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# **Identity and Belonging:** **Urban nature and adolescent development** **in the City of Cape Town**

A thesis submitted in fulfilment of the  
requirements of the Degree of

**DOCTOR OF PHILOSOPHY**

in the School of Education

UNIVERSITY OF CAPE TOWN

by

**Alice Nicola Ashwell**

1 February 2010

Supervisor:

Professor Crain Soudien

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Thesis submitted in fulfilment of the  
requirements of the Degree of

**Doctor of Philosophy**



**Alice Nicola Ashwell**

University of Cape Town

1 February 2010

# Declaration

I the undersigned hereby declare that this thesis is my own original work and that I have not previously submitted it, in entirety or in part, at any university for the purpose of obtaining a degree.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

University Of Cape Town

# Abstract

This study was undertaken in response to two concerns: firstly, that the notion of nature and experiential, aesthetic ways of engaging with nature had declined markedly in environmental education research and practice in South Africa. Secondly, I was concerned that relatively few environmental education centres in Cape Town offered programmes for teenagers. I therefore decided to enquire into the value of nature-based education and awareness programmes to adolescents in Cape Town, particularly in relation to:

- their understanding of and sense of belonging to the natural order, and
- the process of identity development.

The study drew on Erikson's (1968) theory of psycho-social development, and Archer's (2000, 2003) critical realist theory of identity development as an embodied process of reflexivity. The phenomenology of Merleau-Ponty (1962, 1968) provided an alternative to dualistic views of the human-nature relationship. Authors who have worked with Merleau-Ponty's theories helped me clarify my understanding of the need to retrieve nature and embodied practices in education.

The study used mixed methods, integrating multiple case studies of nature-based programmes, and surveys of teenagers in Cape Town. Numerical data were displayed graphically, and narrative data were presented as quotations or compiled into poems. A matrix was developed that mapped the various nature-based programmes according to the two main concerns of the study: namely how programmes represented the human-nature relationship, and how they supported the process of youth identity development. I applied Archer's notion of embodied reflexivity and Merleau-Ponty's ideas of inter-subjectivity methodologically, undertaking a series of short hikes during which I reflected upon the literature and research findings, and drew on insights from my surroundings to compile the final discussion and conclusion of this dissertation.

This study demonstrated that assumptions that teenagers in Cape Town are generally alienated from nature are unfounded; in fact the great majority of youth from all socio-economic groups related positively to nature. It found that nature provides teenagers with a positive context in which to reflexively develop their identities. The conservation community could do much to support adolescents but many education officers felt ill equipped to engage with the senior science curriculum. A variety of alternative approaches to working with youth are therefore suggested.

# Acknowledgements

‘Standing on the shoulders of giants’ may sound a touch passé ever since one particular on-line search engine adopted it as their tagline. But I’m going to use the phrase anyway, as it expresses exactly what I want to say about the many people who have given me a leg up and enabled me to view the landscape of this study more clearly.

Sincere thanks to the two people who guided me intellectually: Professor Crain Soudien and Doctor Katherine Emmons. It was a privilege to work under the wise and compassionate supervision of Prof. Soudien. Thank you, Crain, for achieving that fine balance of providing insightful guidance and space to explore. Kate, I couldn’t have wished for a better critical friend; thank you for your thorough, explicit, and encouraging (☺) feedback on many drafts.

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Some of the intellectual giants onto whose shoulders it has been an honour to clamber are no longer with us, but I am grateful to them for leaving a legacy of ideas that continue to inspire and enliven our explorations today. In particular I am grateful to Maurice Merleau-Ponty for alerting us to the possibility of inter-subjectivity, and to Erik Erikson for his careful observations of the developmental challenges and emergent virtues of human life.

One of the thrills of this research journey has been the opportunity to meet (virtually or in person) some of the heroes of my literature review. In particular, it has been an honour to communicate with Margaret Archer, Michael Bonnett, Phillip Payne and Leigh Price, whose critical and creative explorations of the natural, corporeal, and aesthetic aspects of human experience motivated and equipped me to undertake my own humble study.

I am deeply grateful to the educators, youth development officers, conservationists and youth who participated in this study. Their willingness to share and their moving comments inspired me and gave me hope. Thanks to the Western Cape Education Department for permission to work with the teachers and learners.

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To all the giants in my life, in particular the youth of this generation, I offer my love and thanks.

*Alice Ashwell*

*Cape Town, 1 February 2010*

# Dedication

I dedicate this work to:

My late father, Harold James Ashwell  
who instilled in me a love of nature.

My mother, Elizabeth Mildmay Ashwell (née Hopkins)  
who bequeathed to me her love of education.

My husband, Patrick Ashworth Garratt  
who believed I could do this, and whose love carried me through.

University Of Cape Town

# Table of Contents

Declaration	.....	i
Abstract	.....	ii
Acknowledgements	.....	iii
Dedication	.....	v
Table of Contents	.....	vi
Appendices	.....	xiii
List of Figures	.....	ix
List of Tables	.....	xvi
List of Acronyms	.....	xvii

## Chapter 1: Introduction

<b>1.1 Why this study?</b>	.....	1
1.1.1 The study as a response to a call	.....	1
1.1.2 The scope and purpose of the study	.....	2
1.1.3 The uniqueness of the study	.....	3
<b>1.2 The research question and sub-questions</b>	.....	3
1.2.1 Research question	.....	3
1.2.2 Research sub-questions	.....	3
<b>1.3 The research context – youth and nature</b>	.....	5
<b>1.4 The research context – spatial representations</b>	.....	6
1.4.1 An ecological view of Cape Town’s development	.....	6
1.4.2 The socio-economic context	.....	8
1.4.3 Location of schools relative to natural areas	.....	10
<b>1.5 Overview of thesis chapters</b>	.....	12

## Chapter 2: Literature Review

<b>2.1 Chapter overview: Surveying the scene</b>	.....	15
<b>2.2 Critical realism and a stratified ontology</b>	.....	16
<b>2.3 Growing up in a challenging world</b>	.....	19
2.3.1 The challenge of the global context	.....	19
2.3.2 A challenging local landscape	.....	20
2.3.3 Responding to the youth puzzle	.....	22

<b>2.4</b>	<b>Nature and human wellbeing</b>	.....	24
2.4.1	Recognising the value of nature on the Cape Flats	.....	24
2.4.2	The value of nature to human health and wellbeing	.....	25
2.4.3	Nature and child development	.....	27
2.4.4	Fear, technology and the indoor generation	.....	28
<b>2.5</b>	<b>The experience of alienation</b>	.....	31
<b>2.6</b>	<b>Youth identity development</b>	.....	33
2.6.1	An iterative process	.....	33
2.6.2	Understanding reflexivity	.....	34
2.6.3	Identity development and embodied reflexivity	.....	36
2.6.4	Related literature	.....	39
2.6.5	Erikson's stages of psychosocial development	.....	40
<b>2.7</b>	<b>Environmental education &amp; the notion of nature</b>	.....	41
2.7.1	A brief history of environmental education	.....	42
2.7.2	A progression of methods and approaches	.....	44
2.7.3	Sustainable development and the loss of a notion of nature	.....	46
2.7.4	Where did nature go?	.....	47
2.7.5	Why worry about the loss of a notion of nature in education?	.....	50
<b>2.8</b>	<b>Nature in Western philosophy: A contested notion</b>	.....	52
2.8.1	What is Nature?	.....	52
2.8.2	Western attitudes to nature	.....	55
2.8.3	Hybrid natures	.....	56
<b>2.9</b>	<b>A nature-culture dualism and alternatives</b>	.....	57
2.9.1	Nature as other – the double antithesis	.....	57
2.9.2	Roots of the nature-culture dualism	.....	58
2.9.3	Traditional alternatives	.....	60
2.9.4	A Western alternative to dualism	.....	63
<b>2.10</b>	<b>Nature, education and embodiment</b>	.....	66
2.10.1	Nature and philosophies of education	.....	66
2.10.2	Embodiment, emotion and cognition	.....	70
2.10.3	Implacement and reciprocity	.....	71
2.10.4	Embodiment and education	.....	73
2.10.5	Embodied reflexivity and beyond?	.....	74
<b>2.11</b>	<b>Conclusion</b>	.....	75

<b>Chapter 3: Methodology</b>	.....	<b>77</b>
<b>3.1 The scope of the study</b>	.....	<b>77</b>
<b>3.2 Features of the study</b>	.....	<b>77</b>
3.2.1 A qualitative approach	.....	77
3.2.2 The influence of Critical Realism	.....	78
3.2.3 Reflexivity	.....	79
3.2.4 A mixed method approach	.....	80
3.2.5 Multiple embedded case studies	.....	81
3.2.6 Surveys	.....	83
3.2.7 An emerging interest in phenomenology	.....	83
3.2.8 A poetics of place	.....	84
3.2.9 Language of the dissertation	.....	84
<b>3.3 Research design</b>	.....	<b>85</b>
3.3.1 Translating the research questions into practice	.....	85
3.3.2 Concepts and concept formation	.....	86
3.3.3 Selection of respondents	.....	87
<b>3.4 Data collection methods, instruments &amp; sequence</b>	.....	<b>89</b>
3.4.1 First stage of data collection 2008	.....	90
3.4.2 Second stage of data collection 2009	.....	94
<b>3.5 Data analysis</b>	.....	<b>94</b>
3.5.1 Analytical matrices	.....	95
3.5.2 Use of theoretical models to guide analysis	.....	96
3.5.3 Analytic memos	.....	97
3.5.4 Displaying quantitative data graphically	.....	97
3.5.5 Presenting qualitative data as poems	.....	98
3.5.6 Metaphor as meaning-making	.....	98
<b>3.6 Ethics and accountability</b>	.....	<b>99</b>
3.6.1 Ethical considerations	.....	99
3.6.2 Research quality	.....	101
3.6.3 Language limitations	.....	102
<b>3.7 Conclusion</b>	.....	<b>103</b>

<b>Chapter 4: Findings – Nature-based programmes for youth</b>	.....	105
<b>4.1 Introduction</b>	.....	105
<b>4.2 Provision of nature-based programmes for schools</b>	.....	107
4.2.1 A prior survey of nature-based programmes in Cape Town	.....	107
4.2.2 Reasons for limited support of high schools	.....	108
4.2.3 Reasons for supporting high schools	.....	111
<b>4.3 Case study results: Programmes offered for high schools</b>	.....	112
4.3.1 Nature-based programmes investigated	.....	112
4.3.2 Attitudes of programme presenters to nature	.....	112
4.3.3 Nature ontologies	.....	113
4.3.4 The influence of ontological assumptions on programmes	.....	114
4.3.5 Programme goals and youth identity development	.....	117
<b>4.4 Developing the nature relationship-identity development matrix</b>	.....	120
4.4.1 Descriptors used to map nature-based programmes	.....	120
4.4.2 Mapping nature-based programmes using the matrix	.....	122
<b>4.5 Using the nature relationship-identity development matrix</b>	.....	124
4.5.1 Cluster A: Inter-subjective people-nature relationship	.....	125
4.5.2 Cluster B: Intensive youth development	.....	127
4.5.3 Cluster C: Guided youth development	.....	131
4.5.4 Cluster D: Embodied experience	.....	134
4.5.5 Cluster E: Learning space	.....	135
<b>4.6 Conclusion</b>	.....	138

<b>Chapter 5: Findings – Youth and nature in Cape Town</b>	.....	139
<b>5.1 Introduction</b>	.....	139
<b>5.2 How teenagers in Cape Town spend their leisure time</b>	.....	140
5.2.1 Where teenagers spend their leisure time	.....	140
5.2.2 How teenagers spend their leisure time	.....	141
5.2.3 Natural areas visited by youth	.....	143
5.2.4 Leisure activities in nature	.....	146
<b>5.3 How youth relate to nature</b>	.....	148
5.3.1 Analysing the survey questions	.....	148
5.3.2 Evidence of a sense of alienation from nature	.....	148
5.3.3 Evidence of a sense of affinity with nature	.....	154
5.3.4 General observations of how youth felt about nature	.....	160
5.3.5 Memorable experiences in nature	.....	162
<b>5.4 Responses of youth to nature-based programmes</b>	.....	171
5.4.1 Programmes evaluated by youth	.....	171
5.4.2 Identity development & the human-nature relationship	.....	172
5.4.3 Learning about nature	.....	173
5.4.4 Relating to nature	.....	178
5.4.5 Thinking more deeply about nature	.....	179
5.4.6 Nature as a context for youth development processes	.....	180
5.4.7 The impact of programmes on feelings of well-being	.....	183
5.4.8 The overall influence of programmes on youth	.....	185
5.4.9 Can nature become more relevant to teenagers?	.....	186
<b>5.5 Conclusion</b>	.....	188

<b>Chapter 6: Discussion</b>	.....	191
<b>6.1 Introduction</b>	.....	191
6.1.1 Reviewing the research questions	.....	191
6.1.2 Chapter overview	.....	192
<b>6.2 Youth and nature in Cape Town</b>	.....	192
6.2.1 A general sense of relationality	.....	192
6.2.2 Evidence of alienation	.....	193
6.2.3 Valuing nature	.....	194
<b>6.3 Reflections on alienation and belonging</b>	.....	195
6.3.1 Nature as a place of reverence and refuge	.....	197
6.3.2 Nature as a place to play	.....	199
6.3.3 Nature as a place to learn	.....	200
6.3.4 Nature as a place to engage	.....	202
6.3.5 Nature as a place to care	.....	204
6.3.6 Nature as a place for community participation	.....	206
6.3.7 Nature as a place of belonging	.....	208
<b>6.4 Nature and adolescent identity development</b>	.....	210
6.4.1 Trust versus Mistrust; Autonomy versus Shame / doubt	.....	211
6.4.2 Initiative versus Guilt	.....	213
6.4.3 Industry versus Inferiority	.....	215
6.4.4 Identity versus Role confusion	.....	216
6.4.5 Intimacy versus Isolation	.....	217
6.4.6 Generativity versus Stagnation	.....	218
6.4.7 Integrity versus Despair	.....	219
<b>6.5 Conclusion</b>	.....	220

<b>Chapter 7: Conclusion</b>	.....	<b>223</b>
<b>7.1 Introduction</b>	.....	<b>223</b>
<b>7.2 Summary of findings: research sub-questions</b>	.....	<b>224</b>
7.2.1 Nature-based programmes for teenagers	.....	224
7.2.2 Nature ontologies of programme presenters	.....	224
7.2.3 Prior ideas and experiences of nature	.....	225
7.2.4 Alienation from nature	.....	225
7.2.5 Encouraging a sense of belonging to the natural order	.....	225
7.2.6 Supporting youth identity formation	.....	226
7.2.7 Supporting reflexivity	.....	226
7.2.8 Relevance & appropriateness of programmes	.....	226
7.2.9 Working with adolescents in nature	.....	228
<b>7.3 Identity development: Implications for theory</b>	.....	<b>228</b>
7.3.1 Identity development and community support	.....	228
7.3.2 Nature as a setting for identity development processes	.....	231
7.3.3 Enabling reflexivity in practice	.....	232
7.3.4 Identity and responding to the call of the world	.....	233
7.3.5 Immanence and transcendence	.....	236
7.3.6 The revised identity development model	.....	239
<b>7.4 Implications for practice</b>	.....	<b>241</b>
7.4.1 Finding perspective – an historical view	.....	241
7.4.2 Cultured natures – creative spaces	.....	243
7.4.3 Living more sustainably – Life Orientation	.....	244
7.4.4 Restorative action – responsive agency	.....	246
7.4.5 Facing the issues – deep transformation	.....	247
7.4.6 Experiencing reciprocity – the eco-social community	.....	249
7.4.7 Answering the call to belong – nature clubbing	.....	251
<b>7.5 Concluding reflections</b>	.....	<b>252</b>
7.5.1 Essential findings	.....	252
7.5.2 A personal reflection	.....	254
<b>References</b>	.....	<b>255</b>

## Appendices

A	Groups participating in programmes	.....	269
B	Nature-based programmes investigated	.....	273
C	WCED letter of permission	.....	275
D	Planning the research methods	.....	276
E	Aspects to be probed using each research method	.....	278
F	General questionnaire	.....	279
G	Evaluation questionnaire	.....	281
H	Interview schedule (Education officers)	.....	283
I	Observation schedule	.....	288
J	Document analysis schedule	.....	291
K	Section of an analytical matrix	.....	292
L	Consent form	.....	293
M	Results of evaluation questionnaire Q1: Nature-related questions	.....	296
N	Results of evaluation questionnaire Q1: Identity-related questions	.....	298
O	Analysis of responses to GQ5: How do you personally feel about nature?	.....	300

## List of Figures

1.1	The distribution of protected natural areas in the City of Cape Town relative to soil types	.....	6
1.2	Cape Town's suburbs rated according to a Socio-Economic Status (SES) index. Inset: Main Education districts	.....	8
1.3	Distribution of protected natural areas and schools in Cape Town	.....	12
2.1	Bhaskar's stratified ontology showing levels of the Real, Actual & Empirical	.....	17
2.2	Moll's (2004) revised hierarchy of the objects of science	.....	18
2.3	A model illustrating Identity formation as a reflexive internal conversation (Archer 2000, 2002 & 2003)	.....	39
2.4	A model of identity development integrating the views of Archer (above) and Erikson (1968).	.....	40
3.1	Diagram representing multiple embedded case studies (Yin 2009)	.....	82
4.1	Number of high schools visiting nature-based programmes in Cape Town in 2006	.....	107
4.2	A nature relationship-identity development matrix used to map nature-based programmes in Cape Town	.....	122
5.1	Where youth spend their leisure time	.....	140
5.2	How youth spend their leisure time	.....	141
5.3a	Percentage of youth from different schools that spent leisure time in social activities and sport	.....	141
5.3b	Percentage of youth from different schools that spent leisure time using electronic technologies	.....	142
5.3c	Percentage of youth from different schools that spent leisure time helping others	.....	142
5.4	Frequency of visits to natural areas by youth from different socio-economic backgrounds	.....	144
5.5	Numbers of youth visiting particular types of natural areas	.....	144
5.6	Numbers of youth visiting beaches, mountains & gardens	.....	146
5.7	How youth from different socio-economic areas spent time in nature	.....	146

5.8	Percentage of youth from each school indicating feelings of alienation, belonging or ambivalence in relation to nature	.....	149
5.9	Possible reasons why youth might feel alienated from nature	.....	153
5.10	Responses of youth that relate to the natural order (themes)	.....	154
5.11	Percentage of youth indicating that they had had meaningful experiences in nature	.....	162
5.12	Types of nature-based activities that youth considered meaningful	.....	163
5.13	Percentage of youth from different schools who found learning about nature to be meaningful	.....	173
5.14	Percentage of youth who felt that they would act differently after participating in a nature-based programme	.....	185
6.1	Diagram summarising Erikson's (1968) stages of psycho-social development	.....	210
7.1	Revision of conceptual model of identity development illustrating the importance of the social group	.....	229
7.2	Revision of conceptual model illustrating the inter-corporeal relationship between self and world	.....	233
7.3	Revision of conceptual model illustrating that reflexivity comprises both immanent and transcendent experiences of the eco-social world	.....	237
7.4	The revised model of identity development, incorporating elements of Figures 7.1-7.3	.....	239

## List of Tables

1.1	Schools participating in the research, classified by type of school, area, and socio-economic status	.....	10
1.2	Distances from schools to closest natural areas	.....	11
3.1	Extract from spreadsheet showing how questionnaire data were analysed	.....	95
3.2	Extract from spreadsheet showing how interview data were analysed	.....	96
4.1	Hybrid accounts of nature and interviewees whose responses reflected these views	.....	114
4.2a	Values and descriptors relating to the people-nature relationship, used to construct the nature-based programmes matrix	.....	121
4.2b	Values and descriptors relating to the process of identity development, used to construct the nature-based programmes matrix	.....	121
4.3	Descriptions of five clusters of nature-based programmes mapped using the matrix	.....	123
5.1	A comparison of responses to Questions 5 & 8 in the General Questionnaire	.....	148
5.2	Nature-based programmes evaluated by youth, grouped according to matrix clusters.	.....	171

## List of Acronyms

ADHD	Attention Deficit and Hyperactivity Disorder
CD	Compact disk
DET	Department of Education and Training
EE	Environmental Education
EEASA	Environmental Education Association of Southern Africa
EJNF	Environmental Justice Networking Forum
EMDC	Education Management and Development Centre
EQ	Evaluation Questionnaire
ESD	Education for Sustainable Development
FET	Further Education and Training (Grade 10-12)
GQ	General Questionnaire
HoR	House of Representatives
ID	Identity
IUCN	World Conservation Union
Int	Interviewee
NEEP-GET	National Environmental Education Project for General Education and Training
OBE	Outcomes Based Education
SA	South Africa
SEER	State Education and Environment Roundtable
SES	Socio-Economic Status
UCT	University of Cape Town
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDESD	United Nations Decade of Education for Sustainable Development
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNICEF	United Nations Children's Fund
WCED	Western Cape Education Department
WCED	World Commission on Environment and Development
WHO	World Health Organisation
WWF	Worldwide Fund for Nature

# Chapter 1

## Introduction



*I think nature is very beautiful, and I personally think nature has a message for all of us.  
We just need to listen.  
(Q-GQ 5.4)*

# Chapter 1

## Introduction

### 1.1 Why this study?

#### 1.1.1 The study as a response to a call

Looking back over the past three years, I realise that embarking on this research journey was only partly due to my inherent curiosity. It also represented a response to a call, which at the time of registering as a doctoral student at the University of Cape Town was becoming increasingly insistent. At the time I was feeling disillusioned with my work in environmental education. I felt overwhelmed by the threat of global collapse and desperate because it appeared that, despite all the information available to us, many people simply didn't care.

I also realised that, over the years, as my work in environmental education had become increasingly mainstream, issues-focused, and strategic, I had personally lost contact with the very thing that had originally inspired me to work in this field: nature. Fear had overwhelmed hope; despondency had taken the place of joy; I felt that I no longer had a story worth sharing, particularly with youth.

Research is often compared to a journey. Sometimes it is a voyage of discovery to strange and foreign lands, from which we bring back mysterious insights and unfamiliar wisdom. At other times, we set out as conquering heroes or crusaders, blind to our own views of the world, intent on colonisation or conversion. Sometimes we explore our own home town, looking with new eyes at the taken-for-grantedness of everyday life. And sometimes we embark on a pilgrimage.

This study has been my pilgrimage. It has led me through the marketplace, diverse in its voices and opinions, rich in colour and contrast, and into the wilderness of solo retreat and contemplation. I have learnt from wise sages, read their insightful texts, and communed with both nature and society. It has been a time of descent into the dark to wrestle with uncertainty and retrieve my inspiration. And now it is time to return with that priceless gift to serve our community of the human and more-than-human world.

### **1.1.2 The scope and purpose of the study**

The scope of this study is modest and local, and its intention fairly personal. Having previously been a high school teacher and an education officer working in environmental centres, I was concerned to discover in a survey I conducted in 2007 (Section 4.2.1) that relatively few nature-based environmental education programmes in Cape Town were working with teenagers on a regular basis. Coupled with my disquiet about the generally negative view of the environment we are faced with on a daily basis, and a perception that the notion of nature had all but disappeared from environmental education discourse, I decided to examine more closely how nature-based environmental education programmes in Cape Town were engaging with adolescents and representing nature, and how youth were responding to these programmes. Realising too that a number of organisations preferred not to work with teenagers because they perceived them to be uninterested, I also decided to probe assumptions that youth in Cape Town generally feel alienated from nature.

Inspired by my supervisor Professor Crain Soudien's interest in youth identity in South Africa, I also became interested in exploring how nature-based programmes were supporting adolescents at this key stage of identity development. This caused me to broaden the scope of the study to include youth development- as well as environmental education programmes.

The study took place between 2007 and 2009. It involved programme presenters and high school youth, mainly at the Further Education and Training (FET) level (Grade 10-12, ages 15-19 years). All except one of the schools and youth groups were based in Cape Town (Appendix A); the exception was a school situated just outside the city boundary, which mainly served youth from the city. The programme presenters were based in Cape Town, but some of the programmes took place in natural areas outside the city (Appendix B).

This study draws on the work of philosophers and psychologists, but is not fundamentally a philosophical or psychological study. Instead, I hope to make a contribution to the fields of educational sociology and environmental education, and trust that these insights will inform my work with youth in future.

### **1.1.3 The uniqueness of the study**

This study is unique in a number of respects. This is the first investigation of nature-based environmental education and youth development programmes in Cape Town that has examined their impact on youth identity development as well as young people's understanding of and relationship to nature. Also, very little recent environmental education research in South Africa has focused on senior high school youth, or on how youth relate to nature (Irwin 2008).

While an increasing number of studies are using mixed method approaches, the use of poetry as a means to display survey responses is unusual. Furthermore, while a small number of environmental education researchers internationally are drawing on the philosophy of Maurice Merleau-Ponty, I am unaware of any South African environmental education researchers who have worked with his ideas. I trust that this is an original contribution to research in the field of environmental education in South Africa and, due to its particular case location, internationally.

Having briefly introduced the rationale for and scope of the study, the next section lists the research question and sub-questions that guided the research.

## **1.2 The research question and sub-questions**

### **1.2.1 Research question**

What is the value of nature-based education and awareness programmes to adolescents in Cape Town, particularly in relation to:

- their understanding of and sense of belonging to the natural order, and
- the process of identity formation?

### **1.2.2 Research sub-questions**

This question was explored through the following subsidiary questions:

- What nature-based programmes are available to adolescents in Cape Town? What are the goals and features of these programmes?

- What ontological assumptions do these programmes make about nature and the human-nature relationship? How do these assumptions inform the ways in which programmes are presented and nature is represented?
- What ideas and experiences of nature do young people from diverse backgrounds in Cape Town bring to these nature-based programmes?
- What factors contribute towards a sense of alienation from nature amongst adolescents in Cape Town?
- To what extent are Escobar's (1999) notions of *hybrid natures*<sup>1</sup> reflected in, and generative of, ways of understanding and relating to nature in these programmes?
- To what extent, and how, do nature-based programmes provide opportunities for adolescents to:
  - > Understand/develop a sense of belonging in relation to the natural order?
  - > Engage with processes of identity formation?
- Do these nature-based education programmes encourage learners to be reflexive? If so, how is reflexivity understood and experienced?
- How do adolescents respond to these nature-based education programmes, especially in relation to:
  - > The contribution of these programmes to identity development?
  - > Their knowledge and understanding of nature and the human-nature relationship?
  - > The appropriateness of programme content and approaches to adolescents?
- What factors deter organisations offering nature-based programmes from working with adolescents?
- What are the implications of this research for nature-based education and youth development in Cape Town?

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<sup>1</sup> organic nature, capitalist nature and techno-nature

### 1.3 The research context – youth and nature

There is substantial evidence that adolescents go through a great deal of ‘growing-up’ turmoil at this stage of development and experience confusion about their identities, their relationships with one another, and indeed their place in the world (Epstein 1998; McDonald 1999; Soudien 2007a). At the same time, especially in urban areas, many young people are experiencing a growing sense of alienation from nature (Louv 2006).

Adolescence is a critical period of identity formation. During this stage “the adolescent looks most fervently for men and ideas to have *faith* in, which also means men and ideas in whose service it would seem worth while to prove [themselves] trustworthy” (Erikson 1968: 128). Youth actively explore alternatives that will shape their adult lives, making decisions about friends and family, lifestyles and livelihoods, ideas and ideologies. For environmental educators to neglect youth at this formative stage is unfortunate.

It is an aphorism that a relationship with nature is essential for human well-being and for the development of positive attitudes to self, others and the broader world. This notion is embedded in our stock of popular beliefs, and therefore as a way of understanding the world it may be regarded with some scepticism by academics. However, there is much empirical evidence to show that a healthy engagement with the natural environment does have positive effects on the development of young people (see research reviews by Frumkin (2003); Maller *et al* (2002); The Children and Nature Network<sup>2</sup>; and the Task Force on Cities and Protected Areas of the World Conservation Union<sup>3</sup>). It is against this backdrop that this study seeks to investigate the potential for natural areas to play a positive role in adolescent development in the City of Cape Town.

In this work, I do not argue that a relationship with nature is *the* answer to the challenges being faced by youth. However, I have observed that young people themselves recognise that spending time in nature provides numerous benefits. I suggest that the opportunity to experience and reflect on their place in the environment in general, and nature in particular, is an important *element* of broader efforts to support the personal and social development of young South Africans. Nature can provide a context in which young people have opportunities not only to re-orientate their attitudes towards the environment, but also to confront the complexity of their lives, and become aware and accepting of themselves and their diverse social and ecological community.

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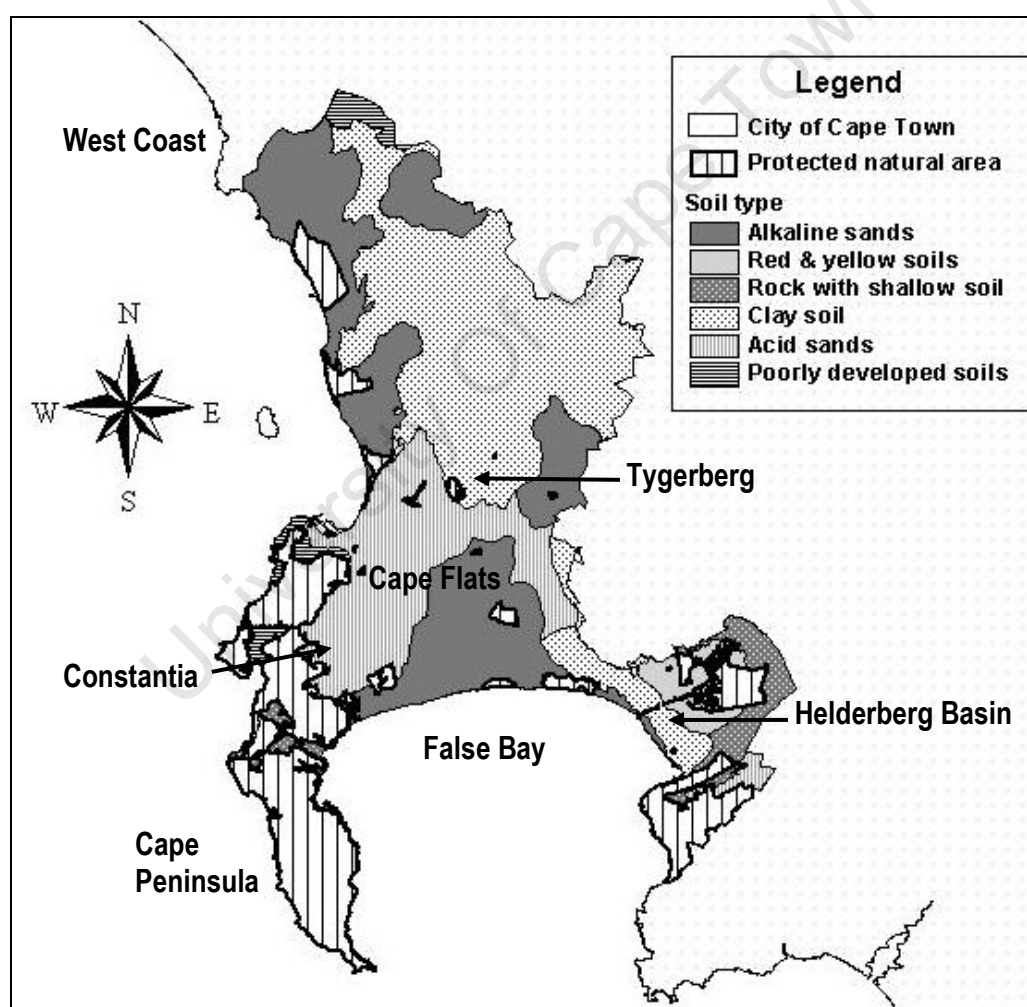
<sup>2</sup> [www.cnaturenet.org](http://www.cnaturenet.org)

<sup>3</sup> <http://www.interenvironment.org/pa/index.htm>

## 1.4 The research context – spatial representations

Nature may offer youth numerous benefits, but for many young people in Cape Town access to natural areas is limited by factors including the physical distance to natural areas, their socio-economic context, the interests of family and community, and concerns relating to safety. In this section, maps illustrate the spatial distribution of protected natural areas, schools, and socio-economic conditions in different suburbs of Cape Town (based on the 2001 census; Romanovsky & Gie 2006). This sets the scene for considering how these factors, and the relationships between them, might impact upon the accessibility of nature to youth in the city.

### 1.4.1 An ecological view of Cape Town's development



**Figure 1.1:** The distribution of protected natural areas in the City of Cape Town relative to soil types. There are very few publicly accessible natural areas in the central and northern parts of the city, where most urban and agricultural development has taken place. Most nature reserves are found in areas unsuitable for development, e.g. mountains, wetlands and coastal dunes.

Taking an ecological perspective on the development of Cape Town, the topography and soils helped to shape the pattern of agricultural and urban development in the city. Prior to European settlement in the mid-seventeenth century, the indigenous people of the region lived as hunter-gatherers and nomadic pastoralists. The Mediterranean climate, with winter rainfall and summer drought, was unsuitable for the cultivation of African grains like sorghum, preventing the development of settled agriculture.

European settlers introduced crops that could grow in this climate. They ploughed up the relatively rich clay soils of the Constantia valley, the Helderberg basin, and from the Tygerberg northwards, to plant deciduous fruits and grains (Figure 1.1). Today extensive areas of farmland can still be found in these parts of Cape Town, but much of this privately owned land is not accessible to the general public.

The sandy lowlands were relatively unproductive for crop farming but cheap to build on, so most residential, commercial and industrial development took place there. After influx control<sup>4</sup> was abolished in 1986, the rapid migration of rural people to Cape Town, aggravated by Apartheid town planning, resulted in the development of sprawling townships, many of them in parts of the Cape Flats that were naturally drift-sand areas and seasonal wetlands, and therefore not prime development land. Within these informal settlement areas, little provision was made for outdoor recreational facilities like parks. Although some townships do adjoin protected natural areas, in most cases these reserves are practically inaccessible because inadequate facilities and access control make them relatively unappealing and unsafe to visit (Manuel 2006).

Today Cape Town's protected natural areas comprise, to a large extent, stretches of land that were either unsuitable for farming or expensive to develop, such as mountains, wetlands and coastal dunes. The nature reserve network is therefore not well distributed across the city (Figure 1.1) (Maze *et al* 2002). On the Cape Peninsula, the False Bay coast, and the West Coast there is ready access to nature, but the central parts of the Cape Flats and the northern suburbs are relatively far from safe public open spaces like beaches, mountains and nature reserves.

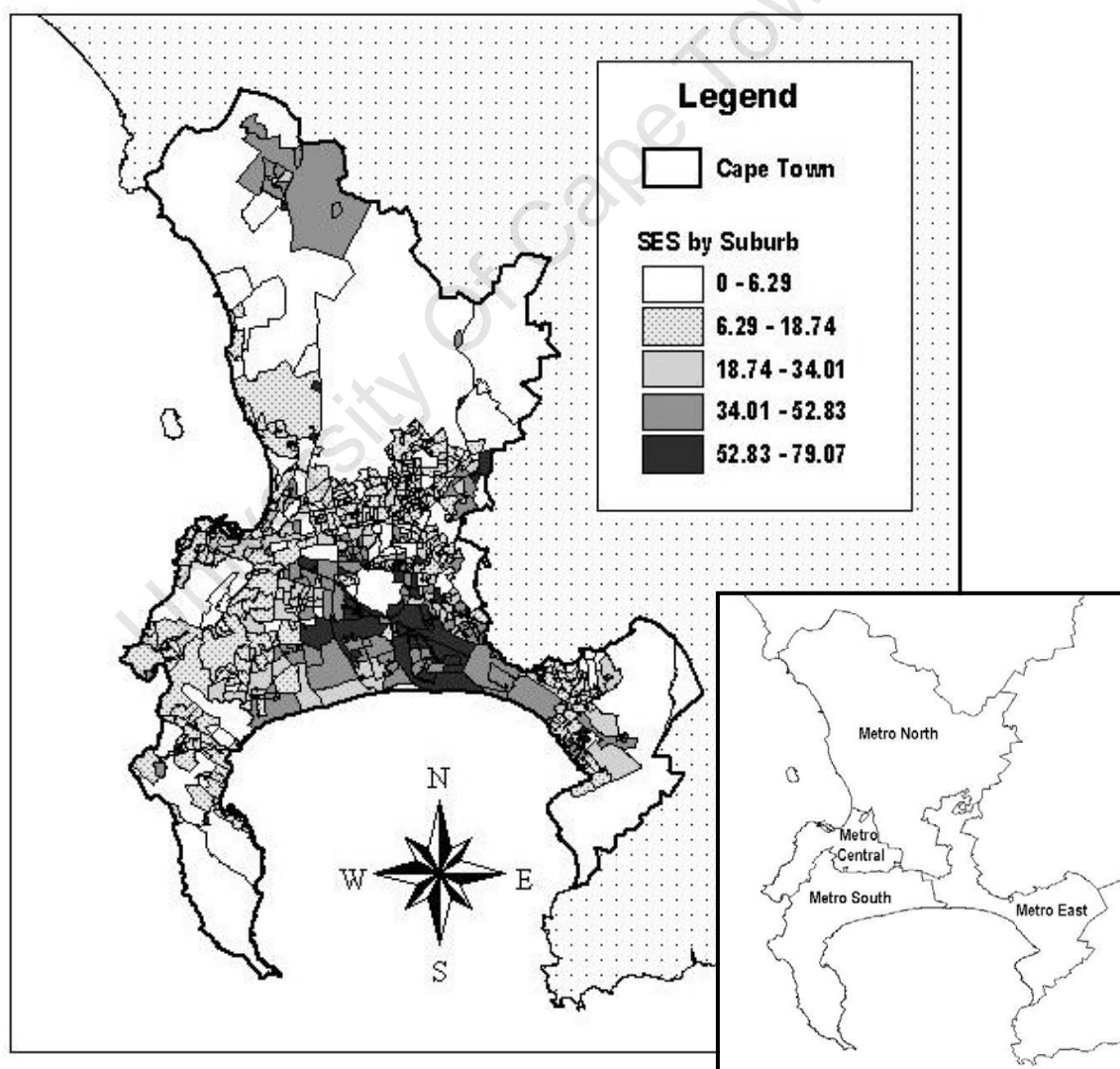
Historically, access to beaches and protected natural areas was restricted by Apartheid regulations like the Reservation of Separate Amenities Act (No. 49 of 1953). Laws like

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<sup>4</sup> Colonial and Apartheid legislation that limited the migration of African people from other parts of South Africa to Cape Town.

the Group Areas Acts (e.g. No. 77 of 1957) removed many people of colour who had previously lived along the Cape Peninsula mountain chain and resettled them on the Cape Flats where rapid urbanisation further restricted access to nature (Green 2007). Today, the uneven distribution of protected natural areas across the city means that some communities (often the most wealthy) live within easy walking distance of diverse natural areas and the recreational opportunities they offer, while people from other communities (usually the poorest) are unable to access nature without some form of transportation. In a city with a very high crime rate, natural areas with no access control or regular safety patrols are potentially unsafe. Access to natural areas is therefore further restricted by a lack of adequate security (Manuel 2006).

#### 1.4.2 The socio-economic context



**Figure 1.2:** Cape Town's suburbs rated according to a Socio-Economic Status (SES) index (Romanovsky & Gie 2006). Each category represents 20% of the total. Low ratings (lighter colour) indicate better-off suburbs, while darker shades represent suburbs facing socio-economic challenges. **Inset:** The main school districts in metropolitan Cape Town.

Cape Town is a city of socio-economic extremes. It was important in this study to survey schools/groups representing a wide range of socio-economic conditions. Figure 1.2 represents socio-economic conditions in the City, based on 2001 Census data.

Romanovsky & Gie (2006) developed a socio-economic status (SES) index for each suburb based on the following four indicators:

- percentage of households earning less than R19 200 per annum (approximately US\$2 750 at 2009 exchange rate)
- percentage of adults (20+) with highest educational level less than Grade 12
- percentage of economically active population unemployed
- percentage of labour force employed in elementary/unskilled occupations.

The map in Figure 1.2 reveals some anomalies. For instance, areas with very low residential populations (e.g. natural, agricultural, and industrial areas) reflect higher than expected SES levels. On the other hand, high student populations contribute to lower than expected SES levels in some suburbs close to tertiary institutions.

Fifteen schools (see also Appendix A) participated in this study, representing a cross section of the regions of Cape Town depicted in Figure 1.2. In order to classify these schools according to socio-economic level, it was not sufficient to use the suburb in which the school was located as a proxy, as the anomalies mentioned above affected some of the SES ratings, and many schools attracted learners from beyond the suburb in which they were located. Thus, factors such as the type of school (private or state-run), and the residential areas of learners attending the school were also considered when rating the participating schools. All these factors were taken into account when determining the socio-economic categories in Table 1.1<sup>5</sup>.

Table 1.1 reveals that schools participating in this study represented a wide range of socio-economic groups, educational districts/suburbs, and types of schools. School J was located just outside the metropolitan boundary, but was attended mainly by youth from the eastern part of the city. The private college (N) was a post-school business college, but the youth surveyed were part of a first year class and all under 20 years of age.

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<sup>5</sup> In this chapter, in order to investigate spatial relationships between schools, suburbs and natural areas, I have used only the data obtained from groups representing a single school. I have omitted data from four programmes attended by individuals from a number of schools. These groups will be included later, where spatial considerations are not significant.

Although the college was located in a relatively wealthy suburb, it served mainly township youth.

Code	Type of School	Town	EMDC Area	Socio-economic category
A	Ex-Model C	Wynberg	South	Middle
B	Private	Cape Town	Central	High
C	Ex-HoR	Wynberg	South	Low
D	Ex-HoR	Goodwood	North	Low
E	Ex-HoR	Goodwood	North	Low
F	Ex-DET	Nyanga	South	Very low
G	Ex-HoR	Cape Town	South	Very low
H	Ex-Model C	Cape Town	Central	Middle
I	Ex-Model C	Cape Town	Central	Middle
J	Private	Somerset West	East	High
K	Private	Wynberg	South	High
L	Private	Cape Town	Central	High
M	Ex-Model C	The Strand	East	Middle
N	Private college	Cape Town	Central	Very low
O	Ex-DET	Khayelitsha	East	Very low

**Table 1.1:** Schools participating in the research were classified by type of school, area and socio-economic status of the majority of learners. To maintain the anonymity of the school, only its general location is indicated using the Education Management & Development Centre (EMDC). The type of school relates to earlier Apartheid classifications, which for the most part still indicate relative levels of privilege: private schools (most privileged), Model C schools were previously schools for white children, House of Representatives (HoR) for coloured children, and Department of Education and Training (DET) for black children (least privileged schools).

### 1.4.3 Location of schools relative to natural areas

To compare access to natural areas by youth attending different schools, Table 1.2 shows the minimum distance from schools to *any* natural area, as well as the distance to natural areas that would be *relatively safe* for youth to visit. Schools are grouped according to the income level of the areas in which most of the learners resided (Figure 1.2).

It is clear from Table 1.2 below that even though schools/residential areas may be relatively close to natural areas as the crow flies, some areas are unsafe to visit due to a lack of access control, supervision and/or facilities (Manuel 2006). Furthermore, in this sample of schools, high- and middle-income areas tended to be located closer to natural areas than low- and very low-income areas. Even in the case where a private school was located seven kilometres from the closest safe and accessible natural area, most learners lived in homes with large gardens, parents frequently took them to the beach, mountains and other natural areas, and some learners reported that they had experienced exotic holidays including safaris, diving trips and mountaineering expeditions. Clearly, socio-economic advantage easily overcomes the challenge of spatial inaccessibility.

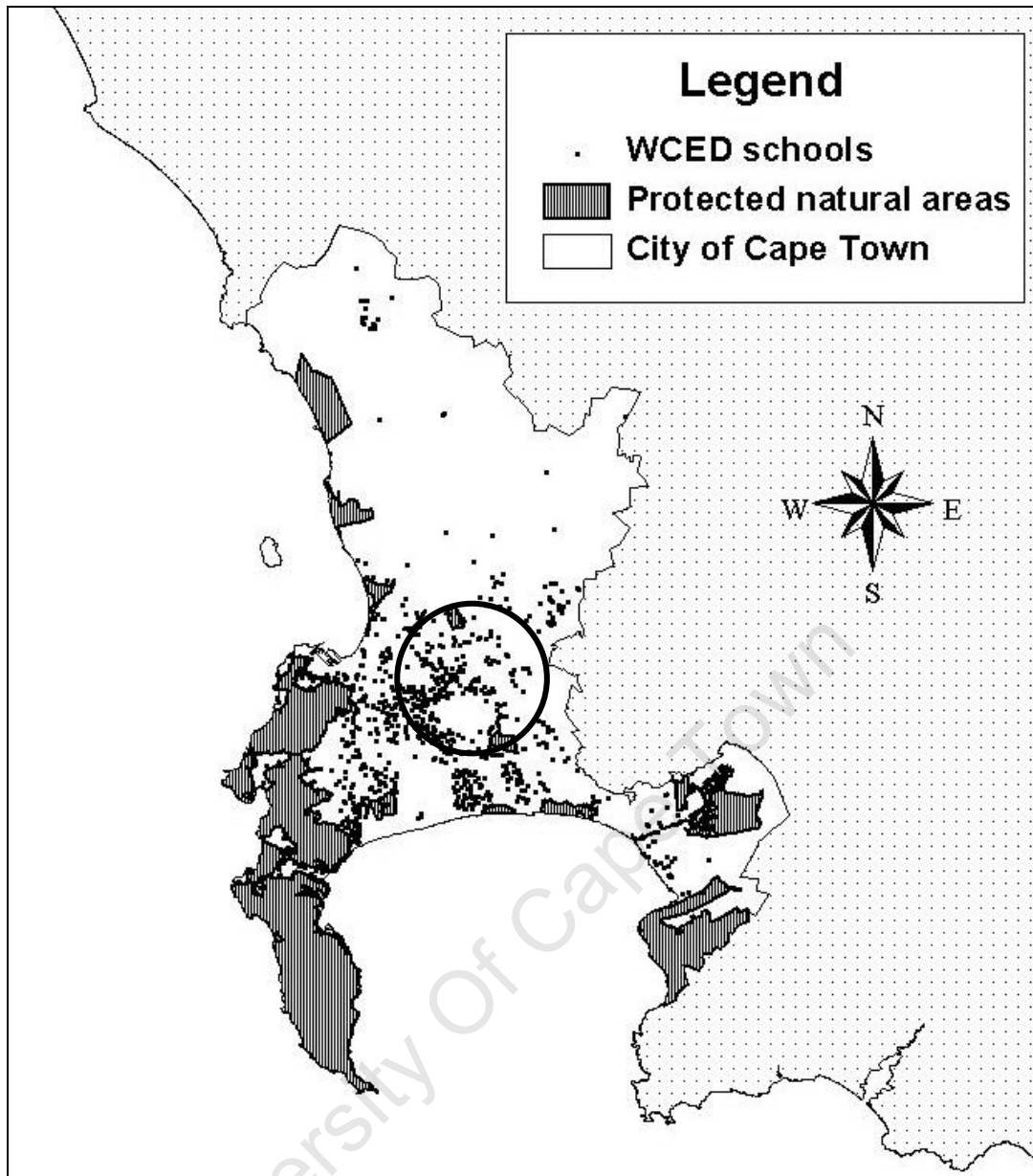
School	Income level	Distance to closest natural area					Distance to safe, usable natural areas with facilities			
		<1 km	1-3 km	3-5 km	5-10 km	>10 km	Beach	Mountain	Wetland	Reserve
F	VL				1		10 km	12 km	10 km	6 km
G	VL	1					< 1 km	< 1 km	12 km	1 km
N	VL			1			5 km	7 km	5 km	7 km
O	VL		1				8 km	17 km	13 km	3 km
C	L		1				4.5 km	5 km	2 km	2 km
D	L			1			9 km	10.5 km	10 km	6 km
E	L			1			9.5 km	11.5 km	10 km	5 km
A	M		1				8 km	3 km	5 km	3 km
H	M		1				5.5 km	5 km	13.5 km	5 km
I	M	1					10 km	1.5 km	12 km	1.5 km
M	M		1				2 km	6 km	2 km	6 km
B	H	1					8 km	2 km	11 km	2 km
J	H				1		7 km	7 km	7 km	7 km
K	H		1				10 km	3 km	7.5 km	3 km
L	H	1					4 km	<1 km	10 km	2 km
<b>Total</b>		5	6	3	1	0				

**Table 1.2:** Distance from schools to the *closest* natural area, and to relatively *safe* natural areas of various types. Distances greater than three kilometres are shaded grey.  
Key to income level: VL = very low; L = low; M = middle; H = high.

Most of the survey schools located further than three kilometres (easy walking distance) from a natural area are situated in the northern and central Cape Flats (Figure 1.3). Even in the case of schools *within* three kilometres of natural areas (Schools D, E, F, H, N), some of these areas are inaccessible, due to a lack of pedestrian or bicycle access (e.g. blocked by a freeway), lack of regular public transport, inadequate facilities and supervision, expensive entrance fees, or concerns about personal safety. Thus, even natural areas located fairly close to schools and residential areas may not be practically accessible to youth, as these survey respondents pointed out:

I love it. If I could spend more time in nature I would! ... The issue especially for teenagers I feel is getting there. (I-GQ 5.21)

I really do have a love and passion for nature but I don't have a lot of accessibility to it. (R-GQ 5.36)



**Figure 1.3:** Distribution of protected natural areas in Cape Town. Most protected natural areas are found in mountainous, wetland and coastal areas. These natural areas are relatively inaccessible to schools and suburbs located in the central and northern parts of the Cape Flats, indicated by the circle.

Having located the study both spatially and in relation to my research concern, the final part of this introduction briefly summarises the forthcoming chapters.

## 1.5 Overview of thesis chapters

This dissertation comprises seven chapters plus appendices. *Chapter One: Introduction* has introduced the concerns that led to this study, presented the research question and sub-questions, and sketched the broad conceptual and spatial context of the study.

**Chapter Two: Literature Review** reviews a broad sweep of the literature, starting with an introduction to critical realism, the perspective that originally framed the study. I then consider the challenging global and local contexts in which youth are growing up, and reflect on the process of youth identity development, and the role of reflexivity in this process. I raise concerns about a perceived loss of the notion of nature from environmental education research and practice, and draw attention to a growing body of empirical research that emphasises the value of nature to human well-being in general, and to the development of young people in particular. This chapter also explores the notion of alienation, observing that adolescence is a period where alienation can be felt acutely. Drawing on both sociological and psychological literature, I then develop a conceptual model that describes identity development as an embodied, reflexive process through which people come to identify their ultimate concerns. Finally I discuss how a sense of alienation from nature relates to the nature-culture dualism of modernity. In seeking grounds for a *rapprochement* between humans and nature in environmental education, I note the deeply rooted place of nature in Western education, and review alternatives to nature-culture dualism in Western and other traditions.

**Chapter Three: Methodology** describes the methodology of this qualitative study, noting the influences of approaches like critical realism and a poetics of place, and the need to adopt a mixed methods approach that incorporated both case study and survey methods. This chapter describes how the research questions guided the development of the research tools and techniques, and refers to many of the research instruments, which are included as appendices. The chapter also explains how the data were analysed and displayed, and addresses issues of ethics and accountability.

The findings are presented in two chapters: Chapter Four focuses on the case studies of the nature-based education programmes reviewed, and Chapter Five deals with the youth surveys.

In **Chapter Four: Nature-based programmes for youth** I first explore why relatively few nature-based environmental education programmes in Cape Town regularly work with teenagers. I then reflect on both the ‘nature ontologies’ of programme presenters, and on ways in which nature is represented in various programmes. Using the identity development model from Chapter Two I also explore how different programmes support youth identity development. I then develop a matrix that maps these nature-based programmes in terms of how they represent the human-nature relationship, and engage

with the process of adolescent identity development. Finally I discuss features of the programme clusters identified using the matrix.

**Chapter Five: Youth and nature in Cape Town** focuses on feedback obtained from two questionnaires presented to a total of more than a thousand teenagers in Cape Town: one asked about their feelings about nature in general, and the other required them to evaluate a nature-based programme they had attended. The chapter begins with some general insights into how youth in Cape Town spent their leisure time. I then report on how youth said they related to nature, representing their responses both graphically, through quotations, and in the form of poems compiled from their questionnaire responses. Surprisingly very few youth reported that they felt alienated from nature, and this chapter therefore reports on many of the ways in which youth expressed their appreciation for and relationship with nature. I then report on how youth responded to programmes they attended, working with the matrix clusters developed in Chapter Four. Their comments relate to how programmes helped them to understand and relate to nature, and how they supported the process of youth identity development.

**Chapter Six: Discussion** draws together the findings and reflects on them in the light of the literature, as well as in relation to insights obtained during a series of reflective hikes. The chapter comprises three sections: an introductory overview summarising how respondents related to nature; reflections on experiences of alienation and belonging; and considerations on the value of nature-based programmes to adolescent identity development, in relation to an Eriksonian framework.

**Chapter Seven: Conclusion** brings the thesis to a close, briefly summarising the findings of the study, presenting a revised model of identity development, and offering programme recommendations informed by the theoretical, empirical and experiential aspects of the research. The chapter is followed by a number of appendices.

# Chapter 2

## Literature Review



*I feel nature is a way of meditation.  
When I go up the mountain I feel so at peace.  
(G-GQ 5.84)*

# Chapter 2

## Literature Review

### 2.1 Chapter overview: Surveying the scene

This literature review ranges fairly widely in an attempt to sketch the broad landscape or context of the study, and to follow the streams of ideas running through this landscape.

In Section 2.2 I explain how *critical realism*, in particular Bhaskar's notion of a stratified ontology (Fairclough *et al* 2002), helped me to ground this study in an appreciation of a real world and to expose the strata underlying the landscape of the everyday and the empirical, revealing many of the assumptions and foundational ideas out of which the situation under investigation emerged.

Section 2.3 begins with a description of the visible landscape of globalisation and social challenge in which youth are growing up. I pick up early signs of two major conceptual streams that I will follow through the review, namely *identity* and *belonging*. In response to my concerns about the declining focus on nature in environmental education, I explore a third stream (Section 2.4), namely the rapidly growing body of empirical literature on the *value of nature* to human well-being.

Beneath these surface concerns about youth growing up in a globalising world lies a fertile body of conceptual literature. Following the stream of *belonging*, in Section 2.5, I probe the issue of *alienation*, which is experienced both as an individual condition and as a societal concern. Authors such as Bauman (2000 & 2001) and Giddens (1991 & 2002) relate concerns about alienation to globalisation, which has undermined many of the institutional and traditional certainties that previous generations depended upon for a sense of belonging and identity.

In Section 2.6 I explore *identity development*, emphasising both the importance of identity formation during adolescence, and the central role of reflexivity in the process of identity development. I probe the concept of *reflexivity* and note calls in the literature for reflexivity to be experienced as an embodied, social process, and not simply as an abstract, cognitive process. Drawing on Margaret Archer (2000, 2002 & 2003) and Erik Erikson (1968), I develop conceptual models to guide the research. Section 2.7 completes

this layer of the review by reporting on developments in environmental education globally and in South Africa, which have contributed to a decline in the focus on *nature*; I raise concerns regarding this development.

The final level of the review covers what I consider to be some of the underlying social realities that have given rise to the issues discussed above. Section 2.8 explores the *contested notion of nature*, especially in Western philosophy. Section 2.9 investigates the issue of *dualism*, which has influenced Western thought since the dawn of modernism, and contributed, I would argue, to attitudes of alienation and abstraction that contribute to current global challenges. I also review some alternatives to a dualistic world view from both Western and other cultures.

Finally in Section 2.10 I review literature that considers the *implications for education* and youth development of a world view that is less dualistic and more appreciative of nature. The review includes the works of both classical and contemporary philosophers and educators, and highlights calls for embodiment and emotion to be respected in philosophy and education. Influenced by Russon (1994: 300) who draws on Merleau-Ponty (1962) in exploring the notion of the 'call of the world', I conclude this review by suggesting that the process of reflexivity be expanded from an internal conversation to an intimate engagement with the human and more-than-human world.

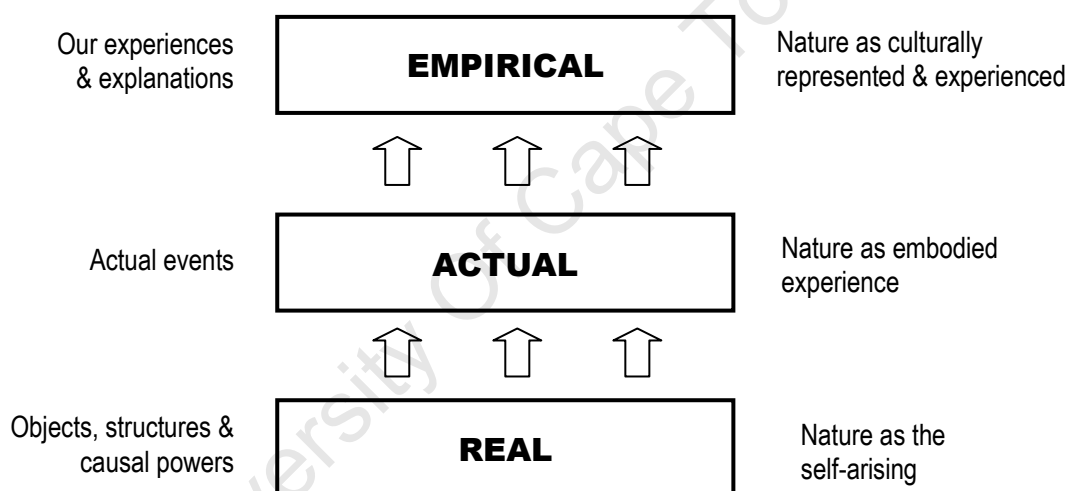
## 2.2 Critical realism and a stratified ontology

This study is informed by a critical realist approach. Plant (2001) describes critical realism as a philosophical approach that accepts that reality is socially constructed; however, it also maintains that underlying structures and mechanisms of the real world determine social arrangements and understandings. Thus, critical realists accept neither the strong constructivist view that the world is no more than a human construct, nor do they accept the positivist view that knowledge is simply an accumulation of sense experiences.

Critical realism makes a distinction between *epistemology* (theory of knowledge) and *ontology* (theory of being/conceptions of reality). Bhaskar (Plant 2001) called the tendency to reduce questions about what there is (ontological questions) to questions about what we can know (epistemological questions) the *epistemic fallacy*. He developed

the notion of a *stratified ontology*, which describes three domains of reality: the *Empirical*, the *Actual* and the *Real* (Figure 2.1) (Fairclough *et al* 2002: 3).

Each layer of reality provides the conditions necessary for the emergence of the successive layer. The empirical, which is typically the domain of positivist enquiry, is the realm of our *experiences*. These experiences result from actual *events*, which in turn occur as a result of real *causal mechanisms*, such as objects, structures and processes in nature and society. At this foundational level a physical reality exists independently of our observations or constructions (Kirk 1999). Critical realists seek to understand phenomena in depth, tracing the origins of our experiences through events to structures and processes. Critical realism judges “the success of an explanation about the nature of reality ... not by the number of times an expected event or experience is observed but by the logic of the links established between the levels” (Plant 2001: 4).



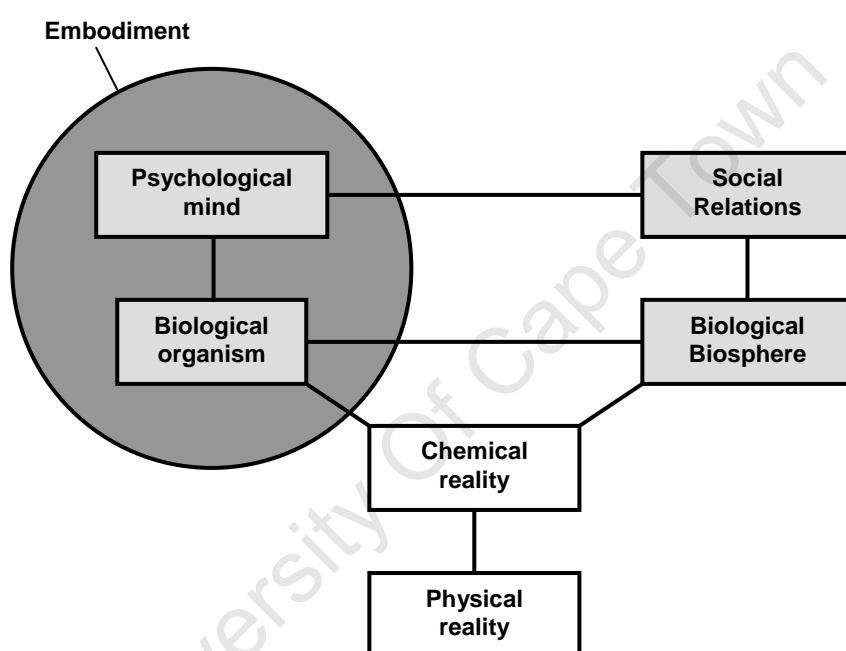
**Figure 2.1:** Bhaskar's notion of a *stratified ontology* comprises three levels of reality: the real, the actual and the empirical. In this study, this model allows a layered understanding of the notion of nature

For example, in the context of this study, nature at the level of the *Real* is nature as it exists, prior to social, cultural or scientific interpretations of it. In Figure 2.1 this is indicated as nature as ‘the *self-arising*’ (Bonnett 2004a&b, 2007):

... we come across natural things as standing there independently of us—i.e. as pre-eminently having their own being that we can affect but of which we are not the author. That is to say, we experience nature as ‘self-arising’. This essentially non-artefactual quality of the standing forth from out of itself is a definitive feature of our experience of nature ... (Bonnett 2007: 712)

Embodied experiences of nature occur at the level of the *Actual*, while the cultural ways in which these experiences are constructed and represented are at the level of the *Empirical*.

As a further example, Moll (2004: 62) uses the concept of a stratified ontology to develop a diagram (Figure 2.2) depicting how the embodied individual, comprising a physical body and psychological mind, relates to the natural and social worlds, both by being ‘of the same stuff’ and through interactions with nature and society. This diagram indicates that people relate to the world in bodily ways as organisms, as well as conceptually as reflective beings.



**Figure 2.2:** Moll's (2004: 62) revised hierarchy of the objects of science. This model depicts the relationship between embodied individuals and their socio-ecological environment.

*I use the notion of a stratified ontology to organise the remaining sections of this literature review. In Sections 2.3 and 2.4, I review literature of an empirical or contextual nature, starting with a review of challenges facing South African youth. Sections 2.5-2.7 seek to understand experiences of alienation, identity development, and environmental education as it relates to the notion of nature. Finally in Sections 2.8-2.10 I investigate ontological assumptions regarding nature, embodiment and the human-nature relationship.*

## 2.3 Growing up in a challenging world

### 2.3.1 The challenge of the global context

The world in which young people are growing up and forming their identities is an immensely challenging one. The ecological, economic, social, and political problems facing humanity in the twenty-first century are unprecedented, and apocalyptic warnings of environmental and social collapse abound. Diamond's (2006) case studies of the collapse of past societies clearly shows that these crises are nothing new, but that it is the *global scale* of problems that is unprecedented. There is overwhelming evidence that humans have had a devastating impact on the quality of air and water, the fertility of soil, the diversity of life, and the predictability of the weather<sup>6</sup>. Today's youth are the unwilling heirs to a modernist bequest which Beck (1992) dubbed a 'risk society'.

This modernist period in Western society, stretched from the sixteenth century to the mid twentieth century and was characterised by a faith in scientific knowledge and progress (Elliott & Lemert 2006). But as the issues and risks associated with scientific, technological and economic progress have intensified, both unquestioning confidence in modernism and optimism for the future have waned (Beck 1992; Giddens 2002).

Modernity was characterised by a sense of solidity and predictability, but Bauman (2000) describes the post-modern period as a condition of *liquid modernity*, during which the solid forms and universalising ambitions of modernity (e.g. the nation state, cultural hegemony, The Law, and The Truth) are becoming liquefied. Giddens (2002) explains that in this increasingly unpredictable world, many of the traditional ways of life and modernist certainties that previous generations relied upon no longer exist. For example, economic globalisation and the post-industrial period have reduced the supply of low-skilled jobs and replaced many permanent jobs with temporary contracts (Beck 1994), leaving people less able to count on the durability of social structures like the workplace.

Beck (*ibid*) observes that people are increasingly required to live their lives as an individual project, forming their identities in a world of expanding choices, but where traditional sources of meaning and solidarity are declining. In a context where the influence of social institutions is in decline, Beck maintains that bonds of love and

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<sup>6</sup> See for example the journal *Global Environmental Change* and websites of the following organisations: Millennium Ecosystem Assessment [www.millenniumassessment.org](http://www.millenniumassessment.org); United Nations Environment Programme [www.grid.unep.ch](http://www.grid.unep.ch); Worldwatch Institute [www.worldwatch.org](http://www.worldwatch.org); and World Health Organisation [www.who.int/globalchange/en](http://www.who.int/globalchange/en).

friendship between individuals become increasingly important. Bauman (2000), however, cautions that in a globalising world, electronic communications are profoundly changing the nature of interpersonal relationships. Bauman believes that the experience of being *with* others opens up the possibility of being *for* others; he is therefore concerned that the prevalence of electronic communication, which decouples communication from physical closeness, could have negative impacts on social solidarity. He is particularly concerned that electronic forms of communication are flourishing in a globalising world where the measures of success are individuality, competitiveness, and mobility rather than solidarity and locality (Bauman 2001).

Bauman (*ibid*) believes that compulsive competitiveness leaves little time for 'higher' or more durable values, and describes the individualised society as a place of both unparalleled freedom and unprecedented insecurity. Giddens (1991) agrees that society has become preoccupied with material rather than intellectual or spiritual concerns, and believes that identity today is more closely tied to what people consume than to what they produce. He is concerned that this has exacerbated a sense of alienation in society.

### **2.3.2 A challenging local landscape**

Young people growing up in South Africa today live in a country that, whilst politically free, is a place of material and psycho-social extremes, more complicated than the world in which their forbears grew up (Soudien 2007a). For example, the United Nations Human Development Report 2007-2008<sup>7</sup> ranked South Africa tenth in the world, out of a total of 116 countries surveyed, in terms of inequality of household income and expenditure.

South African society illustrates poignantly what Bauman (1998) calls *glocalisation*: the worldwide re-stratification of society based on freedom of movement or the lack thereof. The wealthy, educated and electronically networked inhabit the globe and benefit from the opportunities provided by globalisation; the poor and undereducated, lacking access to electronic communications or footloose capital, are chained to place and experience diminishing opportunities; they are sentenced to localisation.

In 2007, Casale and Desmond reported a shocking increase in levels of unemployment in South Africa (including those not actively seeking employment) from 29% in 1995 to

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<sup>7</sup> <http://hdr.undp.org/en/>, retrieved 6 February 2008

43% in 2003. During the same period the proportion of the working population labelled as ‘the working poor’ (employed but earning less than US\$2 per day) increased from 10% to 19%. The Umsobomvu Youth Fund reported recently that young people make up 70% of the unemployed population (Morrow *et al* 2005). Stated another way, two thirds of the 40% of South Africans between 18 and 35 years old have never been employed (Mathoho & Ranchod 2006).

HIV/AIDS remains South Africa’s most serious health crisis. In 2007, 5.7 million South Africans were known to be infected, with the highest prevalence rate (18.1%) occurring in the age group 15-49 years, leaving 1.4 million children aged 0-17 years orphaned by the disease (UNAIDS 2006<sup>8</sup>; WHO, UNAIDS, UNICEF 2008<sup>9</sup>). On average, households with HIV-positive family members spend a third of their income on medical care, compromising the futures of surviving family members. Morrow *et al* (2005) note that marginalised young people with poor life prospects are more likely to take part in risky behaviour, such as crime, substance abuse, and unprotected sex, which in turn leaves them vulnerable to contracting HIV/AIDS, and results in many teenage pregnancies.

Despite improvements in access to and funding for education, the quality of education in many schools remains deficient and approximately half a million learners drop out of school every year. This leaves many young people undereducated and facing dismal employment prospects in a globalising world (Bloch 2009; Morrow *et al* 2005). Of considerable concern within this challenging context is the fact that many young people lack positive adult role models (Soudien 2007a), their family structures having been eroded by the migrant labour system, rapid urbanisation, and the ravages of HIV/AIDS, gangsterism and substance abuse. On the other hand, however, Soudien (2007a: 23) reminds us that the children of the middle-classes in South Africa are growing up “chaperoned, mentored, guided and consciously moulded by parents and schools. Parents and schools invest in their upbringing immense resources.”

Surprisingly, despite the challenging context in which South African youth are growing up, research indicates that they generally claim that they are happy<sup>10</sup>. Soudien (*ibid*), however, cites Barbarin and Richter who argue that South African youth are in fact highly stressed, experiencing high levels of aggression, delinquency, premature sexuality

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<sup>8</sup> [http://data.unaids.org/pub/GlobalReport/2006/2006\\_GR\\_ANN1M-Z\\_en.pdf](http://data.unaids.org/pub/GlobalReport/2006/2006_GR_ANN1M-Z_en.pdf), retrieved 21 February 2008.

<sup>9</sup> [http://apps.who.int/globalatlas/predefinedReports/EFS2008/full/EFS2008\\_ZA.pdf](http://apps.who.int/globalatlas/predefinedReports/EFS2008/full/EFS2008_ZA.pdf), retrieved 5 October 2009.

<sup>10</sup> In the South African National Youth Survey (2000) 59% of youth stated that they were very happy with their lives, 29% were quite happy, and only 3% said that they were quite or very unhappy.

and childbearing, unstable families, substance abuse, poor academic achievement and underemployment. He interprets these paradoxical observations by suggesting that the dawning of the post-Apartheid democratic era, and the opportunity to access the fruits of globalisation like fashion, music and branded goods, generated a sense of optimism in the youth, even in the face of serious daily challenges. Soudien concludes that many young people are growing up able to cope with, but hardened by their circumstances. He poses what he calls the ‘youth puzzle’, asking how youth will be able to find “their social, ethical and intellectual bearings in the maelstrom of modern South Africa” (*ibid*: xi).

### **2.3.3 Responding to the youth puzzle**

Mathoho and Ranchod (2006) raise concerns that youth in post-Apartheid South Africa are relatively uninvolved politically or in their communities, and describe young people as generally materialistic in nature and consumer orientated. However, Morrow *et al* (2005) caution against criticising young people for not living according to the values of the previous generation, calling for positive attitudes towards the youth, and the provision of opportunities for meaningful participation and the development of healthy lifestyles.

McDonald (1999) and Soudien (2007a) encourage much finer observations of issues of identity, alienation and belonging in the experiences of youth. Soudien (*ibid*) advises against stereotyping young people, warning that adults do youth “a grave injustice by stigmatising them as incomplete, deficient and even deviant members of the human race” (Soudien 2007a: 4). He notes that the identity crisis Erikson (1968) wrote about does not necessarily refer to an imminent catastrophe in the lives of youth, but simply a ‘turning-point’, drawing attention to the strong sense of self-awareness and optimism amongst youth, and their uncanny ability to deal with complexity and generate meaning. Similarly, McDonald (1999) observes that youth are starting, in fragile ways, to imagine new ways of living in a changing world. He observes that, where institutions and cultural norms once played a dominant role in socialisation, culture is now shaped by the imperative for self-esteem. He cautions that young people have a critical need to be respected and to ‘maintain face’ in their struggles for subjectivity.

Giroux (1998: 24) observes that in many of the communities in which youth are forming their identities, the “safety nets and nurturing systems that historically have provided some sustenance and hope for youth” have been replaced by “public spaces largely marked by the absence of adult support.” Pinnock (2007: 9), discussing the role of rites of

passage in youth development, asks: “Who listens to the stories of our children? Where are the wise women and men to whom they need to turn? Who are their heroes?” Soudien (2007a) observes that there has been a decline in adult role models in many South African communities, and that the socialising role of the peer group is becoming increasingly influential in defining youth values, understandings, ambitions and tastes. He notes that technology, such as cheap text messaging on mobile phones, has enabled young people to build and strengthen friendship networks, and to provide one another with models of how to live. Influenced by globalisation, a growing sense of individualism is replacing traditional values, and youth are beginning to trust their peers more than members of the older generation whose experience was traditionally respected.

This concern in the literature regarding the need for adults to support youth, especially during the critical period of adolescence, resonates with my personal concern that relatively few environmental centres in Cape Town currently provide programmes for teenagers. Soudien (*ibid*) draws attention to the role of *formative places* in shaping the lives of youth. In these discursive spaces, young people have the opportunity to test the trustworthiness of potentially influential people and ideas. The network of protected natural areas in Cape Town could potentially constitute a network of formative places where youth could engage with supportive adults as part of what Giroux calls a ‘nurturing system’.

*Currently in South Africa, environmental education programmes for youth are increasingly focusing on teaching about environmental issues, while the focus on embodied encounters in nature is declining. However, at the same time, concern is mounting in society that youth are spending much less time outdoors than they used to, and that this is having a negative impact on their health. In an effort to strengthen my argument for a retrieval of nature-based approaches in environmental education, I reviewed the literature dealing with the value of nature to human health and well-being and concerns about a loss of contact with nature. The next section, which reviews the rapidly growing body of empirical research relating to these issues, completes the sketch of the general landscape of the study.*

## 2.4 Nature and human well-being

In South Africa, with its pressing socio-economic challenges, little research has been conducted into the value of nature for human well-being. Anecdotes of people ‘feeling better’ in nature abound, but empirical studies are lacking. This section first draws on a conservation planning study conducted in the lowlands of Cape Town (the Cape Flats) that considered the value of protected natural areas to local residents; it then reviews the international literature.

### 2.4.1 Recognising the value of nature on the Cape Flats

Katzschner *et al* (2005), describing the process of developing the City of Cape Town’s biodiversity strategy, acknowledge that Cape Town’s pressing social issues can make attempts to conserve biodiversity-rich remnant natural areas very challenging. In the face of the desperate need for housing and services, many people consider the imperative to conserve plants and animals to be not only irrelevant but also hurtful, as it suggests that some people believe that plants and animals are more important than people. The approach taken in the biodiversity strategy is to integrate conservation efforts with social and economic development.

Writing in the same publication, Davis (2005: unpaginated web version) credits “the caring sector of middle-class society” during the Victorian era for having established a strong ethic of conservation in Cape Town. However, he emphasises that traditional approaches to conservation represented a particular cultural bias, and that a much wider range of perspectives is now informing the protection of our common natural heritage. He reviews an innovative project known as *Cape Flats Nature*, which has pioneered people-centred conservation approaches in Cape Town, observing that:

Cape Flats Nature has adopted the approach ... to engage community participants by inspiring them to adopt the protection of biodiversity for their own reasons. This could include it being a vehicle for education, an opportunity for involvement in nature-based tourism, job-creation through environmental maintenance, or merely improvement of the natural environment for a better quality of life. From this, an appreciation of biodiversity itself is seen to emerge and take its place in the community dialogue (*ibid*).

Davis observes that community-initiated conservation projects have the potential to encourage social cohesion, as they are often less politically contested than many other projects. At Cape Flats Nature he noted, for example, that the development of a youth nature trail on the Cape Flats fulfilled not only the need for environmental education, but also contributed to crime reduction and fostered growth in civic pride. Although his case

study did not set out to make a case for the value of nature, it illustrated that nature is of benefit to people across the socio-economic spectrum; people may just need to be encouraged to find ‘their own reasons’ for getting involved.

## 2.4.2 The value of nature to human health and well-being

Place matters. (Frumkin 2003: 1451)

The idea that loss of contact with nature is detrimental to human health is nothing new. In the eighteenth century, the French philosopher Jean Jacques Rousseau complained that cities were unhealthy places and that parents should ensure that their children spent time in the country for the sake of their health (Rousseau 1911). City officials in nineteenth century England designed urban parks as recreational areas and ‘green lungs’, believing that these areas would not only enhance the physical health of citizens, but would also reduce disease, crime and social unrest (Senior & Townsend 2005).

With more than half the world’s population now living in urban areas, there is growing research interest in the impacts of urbanisation and loss of access to nature on people’s physical, mental and emotional health: see research reviews by Frumkin (2003); Maller *et al* (2002); The Children and Nature Network<sup>11</sup>; and the Task Force on Cities and Protected Areas of the World Conservation Union (IUCN)<sup>12</sup>.

Confirming the intuition of early park developers, Maller *et al* (2002: 1) refer to studies that show that “green nature [can] reduce crime, foster psychological well-being, reduce stress, boost immunity, enhance productivity, and promote healing.” They cite research that shows that nature has a positive effect on blood pressure, cholesterol levels, outlook on life and stress reduction, and assert that urban parks are a fundamental health resource and should be included in strategies to address mental health and cardiovascular disease.

A recent study in the United Kingdom found that the higher the biodiversity in these parks, the greater the sense of well-being experienced by visitors (Fuller *et al* 2007). The researchers concluded that management of urban green spaces should attempt to maximise biological complexity in order to benefit both human well-being and biodiversity conservation.

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<sup>11</sup> [www.cnaturenet.org](http://www.cnaturenet.org), retrieved 5 March 2007

<sup>12</sup> <http://www.interenvironment.org/pa/index.htm>, retrieved 21 June 2007

Often referred to in the literature is a study that showed that patients in hospital wards with a view of trees recovered more quickly and needed less medication than patients with a view of a brick wall (Ulrich, 1984). Other studies conducted in a wide range of communities and contexts show that contact with nature results in better health among prisoners, improved attention among children with Attention Deficit and Hyperactivity Disorder (ADHD), decreased mortality among senior citizens, and lowered blood pressure and anxiety levels among dental patients (Frumkin 2003). In Chicago, Kuo and Sullivan (2001) found that the presence of trees reduced levels of crime in inner city neighbourhoods. Residents living in greener surroundings reported that they experienced less aggressive and violent behaviour, and were less fearful. These perceptions were confirmed by police records which, after accounting for other variables, showed lower levels of property and violent crimes in greener neighbourhoods. The researchers suggest that this could be due to areas with trees being better used by residents than barren areas, thus improving community surveillance.

In an attempt to explain why many people respond positively to nature, Professor E O Wilson of Harvard University developed the concept of *biophilia* (Wilson 1984), which literally means a love of living things. He postulated that during human evolution, a well-honed awareness of and respect for nature would have been a survival advantage, and that this propensity for closeness with nature could be genetically inherited (Kellert & Wilson 1993).

Apart from direct health benefits of nature, Senior and Townsend (2005) and Townsend and Ebden (2006) investigated the relationship between the biophysical environment, social capital and health. Senior and Townsend (*ibid*: unpaginated) define social capital as “the processes between people which establish networks, norms, social trust and facilitate co-ordination and co-operation for mutual benefit.” They describe the social and health benefits of high social capital, but observe that the key components of social capital, namely social connectedness and civic engagement, are in decline in society. Working with voluntary service groups in Australian parks, they found that the combination of access to ‘natural capital’ and the enhanced social capital resulting from working with others on a meaningful project aided community cohesion and identity. This had positive effects on the physical, mental and social health of members.

Furthermore, Townsend and Ebden (2006) found that involvement in voluntary conservation work in natural areas had a positive impact on the mental, physical and

emotional health of people suffering from stress, anxiety and depression, or social isolation. These benefits were related to “skill development, improving social networks and developing an affinity with the natural environment” (*ibid*: 47). This supports the claim of Furnass (in Maller *et al* 2002: 39) that human well-being depends on satisfactory human relationships, meaningful occupation, creative expression, contact with nature, and opportunities to make a positive contribution to society.

### **2.4.3 Nature and child development**

In addition to the general benefits of nature to health and well-being, many researchers agree that time spent in nature, particularly in unstructured play, is critical for the healthy intellectual, physical, social, emotional and spiritual development of children (Burdette & Whitaker 2005; Kellert 2005; Faber Taylor & Kuo 2006; Wells 2000). Research done in both inner city and rural areas suggests that even views of nature have positive effects on children, enhancing peacefulness, reducing stress and improving self-control (Faber Taylor *et al* 2002; Wells & Evans 2003).

Evaluations of residential outdoor education and wilderness programmes for teenagers and at-risk youth in the United States reported numerous benefits, such as:

- growth in self-esteem, self-confidence, independence, autonomy and initiative (Kellert & Derr 1998);
- improved classroom behaviour; enhanced motivation to learn; better cooperation, conflict resolution and problem-solving; mastery of science concepts; improved environmental behaviour (American Institutes for Research 2005); and
- more self-confidence, independence and personal insight; increased pride in their achievements; greater youth advocacy for the environment; greater awareness of possible careers (Remer 2006).

In California improvements in learning occurred (measured by standardised language and mathematics tests) when the natural environment was used as the principle organiser of the school curriculum. The environmental curriculum also fostered cooperative learning and civic responsibility (Lieberman & Hoody 1998; SEER 2000 & 2005). Furthermore, the greening of school grounds has been shown to improve creativity, self-discipline, health and learning in schools, and to address obesity in children. Greening projects can also increase community involvement, reduce discipline and ADHD problems, and

produce food to supplement school meals (Bell & Dymont 2006; Evergreen 2000; Faber Taylor *et al* 2001, Kuo & Faber Taylor 2004; Rivkin 1997).

As urban youth lose contact with nature, there are concerns that this may negatively affect their attitudes towards nature and the environment. Time spent in nature as a child or youth, particularly in the company of a trusted adult mentor, has been shown to contribute to the development of caring environmental dispositions in adulthood (Chawla 1998, 2006; Kellert & Derr 1998; Louv 2006).

#### **2.4.4 Fear, technology and the indoor generation**

Never have humans spent so little time in physical contact with animals and plants and the consequences are unknown (Maller *et al* 2002: 5).

Maller *et al* (2002) report that chronic diseases related to lifestyle and environment have replaced acute infectious diseases as the major cause of disability and death in industrialised countries. It is well known that unhealthy environments can lead to physical problems such as lead toxicity, childhood asthma, and various types of cancer, but Frumkin (2003) draws attention to more subtle effects of place on people's emotions and performance. Maller *et al* (2002) warn that spending time in purely 'human' environments with too much artificial stimulation may cause exhaustion and a loss of vitality and health.

Malone (2007) calls over-protected children the 'bubble-wrap generation', and Louv (2006) coined the term 'nature deficit disorder' to draw attention to the negative impacts of predominantly indoor lifestyles on the physical, emotional, intellectual and spiritual health of young people. The problem is obviously greatest in cities, with traffic hazards and 'stranger danger' being the prime reasons why parents keep their children indoors and prevent them from playing in the streets or exploring the neighbourhood unattended (Tandy 1999; Timperio *et al* 2004; Valentine & McKendrick 1997; Veitch *et al* 2006). In fact, Strife (2008) views gangs and untrustworthy adults in certain neighbourhoods as an environmental justice issue, as they deny children the right to play outdoors, thus compromising their healthy psychological and physical development.

Surveys from various countries illustrate the extent of the problem:

- In Britain about 20% of children interviewed in the Playday 2005 survey said that they played outdoors for no more than an hour a week, but nearly 40% wanted to

play outside more often. Children generally preferred playing in natural rather than non-natural places (Playday 2005; Tandy 1999).

- Also in Britain, 67% of children interviewed said that they did not go to local shops or parks on their own. About 60% of children who felt unsafe walking or playing alone outdoors feared abduction by strangers; 23% feared cars and traffic. Nearly 90% of children were transported by car during evenings and weekends (Farmer 2005).
- In the United States and England, far fewer children walked or cycled to school than in previous generations due to concerns about traffic and crime, and increasing distances between home and school. In 1971, 80% of seven to eight year olds in England went to school on their own, whereas just 9% did so in 1990. During that period the proportion of children driven to school by car rose from 9% to 32%, and the proportion of young children accompanied to school by adults from 30% to 92% (Center for Disease Control & Prevention 2006; Hillman & Adams 1992).
- In Amsterdam children had less freedom to move around on their own than their parents had had; they played closer to home, and their activities were more constrained by their parents (Karsten 2005).
- In two long-term studies, Hofferth and Sandberg (2001), and Hofferth and Curtin (2006) noted a significant decline in children's discretionary time (time not spent in school, child care, etc.). Clements (2004) found that play was more closely supervised and structured than it had been in the past (e.g. organised sports rather than street games).
- An historical analysis in a working class area of New York revealed that fiscal constraints had resulted in a decline in the maintenance of parks and playgrounds, which had fallen into disrepair and become unsafe. Consequently most local children played indoors, often being entertained by electronic media (Wridt 2004).
- Electronic entertainment like television, video games and computers has significantly changed the nature of leisure time activities. Roberts *et al* (2005) and Rideout and Hamel (2006) found that young children in America spent on average 1.5 hours per day with electronic media, and older children nearly 6.5 hours (which appears to be as much time as can be devoted to media during an average school day). These studies also reflected a dramatic increase in the use of

computers and the internet: 86% of eight to 18 year olds had a computer at home, and 17% spent more than an hour on-line each day.

- Pergams and Zaradic (2006) recorded a 20% decline in per capita visits to national parks in the United States since 1988. They found that people spent on average 327 more hours per year with entertainment media in 2003 than in 1987. While they did not suggest that increasing use of electronic media caused the decline in national park visits, the increasing reliance on electronic forms of entertainment was certainly eroding time available to pursue other activities, including outdoor play and visits to natural areas.

Although most of the studies referred to here were conducted in middle-class neighbourhoods in developed countries, the trends are similar in South Africa, where television in particular has become an electronic baby-sitter in households across the economic spectrum. Parents and guardians wishing to protect children and youth from traffic danger, violent incidents, and the risk of abduction are keeping young people indoors, where they are entertained by whatever forms of electronic entertainment the household can afford.

*The Healthy Active Kids South Africa Report Card* for 2007 gave South African children a C-minus for overall health, representing an *average* risk of future chronic disease based on four indicators: tobacco use, poor diet, lack of physical activity and obesity (Discovery Vitality & Sports Science Institute of SA 2007). Researchers found that 25% of adolescents in South Africa watched more than three hours of television per day, and the average amount of time spent in sedentary activities was as high as nine hours per day. One of the most commonly reported leisure time activities was mobile phone use. In lower income areas, although relatively few families had private motor vehicles, people were often reluctant to walk in the streets because of poor road safety and high levels of crime. Even in small towns and rural areas, up to 64% of girls and 45% of boys had little or no moderate to vigorous exercise in a week.

High levels of overweight and obesity are common in many poor communities within affluent societies (James 2007). The *Healthy Active Kids* report card (*ibid*) reported that 30% of adolescent girls and 10% of boys were overweight or obese, with this problem being most severe in urban areas. More than 25% of adolescents showed little or no interest in sports and this problem was exacerbated by inadequate sport and recreation

facilities, and few trained physical education teachers and coaches in poor and rural communities.

In light of the fact that over half of deaths worldwide and nearly 40% of deaths in South Africa are caused by chronic diseases, safe and accessible urban parks and nature reserves should be vital components of an overall public health strategy. City authorities and civil society groups need to ensure that natural areas, parks and playgrounds are maintained, expanded and kept safe and accessible (Arza 2003; Sherer 2006).

*This concludes the introductory sketch of the challenging context in which South African youth are growing up and forming their identities. A number of the concepts and issues alluded to above will be addressed in greater detail in the next part of the literature review, which takes a deeper look at the concept of alienation, the theory of identity development and its relationship to reflexivity, and the recent decline of the notion of nature in environmental education research and practice.*

## 2.5 The experience of alienation

The concept of alienation has been mentioned previously in relation to both globalisation and the separation of people from nature. According to Epstein (1998: 4) the concept of alienation has a number of meanings, but can generally be understood as “the ways in which an individual can be estranged from society in general, from particular institutions ... and even from herself and others, such as peers.” He explains that sociology recognises two broad categories of alienation, one relating to the relative position of *groups* in society (structural aspects, as described by Marx and Durkheim), and the other to the *individual's* internal feelings of detachment in particular situations (relating to social psychology).

These two types of alienation often coincide, as the following example illustrates: Marx viewed alienation as the separation of the proletariat from access to resources and the means of production, forcing them to sell their labour. Capitalism also serves to alienate the worker from himself, by turning his labour into an object to be traded and allowing him little opportunity for creative expression (Epstein 1998).

In South Africa structural alienation based on class difference has been complicated by a history of racial segregation. The policies of colonial and Apartheid governments served

to undermine the sense of identity and belonging of black South Africans by enforcing estrangement at individual, structural and spatial levels. This has resulted in many black adolescents in South Africa having to carry the double burden of poverty and cultural alienation (Soudien 2007a).

Also at a structural level, Durkheim's concept of *anomie* describes the sense of alienation experienced because of a breakdown or confusion of values in a social group. Anomie, according to Durkheim, is not an individual condition, but rather the breakdown of the normative structure within which individuals are located (Epstein 1998).

One of the factors contributing to a sense of alienation in society is globalisation, defined as "economic, social and political processes that are enabling connections to be made between people and places on a worldwide scale" (Hubbard *et. al.* 2004: 345).

Globalisation is furthered by the increasing mobility of people, products and ideas, and has been greatly enhanced by information and communications technologies. Ironically though, while globalisation can increase connections between people and enhance their sense of belonging to a global village, the rapid spread of ideas in a globalising, post-modern society can also contribute to a sense of anomie, or value confusion.

Giddens (2002) observes that globalisation has contributed to a decline in traditional ways of living, increased individualism, the alienation of the young from the old, and a growing uniformity of material patterns of aspiration and consumption. Farrington (2006: 15) cites Meyerowitz who refers to this experience as the "loss of a sense of place." Despite its potential to enhance communication and networking, Bauman (2001) fears that the internet might contribute to fragmentation in society by presenting a virtual reality that, unlike the lived world, is fragmented, processed and abstract.

From the point of view of social psychology, alienation is a feature of the attitudes and beliefs of individuals, and is experienced as feelings of powerlessness and meaninglessness. It is the opposite of a sense of *coherence*, which describes an experience of life that is manageable, meaningful and comprehensible (Antonovsky, in Epstein 1998).

The period of adolescence is, according to Erikson (1968), a time of identity formation, which may be experienced as an identity crisis. During this period, many youth grapple with an individual sense of alienation and a search for meaning, which is a common

feature of adolescence (Epstein 1998). Youth growing up in a post-modern world face the additional challenge of having to establish a sense of identity and belonging in a society in which people in general are increasingly alienated from themselves, from one another, and from the Earth (Bhaskar 2002). As Frosh (1991: 6) maintains: modern states of mind and forms of selfhood are “forged in the context of instability of a cataclysmic kind.”

## 2.6 Youth identity development

### 2.6.1 An iterative process

This section draws on the works of psychologist Erik Erikson and sociologist Margaret Archer to cast light on the process of identity development in adolescents and to develop conceptual models to guide the research.

Adolescence is a key stage in the process of identity formation in individuals. Erikson (1968; Hook *et al* 2002; Kroger 2007) related the psycho-social development of individuals to their biological development, recognising a succession of stages during the normal life cycle. He believed that each stage was characterised by a particular emotional conflict or crisis, the successful resolution of which resulted in the development of a specific virtue or ego strength. During adolescence, the challenge is to address role-confusion and to develop a sense of being true to oneself or to a particular identity (Section 6.4).

Erikson (1968) and Archer (2000, 2002 & 2003) both view identity formation as an ongoing process which continues throughout a person’s life. Like Giddens (1991) who states that identity is the capacity to sustain a particular narrative of the self, Archer (2002: 15) maintains that the forging of a personal identity requires the agent to develop a ‘continuous sense of self’, and to be able to recognise him/herself as the same distinct subject over time. She views identity formation as a lifelong process during which agents fallibly but intentionally respond to their contexts through a process of reflexive mediation that she calls the ‘internal conversation’<sup>13</sup> (Archer 2003).

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<sup>13</sup> Ogbonnaya (1994) maintains that many traditional African cultures recognise that the individual is a community of multiple selves. One particular group believes that each person is born with a ‘personal oversoul’ (*ibid*: 80) that directs them in life through personal conversations.

## 2.6.2 Understanding reflexivity

Before going further, it is necessary to explore in some depth the key concept of reflexivity, which is an important element in the model of identity development used in this study. This section introduces the concept from the point of view of Giddens and Archer, mentions its relevance in the field of environmental education in South Africa, and alludes to some reservations regarding how the concept has been interpreted.

Giddens (1991) maintains that the development of self-identity requires reflexive<sup>14</sup> awareness. He distinguishes between the day-to-day reflexive monitoring of ‘what we do and why’ (which he believes is intrinsic to all human activity), and the reflexivity of modernity itself, noting that people’s social (e.g. institutional) activities and relations with nature are themselves subject to revision in the light of new insights.

Giddens states that individual reflexivity draws on knowledge that is both practical and discursive. Practical knowledge is tacit; it represents that which is taken for granted within a particular community and which contributes to feelings of ontological security. On the other hand, language enables one to become conscious of oneself and others; in other words: “Subjectivity arises from intersubjectivity” (*ibid*: 51). In the post-traditional order of late modernity, Giddens maintains that each person “lives a biography reflexively organised in terms of flows of social and psychological information about possible ways of life” (*ibid*: 14).

Both Giddens (1991) and Archer (2002) view humans as reflexive beings who are able to review and act in the world in order to bring about changes in society. According to Giddens’ theory of structuration, *individuals* have the power to express themselves within social structures, and to cause changes to these structures over time. Archer agrees that agents can change social structures, but stresses that this emerges through *social interaction* rather than as a result of isolated individual agency.

Archer’s view of reflexivity emphasises the social and embodied nature of human beings, and the influence of the context on the actor’s capacity for reflexivity. For her, reflexivity is more than a cognitive, rational and instrumental process; it is also necessarily normative and affective (Mutch 2004). One’s sense of self arises not only from cognitive

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<sup>14</sup> Reflexivity, according to Giddens, is the process of constantly examining and reforming social practices in the light of new information about those practices

reflection but from embodied interactions with three different orders of reality: the natural, practical and social (Archer 2002).

A reflexive orientation, described as a process of “reflecting, reviewing and changing in response to contextual factors and improved understandings of their practice” (Lotz-Sisitka *et al* 2006a: 10) has characterised environmental education research and practice in southern African since the mid-1990s. The term first appeared in the environmental education literature in the region in the early 1990s (e.g. O’Donoghue 1993a; Janse van Rensburg 1994). Lotz-Sisitka (2009, pers. comm.) explains that she was attracted to the concept because:

It was the only place I could see the meaning of this idea of environmental education as social change; it was the only place I could find the connection outside of rhetoric ... that word has practice-centred meaning, it’s not just rhetorical. ... The educational act can sharpen one’s capacity to be reflexive in relation to one’s embodied practices, which combine tacit and conceptual knowledge.

Despite reflexivity generally being defined as an integrated practical and discursive process, a few authors raise concerns that reflexivity tends to be represented as an overly cognitive and strategic process, which they believe may limit its relevance. For instance, Pellizzoni (1999: 111), commenting on the views of Beck, Dahl and Giddens, maintains:

The Reflexive Modernization reading of the risk society not only maintains that science is the most important institution in shaping the relationship between society and risk, or even the identity construction of people, but also that at the centre of this relationship and identity construction are cognitive or, more specifically, instrumental-rational aspects of human action.

McDonald (1999: 9) further argues that:

Giddens’ concept of reflexivity ... seems deeply flawed. It is a model that reduces action to cognition and therefore, although extremely influential among intellectuals, is not a tool that allows us to explore social relationships ...

He observes that the reflexive subject, whom he describes as cognitive, self-monitoring, risk-evaluating and strategic, is becoming recognised as *the* model of subjectivity. On the other hand, those who “fail to mobilise their subjectivity, who fail to become ‘entrepreneurs of the self’” (*ibid*: 208) are deemed to be dysfunctional. For example, in Archer’s (2003) research into the ‘internal conversation’<sup>15</sup>, she classified one respondent as a *fractured reflexive*, stating that he appeared incapable of reflexivity.

In contrast, in McDonald’s (1999: 2) study of Australian youth, which included so-called marginal groups such as street gangs, graffiti writers and the unemployed, he

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<sup>15</sup> A process of self-talk which Archer identifies as the mechanism of reflexivity

acknowledges that their social worlds often appeared “chaotic, unpredictable and unstructured.” However, he asserts that “patterns of coherence, forms of social creativity and struggle” were emerging. He cautions that, during this time of transition to a post-industrial society, a strongly cognitive model of reflexivity may prove to be an inadequate tool for understanding emerging but as yet fragile struggles for connection, dignity, integrity and freedom. In order to imagine new ways of living in a changing world, he challenges us to look beyond obvious narratives of individualism and globalisation on the one hand and nostalgia for the past on the other.

Abram (1997) contends that it was the development of the alphabet that enabled human beings to develop a more profoundly reflexive sense of self. Once people could read and write, they could review and ponder their own words in a way that had not previously been possible. While the spoken word could not be completely separated from the speaker, the written word enabled ideas to become objects, separated from self and situation, engendering increasing levels of abstraction. In order to overcome a tendency for reflexivity to become an abstract process of deliberation detached from actual situations, Abram calls on people to ground their capacity for literate abstraction in participatory engagement with the local and the particular, believing that it is within relationships of reciprocity that our “abstract intellect [will] find its real value” (*ibid*: 270).

### **2.6.3 Identity development and embodied reflexivity**

Archer (2000 & 2002) believes that people’s *ultimate concerns* help them to configure their developing identities. She defines these as:

... concerns which are not a means to anything beyond them, but are commitments which are constitutive of who we are, and an expression of our identities. Who we are is a matter of what we care about most. This is what makes us moral beings. It is only in the light of our ‘ultimate concerns’ that our actions are ultimately intelligible. (Archer 2002: 11)

In analysing the structure-agency debate, Archer explains that the Enlightenment period in Western cultural history gave rise to what she calls *Modernity’s Man*, an agent imbued with the property of instrumental rationality, who stood outside of nature as its master. This model of the human being “could not deal with our normativity or affectivity, both of which are ... ‘about’ relations with our environment.” It could not acknowledge “the human capacity to transcend instrumental rationality and to have ‘ultimate concerns’” (*ibid*: 11).

Archer also rejects the model of humanity informed by postmodernism and social constructionism, which she labels *Society's Being*. She considers that this model credits society with too much responsibility for constituting the individual, resulting in a conventionalist view of the agent.

Archer contends that neither of these models pays adequate attention to the role that the *experience of reality* plays in shaping who people become. So, while 'Modernity's Man' may shape the world, the way the world is also shapes him/her; and 'Society's Being' experiences a real world beyond that represented by society's conversation.

She argues that our sense of self, or our personal identity, arises from our embodied interactions with three different orders of reality: the natural, practical and social. She insists that "personal identity is a matter of what we care about in the world" (*ibid*: 15), and that this emerges as we come to prioritise an ultimate concern and accommodate our other concerns within a particular *modus vivendi*, or way of living. Individuals' personal identities reflect what they care about most in relation to these three orders of reality.

Furthermore, Archer sees emotions as commentaries upon these concerns and (while I disagree with some of her choices) relates particular types of emotions to each of the three orders of reality with which agents interact (Table 2.1).

Order of reality	Type of relationship	Typical concern	Related emotions
Natural	Organic: self/environment	Bodily well-being	Fear, anger, disgust, relief: Result from anticipating outcomes of interaction between self & environment
Social	Social/discursive: a subject among subjects	Self worth	Admiration, shame: Result from anticipation of social approval/disapproval of our competence in significant life roles
Practical	Work: subject/object	Performative competence	Frustration, boredom, depression; satisfaction, joy, exhilaration, euphoria: Responses to senses of failure/achievement

**Table 2.1:** A summary of the features of Archer's three orders of reality, in relation to which agents develop their personal identities (Archer 2000 & 2002)

Each order of reality impacts upon the others, so each person must attend to relationships in all three orders of reality when working out his/her own *modus vivendi*. Through selecting, balancing and prioritising ultimate and subordinate concerns within these three orders of reality, the individual's personal identity emerges.

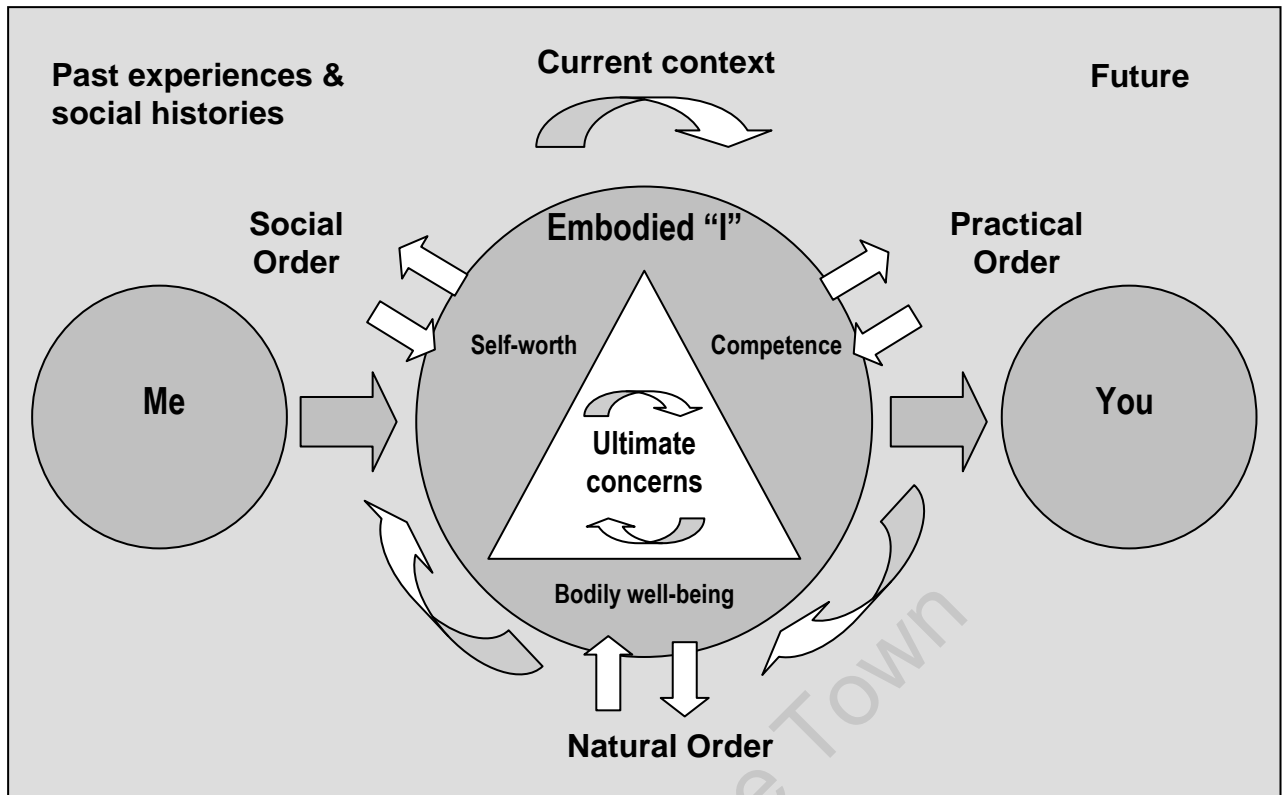
Archer considers the mechanism by which we identify and order our concerns (and thus form our identities) to be a process of reflexivity, which she dubs the *internal conversation* (Archer 2003). She emphasises that this is not a process of introspection (based on a metaphor of the inner eye), but a personal process of mediation through which agents respond to their contexts. She describes this process as being genuinely interior, ontologically subjective and causally efficacious:

... our struggling towards a *modus vivendi* between our commitments is an active process of reflection which takes place through an 'inner dialogue'. In it we 'test' our potential or ongoing commitments against our emotional commentaries, which tell us whether we are up to living this or that committed life. ... Since the process is corrigible (we may get it wrong or circumstances may change), the conversation is ongoing. ... This I have begun to unpack as an interior dialogue between the acting 'I', the future 'you' and the past 'me', as a process of forging personal identity by coming to identify the self as the being-with-this-constellation-of-concerns (Archer 2002: 17).

Similarly, Soudien (2007a) states that Fanon and Bhabha view identity formation as: "an iterative process which leads to a continual repositioning of an individual as either 'self' or 'other' in a range of contexts" (*ibid*: 8). In the process of identity development, the individual constantly needs to work out whether s/he belongs or is being alienated. This entails "*working* through the meanings of their childhoods – their pasts – and the hopes and ambitions they have for their adult lives – their futures" (*ibid*).

As an aside, Postma (2006) identifies two views of the process by which we come to identify the things we care about: the liberal conception assumes that we *choose* the things that matter to us, while an alternative view suggests that "we somehow *find ourselves* in the things we care about" (*ibid*: 148, emphasis mine). These identifications, he asserts, result from close contact and involvement with the things we care about, rather than from a distant, reflective act of choosing. This latter view reflects the Merleau-Pontian notion of the 'response to a call', which Russon (1994) identifies as characteristic of our embodied responsiveness to situations. (Merleau-Ponty's philosophy is discussed in Section 2.9.4.)

The following model (Figure 2.3) illustrates diagrammatically Archer's description of the process of identity development as an ongoing process of reflexivity in relation to three orders of reality. It illustrates that identity development is an embodied process, broadening the notion of reflexivity beyond a cognitive, strategic process of meaning-making to include embodied interactions with the natural, social and practical orders. This model will inform thinking about youth identity development in this study.



**Figure 2.3:** For Archer (2000, 2002 & 2003), identity formation is an ongoing, life-long process through which the individual develops a continuous sense of self. It takes place via a reflexive process known as the internal conversation. Embodied individuals continuously identify and integrate their ultimate and subordinate concerns into a *modus vivendi* (a way of living). This takes place through embodied interactions with the environment in three orders of reality: the natural, social and practical.

#### 2.6.4 Related literature

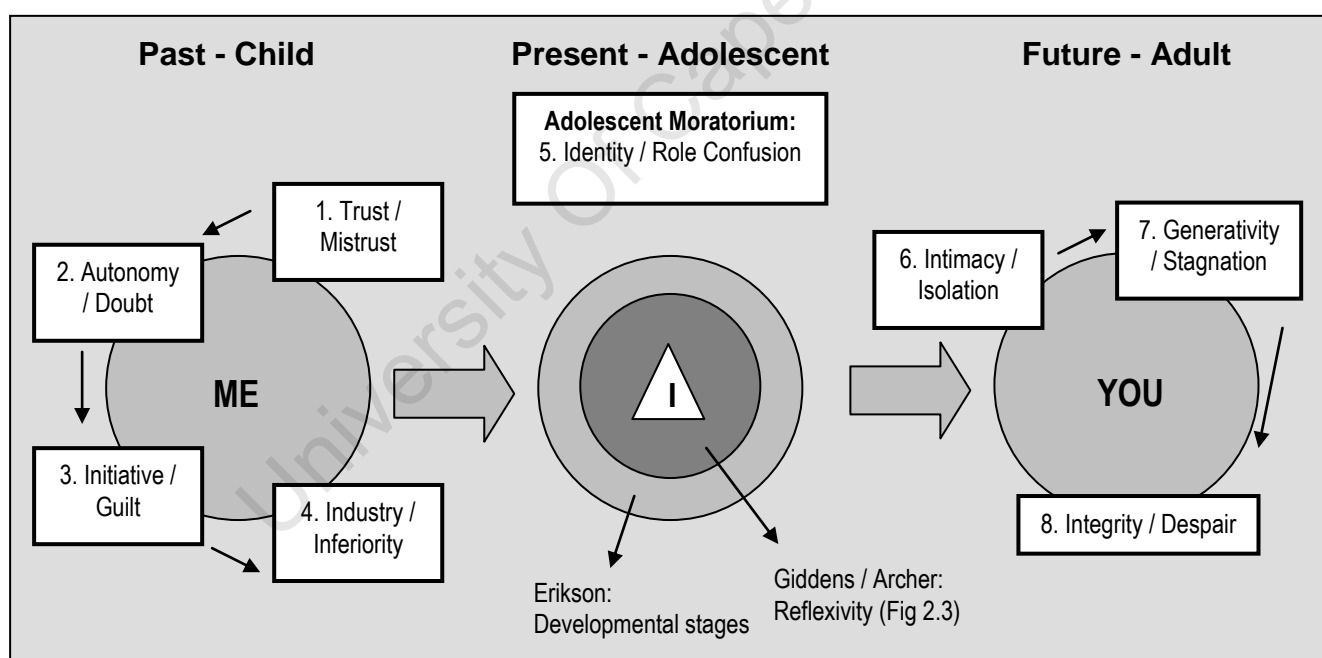
This model of identity development (Figure 2.3) illustrates some of the differences between Archer's views of identity development and those of other authors, for example:

- Mruk (2006) contends that two factors contribute to healthy self-esteem, namely individual competence and a sense of self-worth. In Figure 2.3 these concerns relate to the practical and social orders of reality respectively. To this Archer adds the natural order, which includes not only relations with the natural world but also the development of a sense of bodily well-being, which clearly also contributes to healthy self-esteem.
- Giddens (1991) worries that modernity increasingly separates social life from its natural origins, producing a society characterised by difference, exclusion and marginalisation. He warns that people are becoming separated from the moral resources necessary to live a full and satisfying life. Archer, however, includes the natural order as a necessary component of the developing identity. She recognises

people as moral beings, placing their ultimate concerns at the centre of the process of identity formation, infusing the “reflexive project of the self” (Giddens 1991: 5) with meaning and value.

### 2.6.5 Erikson’s stages of psycho-social development

In addition to considering concepts of identity formation as a reflexive process, this study also draws on Erikson’s (1968) theory of psycho-social development. Erikson views adolescence as a psycho-social moratorium, a sanctioned intermediary period between childhood and adulthood during which young people selectively integrate elements of their identity that started taking shape during childhood (Figure 2.4: ‘Me’) into a developing adult identity (‘You’). Although adolescence can sometimes appear to be a problematic stage, Erikson maintains that it is simply a period of normative crisis and that “the resourcefulness of young people proves itself when the conditions are right” (*ibid*: 131)<sup>16</sup>.



**Figure 2.4:** This model of adolescent identity development combines Erikson’s (1968) stages of psycho-social development with the model of identity formation based on Archer’s work (Figure 2.3). The ‘Embodied I’ represents the adolescent during his/her moratorium. During this stage the developmental challenge is identity formation. Challenges of past and future life stages are also indicated.

<sup>16</sup> Soudien (2007a) notes that South African youth from different socio-economic strata have very different experiences of this period of moratorium. Youth from poor backgrounds often experience a foreshortened moratorium, while more privileged youth usually have longer to experiment with identities, e.g. taking a ‘gap year’.

During adolescence, the key struggle is to integrate earlier identifications (c.f. Archer's 'Me') with a growing array of possible roles into a continuous sense of self. Later in the life cycle (Adulthood, c.f. Archer's 'You'), Erikson observes that the individual struggles to achieve intimacy, generativity and integrity. Soudien (2007a), however, contends that these three qualities are also pertinent during adolescence.

Commentators generally agree that growing up in this late- or post-modern period is fraught with complexities. Soudien (*ibid*) maintains that it is time to tease out the strands of this complexity and to investigate the *substance* of youth experience, including how young people are dealing with issues like alienation. McDonald (1999) observes that young people are involved in fragile forms of struggle to overcome alienation and to realise, amongst other things, connection, presence, dignity, integrity and possibility (c.f. Erikson's qualities of intimacy, generativity and integrity). McDonald holds that a new world is emerging from this period of radical social change, and presents this challenge:

... if sociology is to contribute to the struggle of imagining new ways of living, we must strive to understand such fragile struggles for freedom. We need to be up and out at dawn, listening to questions being asked in languages we do not yet understand (*ibid*: 218).

*Having explored the streams of alienation and identity development, I now follow the stream of people's relationship to nature. In particular, this section traces a recent decline in references to nature, and the use of experiential nature-based approaches, in environmental education research and practice.*

## 2.7 Environmental education and the notion of nature

Despite the very obvious value of nature to human well-being and development and, many would argue, its central importance to environmental education, there are concerns that there has been a marked decline in references to nature in environmental education research and practice since the early 1990s (Bonnett 2004 a & b; Postma 2006). This section investigates this issue and its implications, with particular reference to South Africa. I begin with a brief historical overview of the development of environmental education.

### 2.7.1 A brief history of environmental education

In a review of the development of environmental education in Britain and the United States, Marsden (1997) reveals that the roots of this movement run deep. He suggests that while environmental education entered a new epoch in the late 1960s and 1970s, the notion of *education about, in and for the environment* was evident in early 19<sup>th</sup> century discourse as concern about nature as content, teacher, and victim. He demonstrates how philosophical ideas, social and ecological issues, educational movements, and political agendas have influenced the ongoing evolution and ‘re-badging’ (Robottom 2007) of the field, from nature study and conservation education, to environmental education and education for sustainable development.

While educational fashions constantly change, many of the approaches used today, such as school gardening, fieldwork and cross-curricular studies were already well established in the 19<sup>th</sup> century. At times, outdoor education has been strongly informed by the romantic tradition and progressive education, emphasising aesthetic, ethical and spiritual development. At other times, science has held sway; for example, during the 1950s nature study was deemed to be inadequately scientific and was eventually replaced by environmental studies. Social, economic and political currents have long been shaping influences, with environmental, civil rights and liberation movements encouraging schools to become agencies of change, and emphasising education *for* the environment.

Some maintain that the term environmental education was coined in the mid-1960s (*ibid*), but guiding principles were first officially formulated at a United Nations intergovernmental conference held in Tbilisi, Georgia in 1977 (UNESCO-UNEP 1978). Environmental education was originally defined as an interdisciplinary approach to developing an understanding of the interrelatedness between people, their cultures and the biophysical world. Its aims included developing positive attitudes and values towards the environment, as well as the knowledge and skills that would enable people to participate actively in solving problems relating to natural, social and built environments.

Irwin (2007) notes that, prior to international agreements such as the Tbilisi Declaration and the World Conservation Strategy (IUCN/UNEP/WWF1980), which started to define environmental education as a field, people in South Africa who were interested in the intersection between environment and education tended to be involved in what was called *conservation education*, focusing on soil conservation in the agricultural sector, and

ecological interpretation in the field of nature conservation. In addition, schools, nature study centres and museums offered syllabus-related nature- and heritage education, and a number of governmental and non-governmental agencies coordinated outdoor education programmes for youth.

In 1982 the Environmental Education Association of Southern Africa (EEASA) was established, its annual meetings and popular and academic journals providing the nucleus around which the environmental education field started to take shape in the region. With many EEASA members being either teachers of the natural sciences or people involved in conservation, there was a strong focus on nature-based education in the early years of EEASA. However, Irwin (*ibid*) asserts that, from the outset, EEASA promoted a broad concept of the environment, integrating social, political, economic and biophysical considerations.

The concept of sustainable development<sup>17</sup> was introduced in the mid 1980s (e.g. WCED 1987), based on this broad and inclusive concept of the environment. A diagram representing the interacting biophysical, social, economic and political elements of the environment developed by O'Donoghue (1993b) proved highly influential in informing environmental education processes in the region. This inclusive, socio-ecological model viewed ecological issues *in relation to* social issues, showing the links between nature and culture, and between ecological sustainability and social justice (Fien 1993).

The notion of sustainable development and a broad, inclusive view of the environment resonated with the climate of political change in South Africa in the early 1990s. These concepts informed the environmental law reform process and the design and evaluation of environmental projects. Today environmental programmes in South Africa generally respond in an integrated manner to ecological, social and economic concerns within the political framework of the South African Constitution, in which the right to a healthy environment is enshrined. For example, national and bioregional conservation programmes such as Working for Water<sup>18</sup> and Cape Action for People and Environment (C.A.P.E.)<sup>19</sup> take as their starting points the notion that caring for nature should benefit people directly (Ashwell *et al* 2006; Gelderblom *et al* 2003).

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<sup>17</sup> Development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs (WCED 1987); several United Nations texts refer to the 'interdependent and mutually reinforcing pillars' of sustainable development as economic development, social development, and environmental protection ([http://en.wikipedia.org/wiki/Sustainable\\_development](http://en.wikipedia.org/wiki/Sustainable_development), retrieved 6 January 2008)

<sup>18</sup> <http://www.dwaf.gov.za/wfw/>

<sup>19</sup> <http://www.capeaction.org.za>

The notion of sustainable development has also strongly influenced environmental education internationally. The United Nations, committed to the priorities of providing quality basic education and promoting sustainable development, re-branded Environmental Education (EE) as Education for Sustainable Development (ESD), and declared the period 2005-2014 the United Nations Decade of Education for Sustainable Development (UNDESD)<sup>20</sup>. The key themes for the Decade reflect an extremely broad agenda: promoting gender equality, health, environment, rural development, cultural diversity, peace and human security, sustainable urbanisation and sustainable consumption.

### **2.7.2 A progression of methods and approaches**

In South Africa, as the concept and focus of environmental education broadened, so its methods and approaches evolved. In the mid-1990s, O'Donoghue and Janse van Rensburg (1995) outlined what they considered to be some of the early changes. They mapped a progression of methods from guided eco-trails and sensory experiences in natural areas, to active learning approaches such as fieldwork and environmental problem-solving in local settings.

More recently, as a result of the inclusion of environmental concepts and outcomes in South Africa's National Curriculum Statements for General and Further Education and Training (NEEP-GET 2005), most school-related environmental education in South Africa has become firmly linked to the learning outcomes of the new curriculum. For example, the Eco-Schools programme, an international whole-school development initiative that was introduced in South Africa in 2003, and which in other countries concentrates mainly on the sustainable management of schools, has focused largely on supporting curriculum implementation<sup>21</sup>. Lotz-Sisitka and Schudel (2007), reporting on their work with Eco-Schools in the Eastern Cape, observe that the curriculum provides a normative framework that can encourage teachers and learners to investigate local environmental issues, learn about abstract concepts in context, and enable school- and community-based action.

A survey of ESD practices in southern Africa (Lotz-Sisitka *et al* 2006a) reflects the continued broadening of the scope of EE/ESD. Respondents had very high expectations

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<sup>20</sup> <http://www.unesco.org/en/esd/>

<sup>21</sup> <http://www.wessa.org.za/index.php/Programs/Eco-Schools.html>, retrieved 5 October 2009

of ESD, believing it should mobilise people's prior knowledge and understanding (e.g. indigenous knowledge systems), develop livelihood skills, and address cultural imperialism (*ibid*). While it is encouraging that practitioners are keeping diverse concerns in mind as they develop programmes, ESD seems in danger of becoming a salvation narrative for the twenty-first century, aiming to address all the issues in the world (Lotz-Sisitka & Raven 2004; Rosenberg 2004a&b).

An unexpected consequence of the emergence of ESD, according to Rosenberg, has been a tendency among some environmental educators to see any issue as an environmental issue, and even to consider ecological issues as no longer relevant in the face of pressing social and developmental issues (Rosenberg 2004a). She voices concerns about a tendency to treat social issues as if they can be “*separated from, oppositionalised with and prioritised above ecological issues*” (Rosenberg 2004b: 148; emphasis in the original). In an ironic illustration of Rosenberg's concerns, then-Deputy President Mlambo-Ngcuka, in her opening address to the World Environmental Education Congress held in Durban in July 2007, called for sustainable development to “grow our economies, create jobs and eradicate poverty.” In the same speech she stated that “Africa does not have the luxury of viewing environmental education processes as green issues”<sup>22</sup>. This comment illustrates what Redclift (2006) describes as the increasing detachment of the notion of sustainability from the environment, due in part to the mainstreaming of the sustainability debate in policy and business contexts. Robottom (2007: 94) cautions that where a slogan system such as ESD can be interpreted in a number of ways, “the interpretation most likely to dominate is the one that coheres most closely with dominant interests in the context of implementation.”

Lotz-Sisitka (2006b) recognises that, as environmental education becomes subsumed into the broader field of ESD, there is a risk that environmental educators may feel pressure to respond to issues that are not strictly ‘environmental’ but which are encompassed by a broad view of sustainable development. She cautions:

With the introduction of ESD care should be taken NOT to lose the specific strengths of the rich variety of ESD programmes and practices that exist in the fields of environmental education, health education, gender education, human rights education, etc. An environmental educator cannot suddenly become a health educator under the banner of ESD (although they have much to share, and interaction will no doubt strengthen both environmental education and health education). (*ibid*: 5)

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<sup>22</sup> [www.info.gov.za/speeches/2007/07070310151001.htm](http://www.info.gov.za/speeches/2007/07070310151001.htm), retrieved 15 September 2007

### 2.7.3 Sustainable development and the loss of a notion of nature

It should be borne in mind that sustainable development, the goal of ESD, is a contested concept (Bonnett 2004 a & b). Hattingh (2002) outlines four interpretations of sustainable development, each one appealing to a different interest group and ideological agenda:

- a green agenda of nature conservation;
- a social and economic agenda of needs satisfaction;
- an integrated agenda of caring for the community of life on earth; and
- a radical political and ethical agenda of transformation.

Banerjee (2003) contends that it is the second interpretation that has become dominant. He argues that the notion of sustainable development is generally based on an economic rather than an ecological rationality, and that this has contributed to the transformation of the notion of nature into environment.

A review of national curriculum documents in England revealed that as sustainable development has become a key orientating idea in education policy (Bonnett 2007), simultaneously the concept of nature is disappearing. After reviewing ESD policies in the United Kingdom, Winter (2007) expressed concern that they were unlikely to contribute in any meaningful way to sustainable living because politically they perpetuated the *status quo*. Although these documents provided practical teaching advice, they obscured through a number of silences political and ethical questions that are central to educating about sustainability. Winter cautions that “the concept of sustainable development is politically expedient in maintaining the safe and comfortable existence of powerful groups” (*ibid*: 352).

The loss of the concept of nature is also apparent in environmental education discourse in southern Africa. The following serves as an illustration: in the review of ESD practices referred to above (Lotz-Sisitka *et al* 2006a) the word *nature* (meaning the natural environment) did not occur once in 77 pages; neither, in fact, did the terms *ecology*, or *natural-* or *biophysical environment*. However, the term *natural resource* occurred 19 times (suggesting a view of nature as something of utilitarian value). In contrast, the terms *sustainable development* and *issue* occurred more than 100 times each and the word *problem* about 15 times in the document. This simple word-search confirms my suspicion that the notion of nature has lost currency in environmental education research and practice in the region, being overtaken by a development agenda.

While numerous opportunities do exist for learners to undertake ecological fieldwork and to understand and appreciate nature through experiential encounters, there has been a marked shift to environmental issue-focused approaches in the region. These issues are, however, complex and difficult to address, and many school teachers lack the necessary knowledge to teach about environmental issues, or the capacity to organise curriculum-related action projects (Rosenberg, no date); consequently, issues are often dealt with in abstract and superficial ways.

#### **2.7.4 Where did nature go?**

Bearing in mind the ever-broadening scope of EE/ESD, it is possible that the diminishing focus on nature and experiential approaches might simply be due to the ‘dilution’ of this environmental focus by other issues and approaches. There are, however, other factors that have contributed to the loss of the notion of nature from environmental education in southern Africa.

Firstly, for a number of years, the word *nature* carried negative connotations in the region. The creation of nature and game reserves to protect plants, animals and landscapes often resulted in the removal of indigenous people from their ancestral lands, resulting in resentment towards the conservation sector (Khan 1989; O’Donoghue 2007). Due to Apartheid policies, before the 1990s black South Africans were not allowed to visit or stay in most of South Africa’s nature reserves and resorts, and employment opportunities for black people in the conservation sector were generally limited to poorly paid, menial positions. Many outdoor education programmes for schools were run by racially segregated departments of education (e.g. nature study schools and outdoor education centres run by provincial education departments) and benefited white learners only. Although non-governmental organisations (e.g. the Wildlife Society) and nature conservation departments in some of the homelands (e.g. the Bophuthatswana Parks Board), provided non-racial nature-based education programmes (Irwin 1990), with the political changes in the 1990s came the will to leave behind approaches that were considered to be vestiges of Apartheid institutions and attitudes. At the same time, the establishment of non-governmental organisations like Earthlife Africa<sup>23</sup> (est. 1988) and the Environmental Justice Networking Forum<sup>24</sup> (EJNF, est. 1994), heralded the advent of an environmental justice movement in South Africa and inspired the environmental

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<sup>23</sup> [www.earthlife.org.za](http://www.earthlife.org.za)

<sup>24</sup> [www.ejnf.org.za](http://www.ejnf.org.za)

education community to turn its attention to issues and approaches that attempted to redress social inequalities and build a just and sustainable society in more direct and immediate ways.

During the 1990s, South Africa's political transition resulted in many conservation organisations experiencing institutional restructuring, staff changes and budget cuts, resulting in the downsizing of environmental education or its elimination as a core function (Ashwell *et al* 2006). As the social and economic development aspects of conservation became increasingly important, some organisations established new social ecology departments with a much broader mandate than environmental education. Many environmental education centres were closed or refurbished as income-generating tourism facilities. Where education programmes continued to be offered, these were often delegated to junior staff with little or no background in education, and limited institutional support.<sup>25</sup>

Various other factors presented challenges for nature-based education programmes, particularly where centres were located far from the major urban areas. These included rising fuel prices, which made school excursions increasingly unaffordable; criminal incidents, which made parents and teachers reluctant to expose learners to safety risks; and the growing threat of litigation in the event of accidents at or *en route* to centres.

During the late 1980s and early 1990s, ideological debates started to undermine confidence in some aspects of nature-based environmental education and outdoor education in the region. Criticism by some prominent environmental educators of the use of what they felt was a conceptually flawed 'earth-love education' framework (Opie 1992) to structure a proposed new curriculum for environmental education (Taylor *et al* 1993; O'Donoghue 1994) developed into a more general critique of some popular nature-based education methods.

In the influential booklet on environmental education methods referred to earlier, eco-trails, guided questioning, experiential techniques and quiet reflective times in nature were described as "early fieldwork methods" (O'Donoghue & Janse van Rensburg 1995: 5). This had the effect of making these approaches appear old-fashioned relative to the "broader, more participatory, more local and more action-centred approaches" said to

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<sup>25</sup> Between 2005 and 2009, the bioregional programme known as Cape Action for People and Environment (C.A.P.E.) provided professional development opportunities for people involved in conservation education in the Cape Floristic Region, helping to rebuild capacity in the field.

exemplify “an emerging picture of active learning” (*ibid*: 7). Specifically, the authors described nature interpretation as behaviourist and “top-down” (*ibid*: 5) and sensory activities as representing “a subculture of earth-love spiritualisation” (*ibid*: 6).

Although the authors stated that “it is possible to see a place for all of the methods of the past” (*ibid*: 14) and warned that it would be a mistake to discard these approaches, the effect of setting up a linear, progressive model of methods and approaches was to deter many from drawing on the so-called ‘early methods’, assuming that they were no longer appropriate (Roff, J. 2006 pers. comm.). Similarly, Melville (2007:56) expressed uncertainty about how to “include EE in the school programmes” she offered at a City nature reserve as she felt obliged to focus more on social, economic and political aspects of the environment, and was not sure how to do this in the context of the school curriculum and the particular site.

In effect, the process of mapping environmental education methods as a linear progression, and criticising many nature-based approaches as being epistemologically or intellectually inadequate, became something of a self-fulfilling prophecy. The booklet in which these ideas were published was widely circulated and used as a core text in a number of environmental education policy-, curriculum- and professional development processes. This served to shape the further development of environmental education practices in the region.

O’Donoghue later acknowledged that this linear model was inadequate and that the various methodological perspectives were “more complementary and unfolding than contradictory and contested” (O’Donoghue & Russo 2004: 344). However, he has since rejected a plurality of methods, seeking instead “an agreed best perspective” (O’Donoghue 2007: 153) He has developed a model of practice based on critical historical analysis, which he describes as integrating “*reality-congruent knowledge, shared moral purpose and a situated capability developed within learning processes of active engagement in enquiring practice*” (*ibid*, emphasis in the original). He admits however that he has not yet observed any environmental education programmes that include all the components. While this model has been carefully constructed, it is conceptually complex and risks once again being implemented instrumentally by educators who, as Dewey (1930) cautioned, tend to rely more upon intellectualism than their own sense experience, and the wisdom of their embodied reflexivity.

### 2.7.5 Why worry about the loss of a notion of nature in education?

Considering the pressing environmental issues facing humanity and the need to equip youth to cope with complex challenges, are nature experiences relevant to environmental education today? Contrary to the suggestion that such approaches are somehow less valid than problem-oriented methods (O'Donoghue & Janse van Rensburg 1995), this section provides three reasons why nature-based approaches are in fact essential; these relate to concerns about ecophobia, alienation, and the need for caring dispositions:

#### (a) **Fuelling ecophobia:**

There is concern that an approach to environmental education that focuses mainly on environmental problems without providing youth with opportunities for positive experiences of nature can fuel *ecophobia* or the fear of ecological deterioration. Louv (2006: 133) warns that as children “begin to associate [nature] with fear and apocalypse, not joy and wonder” they learn to dissociate themselves emotionally from the natural world in order to avoid having to deal with overwhelming environmental problems. For example, commentators are reporting the emergence of ‘climate change fatigue’ as people indicate unwillingness to engage with more information on this topic (Benn 2008). Postma (2006) also speaks out against using fear of environmental deterioration to motivate children to think or act in a particular way, suggesting that children should be encouraged to look after what they care about, rather than to fight things they fear.

#### (b) **Analysis, disembodiment and alienation:**

The only way that I can ‘know’ a situation ... is by actually being in it when it occurs ... the more cognitive or thematic one makes it, the more its ‘mood’, ‘feel’ or ‘atmosphere’ disappears. ... the subjective and objective aspects of a situation cannot be isolated ... they interweave and are dialectically interconnected. (Kwant 1966: 14)

Bonnett (2004b, 2007) is concerned about sustainable development having become the new orthodoxy for education strategies internationally. He feels that this can detract from educators developing an understanding of nature and people’s relationship to it, which he maintains is the key issue for environmental education. Referring to the British Science Curriculum for 5-11 year olds, he observes that an appreciation for nature has been entirely replaced by a focus on developing scientific process skills. As a result, a “largely analytic/instrumental/invasive rationality dominates” (Bonnett 2007: 708). Noting that an aggressive scientific attitude has fuelled the environmental crisis, he questions the loss of the motive of appreciation from the study of nature.

Payne (in press) argues that most current environmental discourse overlooks the primacy of our organic relationship with the world, focusing instead on socio-cultural constructions. He uses the term ‘eco-phenomenology’ to describe a sensory basis for being-in-the-world that might “help to ‘earth’ environmental education and ‘ground’ its research from within our primordiality of what it is to be human in relation to nature” (*ibid*: unpaginated).

Writing about science education, Dahlin (2001) asserts that sense experiences should occur prior to the development of conceptual frameworks, and warns against the reductionism that results from trying to interpret a phenomenon before experiencing it. He quotes Dewey (1997: 23) who cautions that “When intellectual experience and its material are taken to be primary, the cord that binds experience and nature is cut.” Dahlin also cites Husserl’s dictum to “return to the things themselves” (*ibid*: 454), and not to remain deaf to 99 of nature’s 100 languages. Dahlin contrasts an understanding of nature obtained through ‘sense languages’ like form, colour and taste, with what he calls the mathematisation of nature. He calls for phenomenological and aesthetic approaches to knowledge formation in science education. Without this he fears that an over-emphasis on cognition that is predominantly conceptual rather than experiential may cause learners to become alienated from both nature and science.

Bonnett exemplifies this reservation:

... the cybernetic/scientific model holds the danger of giving rise to a view of ‘systemic’ that is illusory and distorting because it privileges an understanding of things as constituted through systematization ... This is not only inherently blind to the character of the occurring of natural things ... It sets up our understanding of the greater whole as a set of discursive interrelations rather than as a lived ground out of which things stand forth, are experienced in their particular and essentially mysterious arising ... (Bonnett 2009: 48)

Postma (2006) too insists that where the environment is concerned, poetic and embodied forms of knowing should be valued as highly as scientific and economic discourses. He warns that highly technical, problem-based views of the environment, while important to scientists and policy-makers, may not be as appropriate to children and youth:

... when it comes down to enhancing environmental responsibility, it is not a mere social or economic task that schools are burdened with but an educational assignment: educators ought to preserve the playful and caring involvement of children with their natural environment and inspire them to deal with the caring responsibilities that arise from this experience. Unfortunately, the particular forms of environmental education enhancing intimate physical interaction with nature ... have been pushed to the back within the framework of ESD (*ibid*: 187).

Noting that opportunities for unstructured time and free play in nature are decreasing, he challenges schools to provide children with opportunities for playful involvement in nature.

**(c) Global thinking and local caring:**

Postma (2006) asserts that ESD has prioritised global thinking over local caring. Bonnett (2003) proposes an alternative approach, which he calls *sustainability as a frame of mind*, which values harmony with nature, recognises human responsibility for nature, and encourages intimate, intuitive and sensuous engagement with nature. He proposes that, rather than simply fulfilling pre-determined learning outcomes, learners should be encouraged to respond to nature spontaneously in moral, aesthetic, affective and imaginative ways.

*This concludes the part of the literature review that addressed the professional concern that motivated the study (the place of nature in environmental education) and the conceptual model that guided the investigation (concerns relating to alienation and identity development). The next section explores in depth what I consider to be the underlying social reality that has given rise to many of the concerns raised in the previous sections – that is dominant modernist conceptions of nature and the people-nature relationship, which are in turn the product of a dualistic world view.*

## **2.8 Nature in Western philosophy: A contested notion**

We have seen that there has been a decline in references to nature in environmental education and ESD discourse in recent years, and noted that the concept became politically problematic in South Africa (Section 2.7). This section therefore seeks to explore the contested notion of nature in more detail, and to consider whether or not the concept is worth, in the words of Michael Bonnett (2004a), ‘retrieving.’

### **2.8.1 What is Nature?**

Nature is one of the oldest and most contested concepts in Western thought (Krikorian 1944). A brief critical review of the notion of nature is therefore necessary in order to bring to light some of these different views, as well as issues of power and privilege

associated with this concept. Soper (1995) outlines and analyses two dominant and generally oppositional discourses of nature: realist ecological and post-modern constructivist views.

Relating to an *ecological* point of view, she lists three distinct concepts of nature:

- **lay concept:** everyday ideas of nature, e.g. distinct from urban and industrial landscapes; a place of aesthetic appreciation; a source of raw materials; a place under threat that needs to be conserved;
- **realist concept:** structures, processes and causal powers that operate in the physical world; the object of natural science study; natural laws to which people are subject;
- **metaphysical concept:** nature as non-human; a concept enabling humanity to think more clearly about its specificity and its relationship to the world.

On the other hand, *postmodernists* and post-structuralists tend to deny that nature exists beyond its representation in language, and see it as a cultural construction only. This nature-denialism may be in part a reaction to the abuse of the concept. Soper (*ibid*) refers to some of the problematic ways in which the notion of nature has been used to entrench cultural privilege and ideological power, such as ideas of what is ‘natural’ in terms of sexual preference, and the use of nature aestheticism to fuel nationalism, as in Nazi Germany. Similarly, Marsden (1997) points out that, during the early 20<sup>th</sup> Century, the eugenics movement had a sinister influence on outdoor- and health education in Britain and the United States. Furthermore, Soper also notes ironically that those who profess esteem for nature may not necessarily act accordingly:

The societies that have most abused nature have also perennially applauded its ways over those of ‘artifice’, have long valued its health and integrity over the decadence of human contrivance, and today employ pastoral imagery as the most successful of conventions to enhance the profits on everything from margarine to motor cars. (*ibid*: 150)

Emphasising that humans cannot escape representing nature in cultural terms, Soper (1995: 151) like Escobar (1999) concludes that “this does not justify the conclusion that there is no ontological distinction between the ideas we have of nature and that which the ideas are about.” She quips, “In short, it is not language that has a hole in its ozone layer” (*ibid*: 150).

Similarly, Michael Bonnett (2004a) makes the point that our *concepts* of nature are socially produced, arising as they do in the context of human practices. However, we *experience* nature as ‘self-arising’ and essentially non-artefactual. He asserts that experience shapes our ideas of an underlying reality; intuitively we know that there is a world that exists independently of ourselves. This argument reflects Bhaskar’s notion of the epistemic fallacy: that we must make a distinction between *what is*, and what we *think about* what is (Troster 2005).

Soper (1995) summarises the features of these two opposing viewpoints thus:

- **Nature-endorsing arguments** are predominantly realist and ecological; they view nature as a domain of truth, value and authenticity, and tend to reject the nature-culture dualism. According to Soper, they seek to critique and correct the abuse of nature. However, as will be argued below (Section 2.8.3), realist notions of nature are not necessarily benign. Indeed, modernism, which has promoted unfettered economic growth, is rooted in a realist view of nature as resource, and has had devastating environmental consequences worldwide.
- **Nature-sceptical arguments** are predominantly postmodernist and semiotic; they see nature as linguistically constructed and reject naturalist explanations. They highlight and seek to critique problematic cultural and ideological notions of nature in society.

Soper (*ibid*) calls for an end to the communication impasse between these two viewpoints, noting that both positions oppose oppression, and that each perspective has much to offer the other. So, while many who come from an ecological perspective may need to reflect more critically on the cultural and ideological assumptions that influence their views of nature, a realist perspective is the responsible basis from which to argue for the political changes necessary to sustain human flourishing on Earth.

Returning to Bhaskar’s model of a stratified ontology introduced in Section 2.2, it is clear that these apparently oppositional points of view can be integrated within a layered understanding of nature that is both real and socially constructed.

## 2.8.2 Western attitudes to nature

Pietarinen (1994) has identified four distinct attitudes of people in the West to nature: utilism, humanism, mysticism and naturism. The main features of these views are summarised in Table 2.2 below:

Attitude	End	Nature concept	Legitimisation	Relation to science & technology	Optimism
<b>Utilism</b>	High level of welfare for people	A system regulated by causal laws; a source of energy and raw materials	Humanity has an unlimited right to use nature for the welfare of people	S&T are all important especially to improve human welfare	All problems relating to human welfare can be solved by science and technology
<b>Humanism</b>	Intellectual and moral development of humans; Socratic virtues	Raw, primitive; contains possibilities for development of human culture	Humanity has the right to use nature for intellectual and moral development through education	S&T are necessary but should be used to promote humanism	Culture develops progressively despite occasional problems
<b>Mysticism</b>	Experience the unity of humans and nature through accessing the spirit of nature	A spiritual and divine totality	Nature represents sanctity; this is the highest end for human life	Reject S&T as they violate nature's spirituality and stop humans experiencing mystical unity	Humanity can damage nature but never destroy its divine force
<b>Naturism</b>	Conserve nature in as original a condition as possible	A system governed by the laws of ecology; humans are part of the system	All parts of nature are of equal intrinsic value. People should respect nature's intrinsic value.	Reject S&T that endangers species and causes excessive ecological disturbance	Nature can be conserved if people accept themselves as a species among others, with no special privileges

**Table 2.2:** A summary of the features of Western attitudes towards nature (Pietarinen 1994)

**Utilism** is the view of nature that evolved from seventeenth century modernism, and which has been blamed for many of the social and ecological crises facing the world today.

Pietarinen considers the other attitudes as alternatives to this dominant view:

- **Humanism** is a rational attitude that can be considered an ethical rather than technical rationality. Unlike utilism, this attitude recognises nature's aesthetic value and promotes responsibility for nature. However, the question remains

whether or not human culture can advance without causing damage to the environment.

- **Mystical movements**, he observes, become popular during times of cultural crisis. Respect for nature is central but Pietarinen asks if welfare of people and respect for nature can be reconciled. Although mysticism may be valuable at a personal level, at a global scale it would be unjustifiable as it provides an escape from rather than a solution to the problems facing humankind.
- **Naturism** or biocentrism underlies a system of environmental ethics that states that people should respect the good of all living beings. Practically, however, people are unlikely to reject their privileged position and the benefits of science, technology and civilisation.

Alas, Pietarinen concludes that none of these views, and possibly not even a combination of them, may prove satisfactory in terms of balancing the interests of humanity and the “tolerance of nature” (*ibid*: 294).

### 2.8.3 Hybrid natures

Arturo Escobar, a political ecologist, suggests that the meaning of nature has shifted to such a degree over time that “the ‘crisis of nature’ is also a crisis of nature’s identity” Escobar (1999: 1). In an attempt to develop an anti-essentialist understanding of nature, Escobar offers a framework which acknowledges the biophysical basis of nature and integrates many of the ways in which the concept of nature is socially constructed. His model comprises three hybrid accounts of nature:

- **Capitalist nature:** Nature is a resource to be managed or a commodity to be traded and consumed; nature and culture are viewed as ontologically distinct. In a global economy, this is the dominant view of nature. In the pursuit of profits, natural resources are extracted, traded and consumed without restraint, and with little apparent concern for their long-term availability. Biodiversity and ecosystem services are increasingly viewed as commodities with monetary value.
- **Organic nature:** Nature is an integrated biophysical, human and supernatural experience, culturally established and maintained through rituals and practices. In this view, nature and culture are ontologically linked. This perspective reflects the view of nature Escobar experienced when working in Columbia with indigenous peoples struggling to retain their land and traditions in the face of globalisation

pressures. In South Africa, a similar integrated experience of nature, humanity and the spirit world is reflected in the rock art of San hunter-gatherers (Blundell 2006) and in traditional African cultural practices (Mutwa 1998).

- **Techno-nature:** Nature occurs in hybrid relations with the artificial and the virtual. Although humans have always intervened in nature, molecular technologies (e.g. recombinant DNA, nano-technologies) and the surgical reconstruction of bodies represent the transformation of nature at a deeper ontological level. While threatening in terms of the potential for the ultimate loss of interaction with ‘real’ nature, Escobar speculates on the potential of using new technologies in the defence of place and place-based ecological and cultural practices. He suggests that, at a time when nature seems to have lost significance in the lives of most people, new technologies may provide creative opportunities to “[wrest] control of life away from purely capitalist goals” (ibid: 15).

It is clear from this brief overview that the notion of nature is extremely complex, and that in the West, nature is most often viewed as an object serving humanity. A dualistic world view has often been blamed for this perspective, so the following section investigates this view and its implications.

## 2.9 A nature-culture dualism and alternatives

This section explores the dominant conception of the human-nature relationship in the modern West: a nature-culture dualism that many believe has contributed to the environmental crisis. Alternative views of the human-nature relationship are also presented.

### 2.9.1 Nature as other – the double antithesis

We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect. (Leopold 1949: viii)

In the West, the term nature has generally been used as a term of distinction. Krikorian (1944) refers to the dualism or split between nature and the supernatural on the one hand, and nature and humanity on the other, as a ‘double antithesis.’ Soper (1995) maintains that, even for those who prefer to emphasise human connectedness with nature, the

distinction between nature and culture is fundamental, and implicit in discussions of the human relationship with nature.

Soper notes that the term *nature* is usually used to describe “that part of the material world that is given prior to any human activity” (*ibid*: 16). But in a world transformed by human agency, people have questioned the accuracy of this definition, with Merchant (1980) writing about the *Death of Nature*, McKibben (1990) about the *End of Nature*, and Escobar (1999) describing the present period as ‘after nature.’ On the other hand, drawing on Merleau-Ponty’s notion of inter-subjectivity, Adams (2007) insists that it is misleading to speak of the self as independent of nature because self and nature inter-permeate one another:

... what is most real is this inter-relational couple—or coupling—of self with world, world with self. This coupling is our self or subjectivity. And this radically inter-relational (inter)subjectivity is what [Merleau-Ponty] means by the flesh (Adams 2007: 44).

## 2.9.2 Roots of the nature-culture dualism

Various authors have identified the nature-culture dualism as a fundamental cause of the current ecological crisis, and trace its roots in the West to various causes, including the advent of written language (Abram 1997), aspects of Judaeo-Christian religious thought (White 1967), philosophies of Ancient Greece (Krikorian 1944), and the scientific revolution of the seventeenth century (Capra 1982; Soper 1995).

Abram (1997) suggests that a fundamental disconnection between people and nature arose with the development of alphabet-based writing systems around the world. With the development of written characters that represent sounds rather than actual phenomena (as in the case of glyphs and pictographs), Abram contends that “the larger, more-than-human life-world [was] no longer part of the semiotic, no longer a *necessary part* of the system” (*ibid*: 101) as it had been for people from oral traditions. He demonstrates how the development of literacy caused a growing detachment of people from place, noting that “our ever-increasing intercourse with our own signs” resulted in “an isolate and abstract mind bent on overcoming an organic reality” (*ibid*: 267).

In the Judaeo-Christian tradition God’s injunction to people to “fill the earth and subdue it” (Genesis 1: 28, The Bible, New International Version) conferred on humanity dominion over nature. Humans were also considered to be spiritually separate from nature, having been created in the image of God (Genesis 1:26). According to White

(1967), this intimate relationship between humans and the Divine justified an arrogant, exploitative attitude towards nature. White also suggests that the teleological nature of Western religious traditions created a linear sense of history and established an unquestioned belief in progress, which contributed to competitive and exploitative practices.

In Ancient Greece, Leucippus and Democritus in the fifth century BC introduced the philosophy of atomic materialism, with the atom as the ultimate building block of all matter. Atomism ushered in the possibility of reductionist analysis and a mechanistic view of the world, denying causal relations which could not be explained in mechanical terms (Baird-Callicott 1989). Philosophers like Pythagoras and Plato conceived of the mind as a discrete psychic substance within a material body, introducing a dualistic split between mind and matter (nature), or knowing and doing. The disciplined mind could derive mechanical laws governing the material world (*ibid*). These philosophers posited that knowledge and the mind possessed a higher and more spiritual worth than practical pursuits and the natural world (Dewey 1930).

Interestingly, in Europe during the Middle Ages humans *were* considered to be part of nature. At that time, the order of nature was conceived of as a Great Chain of Being, with an infinite number of links arranged hierarchically, from the lowliest form of life to the most perfect creature. In this model, nature (which included humans) was separate from God or the supernatural. Humans occupied a fairly modest position in the chain below ethereal beings and angels. However, their position above other animals and plants gave them a measure of dominion over them. Although the idea of the Great Chain of Being did not directly inform current ecological thinking, one can recognise parallels between these world views such as the diversity of life and interconnections between links in the chain (Soper 1995).

The supremacy of mind over nature was revived by Enlightenment philosophers and scientists of the sixteenth and seventeenth centuries, such as Descartes, Newton and Galileo (*ibid*). The famous statement of Descartes: *Cogito ergo sum* (I think, therefore I am) set the tone for a new Age of Reason in the West. The rational search for abstract structure and explanation – the quest to discover pre-existing ‘laws of nature’ – unified Western philosophy (Baird-Callicott & Ames 1989). Newton’s mechanistic science displaced intuitive ways of knowing; Galileo’s heliocentric universe diminished the centrality of the Earth in people’s understanding of the universe; and the burning alive

and drowning of tens of thousands of women (mainly peasant midwives and herbalists) accused of being witches, almost succeeded in wiping out traditional nature-based knowledge and practices in much of Europe (Abram 1997; Merchant 1980).

The view of nature as a vast machine spawned a fascination with the systematic study of its parts. Coinciding with a period of exploration and colonial expansion, naturalists travelled the world in the company of merchants and administrators seeking to expand the empires of Western Europe. The collecting, naming and classifying of species from distant lands privileged the taxonomic gaze of classical science, and largely ignored the wealth of knowledge possessed by indigenous people who knew these species intimately (Escobar 1998). The ever-narrowing focus on the 'parts' of nature may have prevented scientists from anticipating or recognising the impacts that their endeavours would have on the 'whole.' As White (1967) comments, scientific and technological progress often proved insensitive and even brutal to people and nature.

The impact of the Enlightenment is still being felt, and dualistic thinking and the pursuit of progress seem in no way diminished, despite the shadow these dominant ideas have cast across the globe. The magnitude of this crisis, in particular the global scale of climatic changes, resource depletion, biodiversity loss, and pollution of air, water and soil – and the threat these changes pose to human survival – require us to urgently reconsider the nature of nature and our place within it.

### **2.9.3 Traditional alternatives**

Soper (1995) recognises that the dualistic view described above is but one part of a paradoxical relationship with nature in the modern West, which is characterised by both immanence and transcendence. Humans have the capacity to experience both a sense of immersion in and belonging to the natural order, as well as a sense of separateness that enables us to objectify nature as other.

... thinking in this area is troubled by the paradox of humanity's simultaneous immanence and transcendence. Nature is that which Humanity finds itself within, and to which in some sense it belongs, but also that from which it ... seems excluded in the very moment in which it reflects upon either its otherness or its belongingness. (Soper 1995: 49)

Merleau-Ponty (1962) recognises this as the fundamental ambiguity that separates human from animal life: "everything is simultaneously natural and cultural. Nothing is

absolutely independent of ‘purely biological being’ yet everything transcends it” (Langer 1989: 62).

In contrast to a view of nature as ‘other’, Abram (1997) and Escobar (1999) point out that many non-modern people (past and present) recognise no distinction between biophysical, human and supernatural domains. There is no strict separation between humans and nature, and people experience the earth and its animals, plants and landforms as expressive subjects with which they have a reciprocal relationship. This section briefly introduces some of these alternative views.

**(a) An African non-dualistic view:**

Odhiambo (1972) describes a traditional African worldview as monistic rather than dualistic: reason and faith are mutually interdependent, and being and force are indistinguishable. All beings share something in common:

The thread that constantly runs through the African’s worldview is one of life, or force, or vital-force. All beings – whether human, animal, plant, or inanimate – possess vital force of their own. (*ibid*: 43)

As in the Great Chain of Being (above) all entities are arranged in a hierarchy, in this case according to the measure of their vital-force, from the supreme being, to the patriarchs of the clans, the ancestors, the living members of the clan, and all other animate and inanimate beings. Ogbonnaya (1994) observes that a *communal* rather than individualistic principle underlies an African world view. He quotes Mbiti who stated, in stark contrast to Descartes: “I belong, therefore I am” (*ibid*: 77). Everything in the cosmos: people, ancestral spirits, and the natural world, is part of the Divine and as such, fundamentally connected and interdependent. Even the human person comprises a community of selves that interact intra-psychically, and this multiplicity makes wholeness possible. In many communities, one of these selves will be a totem animal, which is sacred to the person and may not be killed.

Similarly, the Zulu shaman, Vusamazulu Credo Mutwa (1996, 1998), recounts the words of the Wise Woman, one of the instructors who passed on to him the teachings of what he calls the Great Belief:

Man does not possess a special soul, exclusive to himself. All souls are the same, and Man is but one of the many forms, or re-incarnations that a soul must pass through. The soul of the impala ... may once have been a tenant in the body of someone you knew. (Mutwa 1998: 565 & 566)

Elsewhere he mourns the loss of connection with nature and the impact he feels this separation has had on the psyche:

When you are taken away from nature and see trees as trees and no longer as part of yourself, you lose that power to feel ... When I was in the West, I lived in a strange society where people feel with their brains. But a person who lives with nature ... feels with a second part of his body – (pointing to his abdomen) down here. It is a feeling a mother or father has when something threatens his or her baby. ... We must return to that feeling, a complete feeling of being one with everything else. (Lippe-Biesterfeld 2005: 82)

According to African tradition, we inhabit a religious universe. While nature itself is not worshipped, natural objects and phenomena as creations of God make manifest and symbolise the Divine. Therefore, natural objects and phenomena, such as certain animals, the sun, sky, rain, mountains and sacred groves, feature strongly in myths, beliefs and rituals throughout the continent (Mbiti 1990).

Hoffman (1994) suggests that African philosophies, which assume a relationship of *life in nature* rather than *rule over nature*, can help us to address environmental problems caused by a Western world view. However, Mbiti (1990) points out that, even though the universe is experienced as an integrated physical and spiritual whole, African ontology is strongly anthropocentric; God and nature are viewed in relation to people's interests. In an account of the beliefs and practices of the Lovedu people of Mpumalanga, for example, Forde (1998) reports that, while humans and nature are not opposed, nature is considered important only inasmuch as it is of use to society. The Lovedu seek to control the order of nature through appeals to the ancestors, the use of powerful charms, and through the divinity of their leader, the Rain Queen.

**(b) An Eastern non-dualistic view:**

In the East, Taoism denies the existence of fixed and independent opposites (Parkes 1989) and therefore the possibility of dualism. Instead, the notion of polarity (Yin and Yang) is central. The self has a polar relationship with the other, meaning that each particular requires the other as a necessary condition for being what it is. Each pole is explained with reference to the other, with left needing right, up needing down, and self needing other (Ames 1989). Thus, the *particular* (te) and its *environment* (tao) are inseparable polarities – the human being is irreducibly a 'person-in-environment' and the environment is not an 'other' but a dimension of the self.

Furthermore, Tu Wei-Ming (1989) explains that the Chinese perceive the cosmos as the spontaneous unfolding of continuous creativity and not the product of a single creation

event. The cosmos consists of dynamic energy fields rather than static material entities, and no distinction is made between energy (ch'i) and matter in Chinese philosophy. Everything in the universe is an integral part of a continuous process of transformation, without beginning or end. In this regard, Eastern views of nature have more in common with quantum physics than with earlier Newtonian views of science. This quote from Chang Tsai reflects this deep sense of mutuality and immediacy with nature:

Heaven is my father and earth is my mother, and even such a small being as I finds an intimate place in their midst. Therefore, that which fills the universe I regard as my body and that which directs the universe I regard as my nature. All people are my brothers and sisters, and all things are my companions. (Tu Wei-Ming 1989: 73 & 74)

#### **2.9.4 A Western alternative to dualism**

... the world consists of a fabric of interwoven structures ... 'the intertwining – the chiasm'  
(Kwant 1966: 37)

In modern Western philosophy, both Dewey (1997) with his emphasis on the experiential (Section 2.10.1), and the phenomenological writers Husserl (1970: a phenomenological critique of science) and Merleau-Ponty (1962: the phenomenology of perception) appear to provide alternatives to the dominant mind-body and nature-culture dualisms (Dahlin 2001). They do this by rejecting dualism, insisting on the primacy of sense experiences relative to conceptual frameworks, and by introducing the notion of inter-subjectivity or inter-corporeality. Merleau-Ponty set out to provide an alternative to Cartesian dualism and its extremes of realism and idealism. His phenomenology has been described as a philosophy of situation, which reveals the ultimate unity of humans and their surroundings (Mallin 1979).

In Merleau-Ponty's works (1962, 1964; Langer 1989; Mallin 1979), he views the perceiver as a body-subject, not a pure thinker. He rejects both the Cartesian idea of consciousness as a psychic entity encased in a machine, and the positivist conception of the neutral observer. He denies that what we perceive is a mere mental construction, asserting that bodily existence is itself imbued with meaning. He holds that our situated participation in the world is the foundation of knowledge.

As embodied beings, we do not observe the world as spectacle from some ideal standpoint beyond ourselves. The body is permanently present and its perspective constitutes our bond with the world, and makes others present to us. Our actual

experience is one of *being-in-the-world* – and we *experience* this before we arrive at the *idea* of an external world (Langer 1989):

Underlying that reflective procedure that tears subject away from body, we find a pre-reflective experience in which body, things and world are immediately present and interrelated in a living connection – as are the parts of our body (*ibid*: 71).

Neither subject nor object is primary; indeed, when viewed as distinct, both become abstractions, separated from the unified situation in which both are founded (Mallin 1979). Merleau-Ponty calls this unified situation the *phenomenal field*; it is the domain in which we as incarnate, perspectival subjects are situated. Sensation is the living dialogue between the body-subject and its environment:

Sensing is neither a passive registering nor an active imposing of a meaning; to sense something is to co-exist or ‘commune’ with it, to open oneself to it and to make it one’s own prior to any reflection or specifically personal act (Langer 1989: 74).

Merleau-Ponty (1962; Langer 1989) also critiques the idea of the body as an object governed by a mechanistic ‘stimulus-response’ physiology. The body is a synthesis of powers – spatial, unified and intentional. Bodily intentionality is directed towards the perceived world, establishing a vital connection between the sensing body-subject and the sensible world. In turn, Merleau-Ponty asserts, the sensible *beckons* to the incarnate subject.

Merleau-Ponty proposes a radical notion of inter-subjectivity. He views the senses not as the possession of an individual with which s/he perceives others, but as something pre-personal – a dimension of Being itself, in which individual subjects participate (Mallin 1979):

The senses are open and synchronised with the world to the absolute extent that Being ‘runs through’ them. The corporeal subject is not face to face with Being; for corporeity is Being itself ... there is meaning in the world before I initiate it, but at the same time this meaning discloses my ‘conaturality’, that is to say, that the nature of myself is the same as the nature of the world (*ibid*: 42).

In his unfinished work *The Visible and the Invisible* published posthumously, Merleau-Ponty (1968; Kwant 1966) describes the relationship between the perceiver and the perceived as a chiasm, an intimate and reciprocal intertwining “as close as between the sea and the strand” (Merleau-Ponty 1968: 130 & 131). It is as if a primordial element of Being, which he calls the *flesh of the world*, intervenes between the seer and the thing perceived and provides their means of communication. Such is the intertwining that “the seer and the visible reciprocate one another and we no longer know which sees and which

is seen” (*ibid*: 139). Indeed, Merleau-Ponty suggests that “it is not *I* who sees, not *he* who sees, because an anonymous visibility inhabits both of us ... in virtue of that primordial property that belongs to the flesh” (*ibid*: 142). Touching and being touched, seeing and being seen are reversible, as when I touch my right hand with my left. The experience of being simultaneously subject and object is united in the body.

O’Loughlin (1995: unpaginated) explains that this notion of ‘flesh’ constitutes an important claim – that beings are not independent entities but that the body-subject and world share a materiality: “subject and object are inherently open to each other for they are ‘constituted’ in the one stroke separating the flesh into its distinct modalities.” There is no necessary split between human corporeality and that of nature. O’Loughlin believes that this account of the ‘flesh of the world’ provides an alternative to mind-matter dualism, that ‘powerful fiction’ which has sustained relationships of domination and subjugation.

In positing his ontology of nature, Merleau-Ponty (1970: 64 & 65) holds that:

... nature is not simply the object, the accessory of consciousness in its tête-à-tête with knowledge. It is an object from which we have arisen, in which our beginnings have been posited ... It presents itself always as already there before us, and yet as new before our gaze. Reflexive thought is disoriented by this implication of the immemorial in the present ...

He observes an ongoing cycle in philosophy between thought he describes as ‘positivist’, in which being and God exist, and that which he calls ‘negativist’, which begins in doubt and which finds certainty on a continuum between being and nothingness. He holds, however, that these apparently mutually exclusive points of view can be accommodated if one accepts:

... that being exists, that appearances are only a manifestation and a restriction of being – and that these appearances are the canon of everything that we can understand by ‘being’ ... being in-itself ... appears as an ungraspable phantom ... we cannot expect to bring [being] to a rational reduction ... which leaves us with the sole alternative of wholly embracing it (Merleau-Ponty 1970: 90).

An ontology that can accommodate such a contradiction is inherently dialectical, revealing “in being itself an overlap or movement” (*ibid*: 91). He notes that the Cartesian concept of nature as a mechanism governed by laws disallowed hidden possibilities. The Cartesian split left nature as an empty shell, with everything internal transferred to God. However, quantum physics overturned this determinist view and gave us a perspective on the physical that no longer comprises discreet, fixed ‘natures’: “[t]he field ‘is no longer a thing, it is a system of effects’” (*ibid*: 92).

Merleau-Ponty denies that nature is either a spirit at work in things, or a projection of our own thoughts; it is “*that which makes there be*” (*ibid*: 93, emphasis in the original). While nature is not a fact we can deduce, perception (rather than consciousness) *reveals* the facticity of nature to us.

This brief summary of some of the features of Merleau-Ponty’s work provides the possibility of viewing relationships amongst people, and between people and nature, in an inter-subjective rather than dualistic manner. This inter-subjectivity, as Payne (in press) points out is “of that sensuously perceptive organic or ‘animal-like’ body.” Merleau-Ponty makes “a compelling, non-idealist case for the inseparability of the non-transcendental mind, carnal body, and its intimate spatio-temporal connections of I and life-world.” Or, in the words of Will Adams:

... humankind and nature are two different yet inseparable ‘sides’ or participants in an inter-subjective community, always presencing together—intertwining, inter-permeating, inter-being—and always already interrelating with one another in intimate conversation (Adams 2007: 49).

## **2.10 Nature, education and embodiment**

Despite the dominance of the nature-culture dualism in modern Western philosophy, this final section of the literature review demonstrates that notions of learning in and from nature are deeply rooted in Western philosophies of education. After briefly considering how four well-known educational philosophers viewed the role of nature in education, arguments for the retrieval of embodied ways of experiencing and learning about and through nature are presented.

### **2.10.1 Nature and philosophies of education**

Nature has had a place in philosophies of education in the West for hundreds of years. This section briefly summarises the contributions of Rousseau, Pestalozzi, Froebel and Dewey to our understanding of the place of nature in education. It reveals that an appreciation for nature is deeply rooted in Western education, and also that many of the issues that confront us today have troubled educators for hundreds of years.

**(a) Jean Jacques Rousseau:**

In modern Western philosophy, Rousseau (1712-1778) was one of the early proponents of a more 'natural' approach to education. As early as the mid-eighteenth century he complained that education was training people for a place in an industrial system, and that its watchword 'progress' was the departure from 'Nature' (Archer 1928). An individualist and a romantic, Rousseau rebelled against what he perceived to be the wrongs of eighteenth century France. He saw the overcrowded cities as unhealthy places, and advised parents to ensure that their children had time for healthy recreation and education in the country.

At that time school children studied Greek and Latin literature, logic and ethics, and a smattering of the scientific knowledge of the day; corporal punishment was rife (*ibid*). In letters and books Rousseau elaborated on his ideas for a more humane and practical approach to education. His most famous treatise on education was *Emile*, in which he wrote that education should follow the lead of nature, and that children should be allowed to explore and experience their environments actively with their senses before they were required to learn from books (Rousseau 1911). He admonished tutors "never [to] substitute the symbol for the thing signified" (*ibid*: 133), and presaged the fieldwork tradition when he wrote:

You wish to teach this child geography and you provide him with globes, spheres and maps. What elaborate preparations! Why not begin by showing him the real thing so that he may at least know what you are talking about? (*ibid*: 131)

Although Rousseau himself was neither an effective educator nor parent, and many of his ideas were extremely impractical, his works nevertheless proved highly influential and inspired more practical education reformers, such as Pestalozzi and Froebel (Archer, 1928).

**(b) Heinrich Pestalozzi:**

Pestalozzi (1746-1827) was an acclaimed educator who, like Rousseau, promoted the dignity of the child and looked to nature for guidance on human development. He believed that love should be the foundation stone of education, and abolished corporal punishment in his schools (Pestalozzi 1951). Pestalozzi valued direct, concrete and active learning experiences; he developed the doctrine of *Anschaung*, or direct, concrete attention, designing educational experiences that progressed from the known to the unknown, from concrete to abstract, and from simple to complex.

Pestalozzi observed the negative social impacts of the industrial revolution, such as the dehumanisation of workers, the breakdown of families, increased delinquency, and the alienation of people from nature. He was concerned that, as industry created surplus wealth, people pursued unnecessary luxuries rather than simply satisfying their basic needs. He believed that education in the natural environment of the countryside could help to counter the effects of a pernicious social environment, allowing the child's natural goodness to develop.

Pestalozzi believed that life itself was the true basis of education (*ibid*). As with environmental educators today, he developed a natural system of education that integrated the 'heart, hands and head' through activities such as vegetable gardening at school. He believed that the environment stimulated innate powers of learning, and consequently promoted nature study and scheduled frequent excursions (Gutek 1968). His schools offered a number of practical and vocational subjects, including geography, art, music and gymnastics.

Pestalozzi could be considered one of the first environmental educators, predicting more than 150 years before the advent of the ecology movement that "Sooner or later, but of a certainty in the end, Nature will take her toll for what men do against her" (Pestalozzi 1951: 4).

**(c) Frederick Froebel:**

Froebel (1782-1852), a student of Pestalozzi, was the founder of the kindergarten movement. A passionate naturalist who was fascinated by natural design, he rejected the assumption that children could not be educated before the age of eight. He started a school in 1840, which he called Kindergarten (garden of children).

For Froebel, the three elements of education were religion, nature, and language. It was the goal of the school to integrate these three elements in the sharing of knowledge and to lead youth into a life of harmony. Froebel observed that children loved to explore, observe and interact with nature, and he recognised that this was important to the development of both an understanding and a love of nature. He therefore encouraged children to learn through play and imagination. Using music-making, dance, story-telling, poetry and gardening, he encouraged students to commune with one another and with nature (Froebel 1911; Lawrence 1951). Unlike Rousseau's Emile who was a solitary child interacting with nature, Froebel believed that it was essential for children to interact in a

community with nature, other children, adults, and media. He therefore designed the kindergarten to develop feelings and intellect in a community context (Cole 1990).

Froebel's approach to education was religious but not dogmatic. He believed that the purpose of nature was the revelation of God, and saw unity with God, nature, and society as the goal of education (Lawrence 1951). He believed that the spirit of God dwelt in nature and that external phenomena had an inner spiritual significance and symbolism; for instance:

What the water in brook and lake, what the pure air and wide expanse of the mountain-top are to the boy's soul, that, too, play is to him – a mirror of the life-struggles that await him ...  
(Froebel 1911: 118)

Froebel believed that people should become intimate with nature as this would reveal the spirit of God. He held that where an attitude of love for nature prevailed, nothing could unite teacher and pupils more intimately than the thoughtful study of nature. He encouraged teachers and parents to take a walk in nature with children at least once a week, in order to receive what nature offered (Froebel 1911).

**(d) John Dewey:**

Dewey (1859-1952), one of the most influential educational philosophers of the modern era, was a naturalist<sup>26</sup> and a pragmatist. As in the case of Pestalozzi, Dewey's legacy is evident in many of the principles and approaches of environmental education today.

Dewey (1930; Dahlin 2001) disagreed with both dualism and intellectualism. He rejected the idea that manifold forms of experience could be reduced to a 'mere knowing', or that cognition took place only in the mind. He criticised classical education, which considered knowledge and the immaterial mind to be superior to practical activity, and which tended to reduce nature to refined objects of science. The elevation of rational intelligence over experience was a legacy of the Greek philosophers; for Plato, experience represented the bondage of custom and tradition, while reason permitted progress and understanding of the true nature of things. However, Dewey maintained that intellectualism could result in a mechanistic, asomatic attitude and a distrust of human sense experience.

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<sup>26</sup> Naturalism emerged as a philosophy during the nineteenth century, informed by the development of evolutionary theory. It took an anti-dualist, anti-reductionist view of the relationship between humanity and nature but rejected the supernatural and transcendental. Naturalists believed that all phenomena, including the mind and the supernatural, were derived from organic nature and could be investigated using the scientific method (Krikorian 1944).

Dewey observed that infants gained knowledge by being involved in activities and monitoring results. He rejected the notion of a spectator theory of knowledge acquisition, viewing intelligence as embodied. He developed an approach to education based on the methods of experimental science, which reconnected practice and reason. This approach went beyond mere book learning on the one hand and the often trivial ‘object lessons’ of the empiricists on the other. For Dewey, meaningful learning was an active process of developing knowledge and understanding through discovery and inquiry (*ibid*). Experience was always embodied, immediate, enjoyed or suffered (Dahlin 2001). Payne (2003) reminds readers of Dewey’s call for an intelligent theory of experience. However, Payne and Wattoo (2008) contend that Dewey’s call for the primacy of experience in education remains unheeded.

Another aspect of Dewey’s educational philosophy that is reflected in environmental education processes today is the idea of the interdependence of different knowledge areas. Dewey believed that separating the humanities and the natural sciences in particular was artificial, and that it was easier and more meaningful to teach them together.

Dewey was a committed democrat and saw education as potentially transformative. He believed that children should be brought up as change agents and not just as spectators of their environment and society. He therefore developed a science-based social issues curriculum in which the environment and culture provided the context in which learners could develop responsibility. Dewey’s ideas of meaningful, socially transformative education are reflected in many environmental education processes today.

### **2.10.2 Embodiment, emotion and cognition**

Driven by the fantasy of splitting mind from heart and self from nature, modern and post-modern Western cultures valorize the (supposedly) disembodied intellect. Our cognitive abilities are great gifts, yet all too often we deaden our sensuous attunement with the world and thereby fabricate a desensitized, anesthetized existence. In contrast, as Merleau-Ponty shows, when truly alive ‘the body . . . is open in a circuit with the world.’ (Adams 2007: 40)

Like Dewey, Marjorie O’Loughlin (2006) argues against the dualistic tendency to treat knowledge and ideas as abstract and detached from embodied encounters with the world. She contends that predominantly disembodied approaches to education fuel subject-object dualism and a tendency to oppress ‘the other’. She stresses that an adequate understanding of social agency demands a concept of *embodied* agency, and views

emotions as the “wellspring of human action” (*ibid*: 10), which generate bodily dispositions, orientations and attitudes. She considers the idea that “experience can only be meaningfully talked about when emptied of its physicality and materiality” to be a major philosophical mistake, and asserts:

The privileging of cognition at the expense of the totality of complex processes constituting the ‘intercourse of the living being with its environment’ reinforces a view of ourselves that is not only impoverished but also dangerous. (*ibid*: 12)

Schatzki (2007) agrees that desire, cognition and emotion all combine to determine people’s actions. Emotions do indeed motivate action, usually by contributing to what he calls *practical intelligibility*, or the phenomenon of it making sense for a person to perform a particular action. He notes that it can make sense to do something both from a rational and from an emotional point of view, and asserts that “reason and emotion are not opposed in principle and need not be opposed in fact” (*ibid*: unpaginated). He points out that believing that it is necessary to repress the emotions in order to act reasonably is a legacy of modernist philosophies that set reason and emotion in opposition. According to Schatzki, Aristotle recognised that value requires truth (reason) in agreement with right desire (emotion). Just as emotion can bolster reason, Schatzki contends that reason can “be emotion’s ally in cases where emotion leads us into action” (*ibid*: unpaginated).

### **2.10.3 Impacement and reciprocity**

For O’Loughlin (2006), the tendency to observe but not to become involved is a symptom of a pre-eminently visual culture, which creates a distance between the subject and the object. She warns that this distancing tendency can, over time, undermine “the development of a sense of embodied ‘impacement’, of that ‘being-in-place’ ... [that is] essential to human flourishing” (*ibid*: 34). She believes that developing a sense of belonging is a corporeal process which involves all the senses, and she expresses a deep need for educators to recover situational bodily encounters with natural and built environments.

Postma (2006), drawing on Merleau-Ponty, observes that as sensual bodies we are able to identify with things in our life-world because we all share a corporeal mode of existence (see Section 2.9.4). The objective world we create is secondary to the life-world in which we are situated; however, notions of separation have become pervasive in both educational and environmental discourse, creating the dangerous illusion that we are somehow independent of nature. Postma encourages us to recognise the intrinsic value of

nature and develop an attitude of *listening*, which is very different from the attitude of active choice that is promoted by the liberal ideal of personal autonomy. He observes that, through being involved with nature or other people in embodied ways, we experience an inherent *call* to relate. He believes that we need to develop an attitude of receptivity and to lose ourselves in that which speaks to us.

Russon (1994) is also influenced by Merleau-Ponty. He contends that while nature is always alien to the rational ego, it is *already* involved with the embodied self:

The body is thus the point where I touch the world, where I intervene, and, equally, where the world touches me ... The body does not first exist and subsequently come into contact with an other which was also already existent, but is precisely the field where I am already involved with the other and it with me. (Russon 1994: 295)

He is therefore able to replace the dilemma of the intrinsic or utility value of nature with the options: 'value-to-the-alienated-self' or 'value-to-the-involved-self.' He believes that our *bodily commitments* are primary and that we develop 'values for the involved self' through bodily contact with others. The reflective gaze, on the other hand, enables us to make *reflective decisions*, through which we develop 'values for the alienated self' (*ibid*: 302). He believes that we need to learn to *feel the call* of nature's demands, rather than just subjecting nature to goals developed through reflective processes which, according to Kwant (1996), automatically limit one's knowledge to what can be revealed through cognitive structures.

Russon sees being embodied as being responsible for the other: "the demand to measure up to the other is not an alien demand, but is, rather, a demand to live up to what is *already intrinsic* in one's situation" (*ibid*: 300). Like Kwant (1996), he maintains that we do not decide on our values and commitments entirely autonomously; instead, these values are to an extent 'given' due to the conditions of our existence as embodied beings in the world. He suggests that we *discover* our values and commitments as we respond to the 'call of the world' and that in living out these commitments we discover who we are.

As human beings we cannot cut ourselves off from other people or from the natural world; our ontological state is one of involvement. Postma (2006: 170) declares, "I exist only insofar as I am committed to this world and involved in its affairs." Even though reciprocity amongst people may be qualitatively different from reciprocity between people and the natural world, Postma, in positing a phenomenology of care, asserts that as body-subjects we partake in "communal forms of flourishing" (*ibid*: 171). Caring for

people and for nature is not simply an instrumental decision; we are reciprocally linked as *cared-fors* and *ones-caring*, so our relationships and the well-being of others are intrinsically valuable to us. Postma observes that the emergence of a sense of reciprocity vindicates the ethical value of children's playful and aesthetic involvement in nature.

#### 2.10.4 Embodiment and education

Forms of environmental education enhancing intimate physical interaction with nature ... have been pushed to the back within the framework of [education for sustainable development]. (Postma, 2006: 187)

Where formal environmental education processes are concerned, the difficulty of implementing embodied approaches to learning, such as environmental projects that are locally-based, open-ended, experiential, and/or action-oriented, has long been recognised (Robottom 1996). With constraints ranging from the logistical to the political, environmental learning is often reduced to abstract, cognitive exercises. While some teachers do involve learners in field work, outdoor experiences and local action projects, in many cases environmental education is limited to classroom-based curriculum activities, such as reading about, analysing and reporting on environmental and development issues. This lack of embodied learning extends to the general curriculum, as Phillip Payne observes:

Apart from increasingly token offerings in art, dance, drama and music, a kind of *synamnesia* exists in schools about the central role of sensuous bodily consciousness, somatic understanding and nourishing of its often invisible and embodied 'memory-work' in 'meaning making' about one's relational, ecological self. (Payne, in press)

Beyond the core curriculum, too, Payne and Wattchow (2008) note that most experiential, outdoor programmes focus on adventure challenge and personal and social development. They observe that most are anthropocentric in approach, influenced variously by notions of self-development, national pride, taming the wild, extreme adventure, or privileged escape to the wilderness. Many of these approaches valorise speed and the overcoming of challenges in nature. They are concerned that "[o]bjectified nature and its instrumentalized spaces tend to be 'passed through' or 'over' as distinct from 'paused' or 'dwelled' in" (*ibid*: 25). They call for a rethinking of outdoor education practices as "slow, wild, elemental and post-traditional" (*ibid*: 27) rather than fast, faddish or quasi-religious:

... we seek to optimally 'presence' the earthy places of otherwise abstract spaces that too often we hastily 'pass through.' We seek to expose the possible depths and values of these places we might dwell in ... by describing and reflecting upon the needed pedagogical conversations of learners' embodied experiences, their rational reflections and their eventual

representations as texts. But, importantly, we are equally happy for silences ... in the fullest appreciation that the richness of experiences cannot be captured in language or text, so cannot be represented as learning even though, deep down, it is. (Payne & Wattchow 2008: 27 & 28)

Reporting on an outdoor course run for university students, Payne and Wattchow (2008, 2009) explain that slow pedagogy helps students to make meaning of their surroundings as they are able to integrate embodied, academic, experiential and 'glocalised' learning through "exploration, discovery, play, silence, pausing and, perhaps, most of all, our socio-ecological becoming" (Payne & Wattchow 2008: 36). Heath (2008) also calls for a more embodied orientation to learning that, instead of privileging individual mental processes of introspection and traditional ways of teaching reason and knowledge, sees teaching and learning as a process of entering into a community that focuses on doing, sharing and feeling.

### 2.10.5 Embodied reflexivity and beyond?

In Section 2.6.2 we saw that Giddens acknowledges that our sense of identity (subjectivity) emerges from our inter-subjective relations. Furthermore, Giddens and Archer view people as reflexive beings and, for Archer, the process of reflexivity is fundamentally embodied and social. Merleau-Ponty appears to provide, through the notion of the 'flesh of the world', a view of reflexivity and a possibility for identity development that is not just embodied and social, but *eco-social*:

'Flesh' furnishes the capacity for turning the world back on itself, to bring into play its reflexivity. Thus subject and object are inherently open to each other for they are 'constituted' in the one stroke separating the flesh into its distinct modalities. (O'Loughlin 1995: unpaginated)

Immersed within society, most of us are familiar with the role that relationships with people and ideas play in the shaping of our identities. In urban societies, however, our intimacy with nature is less developed. Some of the so-called 'early methods' of environmental education described by O'Donoghue and Janse van Rensburg (1995), such as sensory activities and solitaires, are precisely the opportunities that can enable us to experience, through embodied reflexivity, our ecological identities and develop a sense of respectful intimacy with the more-than-human world.

Postma (2006: 166) states that Merleau-Ponty views the human body as "the site where the perceptible world turns back upon itself and reveals itself." It is the site where the reciprocal relationship between the perceiver and the perceived constitutes the possibility

of perception: vision emerges out of the visible, and touch emerges out of the tangible. It is therefore possible that the reflexive agent, through a reciprocal relationship with the world, may become the locus through which the reflexive world finds expression. This may be what Russon means when he says that:

The very nature of embodiment is to find oneself compelled, and the form the compulsion takes is to find oneself *called upon to respond to the situation* in a specific way: the form in which the other exists for the body is as a *call to action*. (Russon 1994: 299, emphases in the original).

As Russon states, we discover what we value as we respond to the ‘call of the world’, and we discover who we are as we live out these commitments. In relation to the development of identity, those ultimate concerns that Archer (2002) recognises as constituting our identities may represent our response to the call of the human or more-than-human world. Furthermore, our internal conversations (Archer 2003) may in fact incorporate our dialogue with the world, which initially beckoned to us and within whose flesh we dwell.

## 2.11 Conclusion

This review of the literature has constructed a foundation for this study into the value of nature to teenagers in Cape Town. It has helped me to appreciate the local and global context in which youth are growing up, to define and elucidate key concepts, and to develop conceptual models that guided the study. It has also enabled me to make a strong case for retrieving nature in environmental education.

Searching for literature to compile this review confirmed that, in the field of environmental education, research of this kind has not been undertaken in South Africa before. Even internationally, relatively few researchers are focusing attention on the human-nature relationship, especially as it relates to adolescent identity development.

I did, however, come across an extremely valuable body of international literature dealing with embodied and inter-subjective ways of engaging with nature. These authors propose a qualitatively different view of the human-nature relationship than is generally encountered in the literature relating to education for sustainable development. Their descriptions resonate with the positive ways in which most of the young people surveyed in this study described their experiences of nature (see Chapter 5). It is a view of nature and the human-nature relationship that is definitely worth retrieving.

# Chapter 3

## Methodology



*Nature looks after me so it's about time I looked after it.*  
(G-GQ5.3)

# Chapter 3

## Methodology

### 3.1 The scope of the study

As outlined in Chapter One, the main purpose of this study was to investigate the value to adolescents in Cape Town of nature in general and nature-based environmental education- and youth development programmes in particular. The study involved mainly senior high school youth (Grades 10-12, approximately 15-19 years old), as well as the providers of nature-based programmes for youth in Cape Town. The research took place between 2007 and 2009.

The study is in two parts:

- Through **multiple embedded case studies** (Yin 2009) I investigated a variety of nature-based education- and youth development projects. I used the results of an earlier survey (Section 4.2.1) to identify organisations that worked with teenagers. I gathered data using semi-structured interviews with programme presenters, programme observations, analysis of programme-related documents, and questionnaire-based evaluations of these programmes by teenagers.
- Through a **questionnaire-based survey** of teenagers, I investigated their prior experiences of and feelings about nature. After analysing their responses, I held four focus group discussions with teenagers to probe a particular question that emerged from the research.

### 3.2 Features of the study

#### 3.2.1 A qualitative approach

In this study, I did not set out to prove or disprove a hypothesis, conduct experiments, make predictions, or generalise the findings of the research beyond my own context. Thus, I do not consider this investigation to be positivist in nature. Furthermore, although a concern about the lack of experiential nature-based programmes for teenagers motivated the study, the research orientation was not primarily critical or emancipatory (Cohen *et al* 2007).

Instead, the study was predominantly naturalistic, qualitative and interpretive in approach. I set out to explore a situation in the city in which I live in order to understand it better and to respond more thoughtfully, empathetically and appropriately in my professional life. Della Porta (2008: 205) distinguishes between research based on causal variables, and that which (as in this case) is “more akin to an ‘appreciative’ or ‘aesthetic’ act, an effort to understand the principles by which the parts consistently fit together.” She also contrasts explanations as being either external, seeking *causes* for actions, or internal and deliberative, seeking *reasons* for actions, as in this case.

The features of a naturalistic, interpretive approach (Cohen *et al* 2007: 20 & 21), which I believe apply to this study, include:

- Reality is multi-layered and complex, and should not be interpreted in a simplistic manner.
- People actively construct the social world and make meaning through their activities.
- People and events are unique so it is difficult to generalise from qualitative studies.
- People interpret events and situations from their own perspectives, resulting in multiple interpretations of situations.
- We need to examine situations through the eyes of participants.

### **3.2.2 The influence of critical realism**

A critical realist perspective tempered the subjectivist frame of reference of this qualitative study. Archer (2002), as well as Merleau-Ponty (1962), reject extremes of both realism and instrumentalism (associated with positivism), as well as idealism and social constructionism (typical of a subjectivist approach). Thus, while I accept that the comments and opinions of participants in the research were constructed by the individuals themselves, I hold that they were also informed by experiences, events, and the underlying structures, processes and causal powers of the real and complex world.

Della Porta and Keating (2008), like Denzin and Lincoln (2005), classify critical realism as a post-positivist approach, distinct from both positivism and interpretivism. Critical realism accepts that an objective social reality exists and can be known, but acknowledges that this knowledge is difficult to capture, and that it is influenced by the

scholar. Della Porta and Keating's interpretivist approach, and Denzin and Lincoln's participatory approach, on the other hand, consider social reality to be both objective and subjective, intrinsically linked, and co-created by the mind and the given world. I contend that this view is actually compatible with critical realism both as a stratified ontology and as an approach to research that seeks in-depth understandings of contexts and practices (Soudien 2007b).

Price (2007) uses the metaphor of a hologram to describe the features of critical realism as research methodology. If holographic film is cut into pieces, each can produce an image of the whole; in other words, "no matter how small the piece of the world we analyse, it contains the image of the whole" (Price 2007: 98). She explains that critical realism does not support prediction, but rather encourages a deeper understanding of reality, and sees *consistency* as a mark of validity. In this study I have sought consistency between theoretical and conceptual frameworks and the research methods employed:

... reality is not judged by the number of times an expected event is observed. Rather, reality is judged by the adequacy of the explanation, or the logic of the links between the levels. (Price 2007: 107)

### 3.2.3 Reflexivity

Reflexivity is the process of reflecting critically on the self as researcher, the 'human as instrument' ... It is a conscious experiencing of the self as both inquirer and respondent, as teacher and learner, as the one coming to know the self within the processes of research itself. (Denzin and Lincoln, 2005: 210).

Reflexivity was both a focus of the research (investigating the embodied nature of reflexivity in the process of identity development) and part of the research orientation. According to Denzin and Lincoln (2005), reflexivity forces us to come to terms with ourselves through the research process. They describe the self within the research setting as comprising multiple identities, both personal and professional, each having a distinct voice.

The research process was an ongoing internal conversation (Archer 2003), in which I was constantly aware of integrating insights from the literature and the research findings, with personal experiences and reflections, into an internally consistent (if temporary and corrigible) *modus vivendi*. This involved, as Denzin and Lincoln point out, facing the binaries and paradoxes of my own life, and their impact on my interactions with participants in the research. A reflexive approach was particularly evident in the hikes undertaken to plan the Discussion chapter (Sections 3.5.6 and 6.3).

### 3.2.4 A mixed method approach

According to Yin (2009), the design of this study may be described as *mixed method* due to the combination of case study and survey methods within a single study. Bergman (2008: 1) observes that in recent years there has been a tremendous increase in the popularity of mixed method research, which he too defines as “the combination of at least one qualitative and at least one quantitative component in a single research project or program.” Referring to the hard-fought paradigm wars that pitted qualitative and quantitative traditions against each other, he observes that lines between these traditions have often been drawn for political and strategic, rather than substantive, reasons. He concedes that mixed method research is actually nothing new, observing that it tends to work better in practice than in theory. Della Porta and Keating (2008: xv) maintain that “social science must never become a prisoner of any orthodoxy”, and that intellectual pluralism can enrich the research process; however, they do caution against an “anything goes” approach, calling for intellectual rigour, clarity and consistency.

Like Della Porta and Keating (2008), Price (2007) distinguishes between *mixed methodology* and *mixed method*, where a methodology is the overall philosophy guiding the research, while methods are closer to techniques. She considers it problematic to mix methodologies, labelling this a “Nike ... just do it!” approach (*ibid*: 36). On the other hand, even though some methods have become strongly associated with certain methodologies, she asserts that it is quite possible to mix methods within a particular methodological framework.

I used a mix of research methods during both the data collection and interpretation stages of the study; indeed, even one particular research tool like a questionnaire generated data that were both numerical and narrative, and which could be analysed quantitatively and qualitatively, in order to address different aspects of the research question.

I contend that the critical realist notion of a stratified ontology, which describes the emergence of actual events and empirical observations from an underlying given world, justifies the use of mixed methods to explore our complex and multi-layered eco-social world. Using both qualitative and quantitative methods within an interpretive framework enabled me to paint a more complete picture of the research situation, as different types of data revealed different things:

... method is a way of making some things count while discounting other things. Method is a perspective that both reveals a topic and conceals it ... (Romanyshyn 2007: 212)

Cohen *et al* (2007) declare that theory should not precede interpretative research but rather emerge from the understanding generated by the research. I disagree. I found it very useful to start with a theoretical framework, which guided the development of the research questions, the research design, and the analytical process. However, the reflexive approach mentioned above ensured that this framework was not constraining, but allowed the emergence of new methodological perspectives and approaches. Cohen *et al* (2007: 33) recognise this approach as characteristic of what they call the emerging paradigm of complexity theory, which allows for feedback, recursion, emergence and self-organisation. My emerging interest in Merleau-Ponty's phenomenology (Section 3.2.7), in particular his notion of the intertwining or recursiveness of self and world, echoes this methodological approach:

Phenomenology aims to understand meanings that come through the research. This can happen, not by embracing 'logical conclusions', but by struggling with complexity. Once you enter this struggle, things are not so neat, precise, and accurate, in control. (Jacobs 2008: 90 & 91)

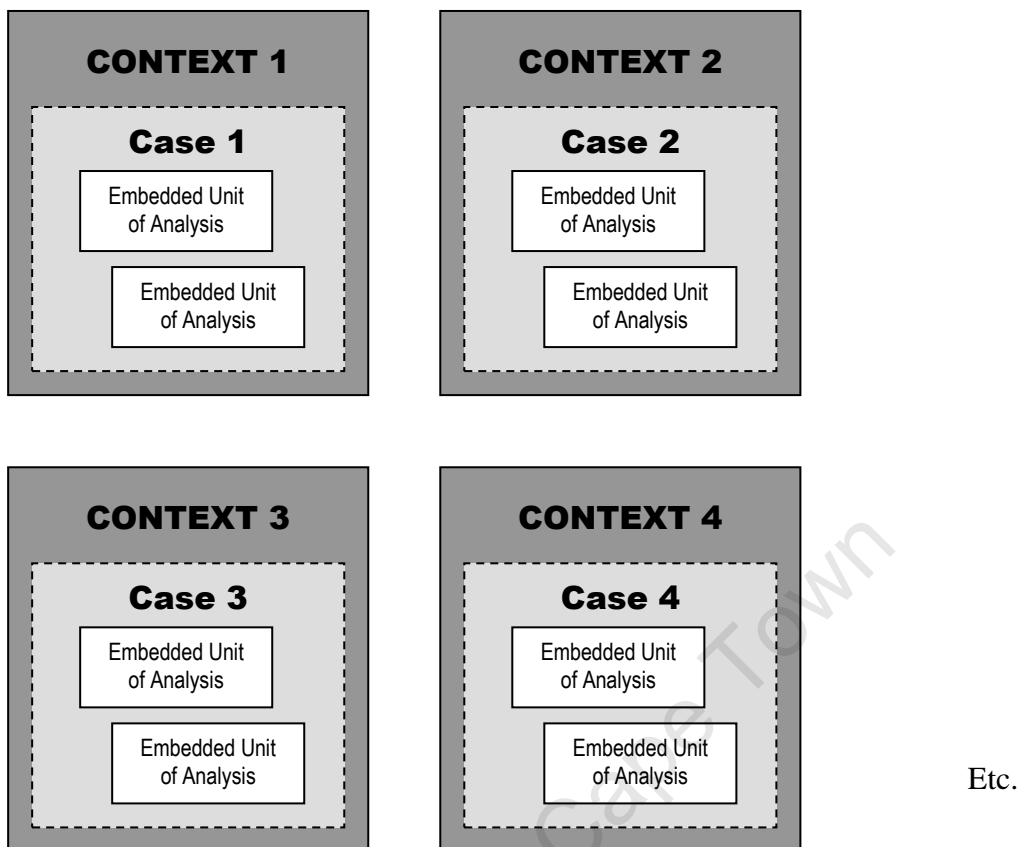
### **3.2.5 Multiple embedded case studies**

Yin defines a case study as:

... an empirical enquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident. (Yin 2009:18)

A case study is undertaken in order to understand a phenomenon. In this study, the nature-based programmes that comprised the various cases were expressions of, and therefore difficult to separate from, their organisational contexts. Case studies rely upon multiple sources of evidence, and data collection and analysis are enhanced by the prior development of theoretical propositions. In this study, the psycho-social model of identity development as an embodied, reflexive process was one of the main theoretical constructs that informed the research.

Adapting a diagram from Yin (*ibid*: 46), the embedded, multiple-case study can be understood as follows:



**Figure 3.1:** Diagram representing embedded multiple-case studies (after Yin 2009:46)

In this diagram, the cases represent different nature-based programmes, each taking place within its own particular context (which includes, for example, the organisation, its spatial location and environmental focus, and the broader political and socio-economic context of the country). Yin states that the dotted line between the case and context represents the lack of sharp distinction between them. Within each case are embedded different units of analysis, for example the officers who conducted the programmes, the teenagers who attended and evaluated the programmes, the programmes themselves, and the documents that described and supported them.

Case study research does not set out to be generalisable, in contrast to positivist research with its focus on sample size and selection (O’Leary 2004). Della Porta (2008) states that in-depth knowledge of a few cases allows one to generalise temporarily amongst the cases studied, but that further research is needed in order to apply insights from case study research more broadly. Case studies can sometimes, as in historical research, advance what she calls *ideal types*, which are “abstract models, with an internal logic, against which real, complex cases can be measured” (*ibid*: 206). The matrix developed in

this study that mapped nature-based programmes according to descriptors relating to identity development and relationship to nature (Figure 4.2), is an example of a model that might be used to explore further cases.

### **3.2.6 Surveys**

Unlike case studies, Yin (2009) observes that surveys have a limited ability to investigate the context of a phenomenon. This study included two surveys (see Section 3.3.1), which enabled me to access and represent the experiences and opinions of a wide range of youth. The General and Evaluation Questionnaires (Appendices F & G) included questions which generated both numerical and narrative data, and included scorings, ratings, descriptions of experiences, and opinions.

In total, I analysed more than a thousand questionnaires. In order to make sense of this volume of data, it was necessary to display many of the survey responses quantitatively (e.g. as percentages and graphs). The point of this quantification was, *contra* Cohen *et al* (2007), to enhance understanding rather than to generalise or make predictions.

### **3.2.7 An emerging interest in phenomenology**

With the wisdom of hindsight, it is tempting to write this chapter in a way that suggests that all the methodological decisions were made neatly and strategically in advance. This was not entirely the case. When I first embarked upon this research journey, I did not consider investigating phenomenology as an approach as it had been somewhat scorned as a methodology during my previous experience of postgraduate study in the early 1990s. However, through the literature I felt myself drawn to the phenomenology of Merleau-Ponty, which resonated with what I was encountering both empirically in the research results, and personally in my own wanderings and wonderings in nature. So, while phenomenology did not inform the initial research design, it has felt like an ever-growing presence in the work. For example, Russon's (1994) notion of the 'call of the world' helped me to cultivate an attitude of listening to the other as subject rather than viewing the other as object, and to recognise the responsive and reciprocal nature of research:

Science should not be methods driven, it should be phenomena driven. Let the phenomena ... dictate more tentative, yet deep, kinds of methods to do justice to the reality. (Jacobs 2008: 91)

### 3.2.8 A poetics of place

... concepts never cover the fullness of human experience (Jackson, in Brady 2005: 993)

As described in Section 3.5.5, while looking for a way to represent many of the moving responses of youth to questions about nature, I came across the use of poetry as a means of displaying qualitative data (Miles and Huberman, 1994). This was a turning point for me, as it introduced me to a view of research that Brady calls ‘artful science’, which encourages “immersion and self conscious saturation” in, rather than “clinical distancing” from the data (Brady 2005: 981).

Brady (*ibid*) describes an approach to place-based research which he calls “a poetics of place with conscience.” He observes that we make sense of our experiences in significant places in *sensuous-intellectual* ways. This is because, in these places, “emotional content often dominates conscious interpretations.” He admits that this type of knowledge is generally discounted by positivist research, and therefore calls for a phenomenological, body-centred, and sensual approach to research to complement (rather than replace) scientific ways of knowing and reporting.

Brady contends that poetry and metaphor enable us to engage with and express our experiences of being-in-place more effectively than many more conventional research methods. In this study, poetry enabled me to display the responses of youth to nature more fully and faithfully than if I had used a more prosaic style (e.g. lists of bulleted points). This poetic approach also resonated with the arguments put forward in the literature review for the retrieval of more aesthetic ways of experiencing and responding to nature (Bonnott 2004a, 2008).

The notion of a poetics of place provided the incentive to work on the Discussion chapter of this dissertation in natural settings, to welcome insights and metaphors from nature (Section 3.5.6), and to share aspects of my personal reflexive journey (Section 3.2.3) as short allegorical pieces (Section 6.3).

### 3.2.9 Language of the dissertation

I have chosen to write this thesis in the first person, active voice, and generally in the present tense. Like Price (2007), I believe that this reflects a willingness to take personal responsibility for my role in the research process, which has been intimate, absorbing and

intense. To write in the passive voice and to call myself ‘the researcher’ would be to misrepresent the research process as something impersonal and distant, which has not been the case.

I accept the need to use academic terminology and certain scholarly conventions when writing a dissertation. However, as an educator, I am interested in sharing knowledge as widely as possible, and therefore prefer to write in a style that is simple and direct, even though some of the concepts discussed may be fairly complex and sophisticated. I hope that this will enable other educators, whether or not they consider themselves to be ‘academics’, to engage with the ideas expressed here.

### **3.3 Research design**

#### **3.3.1 Translating the research questions into practice**

The first stage of the research process entailed developing the research questions and sub-questions (Section 1.2), which clarified the purposes of the research. Translating these questions into action involved both logistical and methodological work, including detailed planning, design and scheduling of research tasks and tools (Cohen *et al* 2007).

Fieldwork was constrained by limited time and money. I set aside the second year of a three-year study period for fieldwork, but permission to work with schools was only obtained from the Western Cape Education Department in the second term and granted for the second and third terms of 2008 only (Appendix C). Due to funding constraints, I limited data collection to sites in Cape Town within about 50 kilometres of my home.

I drew up a series of planning grids to help me develop data gathering strategies and tools covering each sub-question. The first grid (Appendix D) listed the respondents (e.g. education officers, teachers, youth and others) and the possible research methods (e.g. questionnaire, interview, document analysis) I could use to investigate each question.

Having decided on the respondents and research methods, I then drew up a separate grid for each research method, listing all the questions that I could ask each group of respondents using that particular method (see Appendix E for an example). Finally, I developed research tools (e.g. questionnaires, interview schedules, observation schedules) for each research situation:

- Appendix F: General questionnaire for youth;
- Appendix G: Evaluation questionnaire for youth;
- Appendix H: Interview schedule for education officers;
- Appendix I: Observation schedule for nature-based activities;
- Appendix J: Document analysis schedule.

Interview and observation schedules comprised an introductory page summarizing the questions, and reminders relating to how to introduce the session. The schedule then listed the questions and provided space to record comments or observations during the interview or excursion. In the appendices, some of the schedules have been condensed to save paper.

### 3.3.2 Concepts and concept formation

Mair (2008) states that, when initiating a research project, it is important to specify and define concepts. He defines a concept as the basic unit of thinking, and notes that we can specify concepts based on observations or on theory. Whether empirical or theoretical, however, concepts are always made more meaningful by theory. In order to clarify concepts relating to identity development, and reflexivity as an embodied process, I found it helpful to develop models that would enable me and the reader to share visually my understanding and use of these concepts (Figures 2.3 & 2.4).

Later in the research, analysis led to concept formation and the development of a typology of nature-based programmes (Figure 4.2), which drew on previously defined concepts (Tables 4.2a&b). Mair observes that classifications and typologies should be both *exclusive* and *exhaustive*. In terms of exclusivity, a phenomenon may not belong to more than one class; for the classification system to be exhaustive, it should not leave any phenomena out because they do not fit the system. He observes that typologies move towards explanation.

### 3.3.3 Selection of respondents

The selection of respondents (sampling), in accordance with the non-positivist research approach, was purposive and pragmatic, rather than random (Cohen *et al* 2007; O’Leary 2004).

#### (a) Selection criteria and issues:

Selection criteria included the following:

- Programme coordinators, educators and youth were willing to participate;
- Programmes offered by service providers were well established and presented by project staff, rather than run by the groups themselves;
- Programmes offered by the schools themselves were formally recognized as part of the school programme (e.g. field trips, clubs, outdoor education programmes);
- Research sites (schools and natural areas) were accessible and affordable to visit within time and budgetary constraints;
- The cases represented a diversity of programme *contexts* (e.g. initiatives organised by service providers and schools; a variety of natural settings; one-day field trips, overnight camps, environmental clubs, etc.) and *purposes* (focusing on curriculum, adventure, service, personal development, etc.);
- The adolescents involved came from a wide diversity of backgrounds (e.g. race, class, gender; income levels; state or private schools).

To an extent, convenience sampling was used, as most of the schools and projects visited were within 50 kilometres of my home. The only part of Cape Town not included in the study was the far north, where there are relatively few high schools and nature-based programmes.

Access and practicability (Cohen *et al* 2007) were important considerations in the selection of cases and survey respondents. The limited time (two school terms) available to observe and survey learners restricted opportunities to observe programmes and survey youth. One difficulty faced was the relatively small number of high school groups visiting some centres during the second and third terms. The winter season was not popular for outdoor activities, and one education officer told me that most of their senior high school groups visited during the first term, by which time I had not managed to obtain permission to work with schools. In some cases, programme presenters were interviewed but it was not possible to observe a group as no high schools made bookings

during the fieldwork period. Busy work schedules and inclement weather prevented me from observing two programmes that had been arranged but were cancelled at short notice and not rescheduled at a convenient time.

Relatively more high schools serving higher income families participated in outdoor programmes than schools serving lower income families. I did not exhaust the number of English-speaking senior high school groups from higher-income areas that I could have observed; but on the other hand, I was unable to find many isiXhosa-speaking groups from low-income areas to observe or survey. I therefore had to include some youth who were not in my target group of Grade 10-12, including a group of first-year students at a college (N), a group of junior high school (Grade 9) learners (F), and a primary school group (Programme o).

**(b) Selection of nature-based programmes for case studies:**

I investigated programmes which were based and/or presented in Cape Town, which involved (at least occasionally) senior high school groups, and which ran programmes in the natural environment (Appendix B). These natural environments were not necessarily remote; only one of the organisations consulted worked frequently in a wilderness area outside Cape Town; most others worked in protected natural areas, heritage sites, or public open spaces in the city.

Initially I approached organisations with which I was familiar, or which I had come across while conducting a survey of nature-based programmes in Cape Town in 2007 (Section 4.2.1). During the course of the study, through the advice of respondents, I became aware of school and service provider programmes I had not known about before. Thus snowball sampling played a role in the selection of participants.

As explained above, I wanted to investigate as wide a range of nature-based centres and projects as possible within this period. I planned to involve both service providers (e.g. NGOs, parastatal organisations, government departments) and school clubs in the study. In practice the service providers were easier to work with, and I managed to interview and/or observe a wide variety of programmes representing different educational and youth development approaches, and a range of natural settings. On the other hand, despite many attempts, I was unable to investigate in sufficient depth some of the clubs I had intended to focus on in the research. Due to time constraints, communication

difficulties, ill health and inclement weather, I was unable to find a suitable time during the fieldwork period to conduct interviews or observe club activities.

**(c) Selection of school/youth groups for surveys:**

I selected most of the schools involved in the surveys because they were participants in programmes offered by the organisations I investigated as part of the case study research, or schools that offered their own nature-based programmes (Appendices A & B). I wanted to survey youth from diverse backgrounds, representing the main racial, language and socio-economic groups in Cape Town. This represented a quota sampling approach, which seeks to represent significant characteristics of the wider population in the groups investigated (Cohen *et al* 2007). It was not possible to select groups in proportion to the relative population sizes of, for example, different language, racial and socio-economic groups, as wealthier groups were disproportionately involved in programmes compared to poorer groups. However, I did strive to include groups representing the different sectors of the population of Cape Town.

There were large discrepancies between the sizes of the groups surveyed (Appendix A). This was due firstly to the practical limitations of working with groups that had actually participated in programmes during the fieldwork period (some were small clubs, while others represented entire grades of learners). Secondly, it was due to the way in which the questionnaires were administered: some group leaders made participation in the survey voluntary, while others gave a whole class time during a lesson to complete the questionnaires. This was not considered to be a problem as it was not a positivist study, and the youth surveys did not set out to generate data that could be statistically analysed in order to make causal assertions or predictions.

### **3.4 Data collection: methods, instruments & sequence**

In qualitative research, it is important to draw on multiple sources of evidence in order to allow for triangulation of these data sources, or corroboration of the evidence (Yin 2009). In this study, in addition to surveys of adolescents conducted using questionnaires, sources of evidence included semi-structured and focus group interviews, observations of programmes, and analysis of relevant documents.

### **3.4.1 First stage of data collection 2008**

As explained above, interviews, observations, surveys and collection of documentation had to take place during the second and third terms of 2008. Usually I would start by interviewing one or two representatives of the project under review, and during the visit collect the relevant documents. I would also ask permission to observe a nature-based programme, and make an appointment to observe one or more high school groups before the end of the third term.

#### **(a) Interviews with programme presenters:**

Interviews are essential sources of data for case studies, and are fluid rather than rigid in style (Yin 2009). A focused or semi-structured interview model suited my purposes best, as it enabled me to cover a range of questions in a relatively relaxed, responsive and conversational manner. As described previously, I developed an interview schedule (Appendix H) that served to keep me focused and ensure that I gathered the necessary data to address the research questions and sub-questions. A challenge when interviewing people I knew well was to avoid sharing my personal opinions when they enquired about the research, in order not to unduly influence the respondents (Yin 2009).

I used a digital voice recorder to record most of the interviews and later transcribed them verbatim. I obtained permission to record the session before the interview, and made it clear that the identity of the interviewees would be kept anonymous. As a backup, I also took notes during the interviews on the pre-prepared interview schedule (Appendix H). On two occasions, the tape recorder did not work. I typed up the notes from these two interviews immediately while they were fresh in my mind.

#### **(b) Observations of programmes:**

In some cases, I contacted the teacher or group leader in advance to ask permission to observe their outing. At other times I simply asked permission when I met the teacher in charge on the day of the programme. I also asked the programme presenters and group leaders (e.g. teachers) for permission to take photographs of the programmes I observed. These provided a visual record of aspects like teaching and learning approaches and activities, the use of learning support materials, the physical context of the experience, and the participation and responses of the youth. In most cases I compiled a CD of photographs for the group to thank them for allowing me to observe them.

Having obtained permission to observe the outing, I then introduced myself to the group, briefly explained the purpose of my research project, thanked them for allowing me to join them on the outing, and invited any of them who might want to share their thoughts with me to do so during the outing. Guided by the observation schedule (Appendix I) I recorded activities, observations and reflections as I accompanied the group on its excursion.

Owing to my experience in the field of environmental education, and having previously worked at some of the sites where I undertook observations, I sometimes became a participant observer in the programmes (Yin 2009). One coordinator felt that the learners would accept my presence in the group better if I played a role in the course, and another invited me to present a particular aspect of the programme to the group. I had the impression that participating in these programmes made my presence in the group less threatening to the presenters, as my role became that of co-presenter rather than evaluator.

**(c) Questionnaire surveys of youth:**

During 2008, I gave questionnaires to 22 groups of youth representing 19 different schools or groups. Most questionnaires were completed at school during class time a week or more after at least some of the learners had participated in a nature-based programme. They were group-administered either by the teacher or by me, making it easy to guarantee a high response rate (Chambliss and Schutt, 2010). In one case members of a hiking group who had completed the General Questionnaire asked for copies so that they could survey some of their friends at other schools (Appendix A, Table 2: Group P). Two groups (R & S) completed their questionnaires at the end of a camp before they went home, because these groups comprised learners from a number of different schools and it would have been difficult to have collected questionnaires completed later.

I developed two different questionnaires:

- The **General Questionnaire** (Appendix F) asked youth about their prior experiences of nature, their leisure time activities, how they thought other teenagers felt about nature, and what could be done to make nature more relevant to teenagers.
- The **Evaluation Questionnaire** (Appendix G) asked youth to comment on a nature-based programme they had attended. The questions related to the value of

the experience in relation to their understanding of nature, and experience of the human-nature relationship, as well as to the process of identity development.

The questionnaires were designed to be relatively unthreatening and easy to fill in. Each was just two pages in length, fitting on one double-sided page. The style of question varied from boxes to tick (mainly at the beginning of the form), to attitude scales, and open-ended questions requiring written comments (mainly in the second half of the form). Bold, attractive font styles were used, and the questionnaires were printed on brightly coloured paper to make them more appealing to youth (Chambliss and Schutt, 2010). Logistically, it was most efficient for me or the teacher to administer both the General and Evaluation Questionnaires on the same occasion.

To introduce the survey session, I shared my concern that there were relatively few nature-based education and awareness programmes available for teenagers in Cape Town. I explained that I wanted teens to share their opinions and ideas about this issue, and told them that their feedback would be passed on to organisations that provided nature-based education and youth development programmes. In presenting the introduction it was important not to sound biased (Yin 2009) or to try to influence the youth. I therefore introduced an element of doubt, saying that although I was concerned about the situation, it might not be of any concern at all to them, and that I needed them to let me know whether or not my concern was valid.

In cases where I had previously observed a field trip and taken photographs, I would usually give the class a slide show of their visit, as well as a short presentation on the purpose of my research. The first time I did this (Appendix A, Table 3: Group F), I used the presentation to introduce the survey session; however, I realized that this might unduly influence the respondents, so in all future sessions I first conducted the survey after a very short introduction, and concluded with the presentation and slide show. Teenagers can be quite difficult to impress, so I was puzzled when many of the classes I addressed spontaneously applauded after the presentation. I now accept this as further evidence of the surprisingly positive response of youth to questions about nature.

In an attempt to reduce the possible influence of recent nature-based programmes on what youth said about a general relationship with nature, where possible I asked youth who had *not* participated in these experiences to complete the General Questionnaire, while those who *had* participated completed an Evaluation Questionnaire (Appendix A,

Table 3: Groups D, E & O). Groups G and M had participated in a Geographic Information Systems (GIS) project that I had worked on in two nature reserves. These learners undertook a separate evaluation of that particular project during their field trips; they therefore only completed the General Questionnaire during my survey visits.

I was not able to observe programmes presented by the schools themselves as these had taken place months or even a year or two earlier (Groups A, B, H, J, L & N). Instead, in these cases I interviewed the teacher in charge and either left survey forms or e-mailed electronic versions to the school for the teacher to administer and return to me. In these cases youth were asked to complete both questionnaires. Due to the passage of time since the programmes had taken place I assumed that they would not unduly influence the respondents' general perceptions of nature. Furthermore, as I did not meet all the young people who completed the surveys, I believe that the generally positive responses received to questions about nature were not caused by youth trying to please me.

After transcribing the survey forms (general and/or evaluation questionnaires) and displaying all the responses in spreadsheets, I deleted all the names of respondents to ensure anonymity and sent the electronic summaries to the teachers and/or education officers for their interest.

**(d) Analysis of documents:**

Prior to conducting interviews or observations, it was important to find out about the purposes and programmes of the various organisations involved in the research. This initial research was generally done on the internet, consulting organisational websites and programme web pages. During site visits, I asked programme presenters to provide additional documentation that described the philosophy of the organisation as a whole (e.g. mission statements and organisational goals), and the particular programmes under review. These documents included:

- annual reviews and project reports
- programme prospectuses and curricula
- lesson plans, fieldwork programmes and worksheets
- participant evaluation forms and letters or e-mails
- media articles about programmes
- promotional and documentary videos.

These documents were used mainly to source official organisational positions, and to corroborate insights obtained from direct observations and interviews. They were therefore important resources for triangulation of data (Cohen *et al* 2007).

### 3.4.2 Second stage of data collection 2009

During the second and third terms of 2009, having analysed all the results of the fieldwork conducted in 2008, I arranged focus group discussions (Morgan 1988) with four groups of learners from different types of schools: one private school, one ex-Model C school, one ex-House of Representatives school, and one youth group in Khayelitsha, all of whom had been in some way related to the research (i.e. from schools or groups involved in the 2008 fieldwork). The aim of these focus groups was to give feedback from the study to youth, and to ask their opinions about an emergent question:

If adolescents are as positive about nature as feedback suggests, why is there so little evidence of involvement in nature-based service activities?

Morgan (1988) describes focus groups as group interviews that rely upon interaction within the group, rather than between individual members of the group and the interviewer. Amongst the useful applications of focus groups, he lists “getting participants’ interpretations of results from earlier studies” (Morgan 1988: 11).

The groups all consisted of between six and ten people, the group size Morgan recommends. I developed an illustrated presentation sharing some of the key findings of the research and presented this prior to the focus group discussion to stimulate interest. I also developed a short series of questions to guide discussion, which I projected as an *aide memoir* during the discussion. Although Morgan advocates that focus groups should be self-managing, with the interviewer stepping back and playing the role of moderator, in practice I found that it was necessary to play quite an active role in keeping the conversation going. This was particularly necessary where English was not the mother tongue of the youth. In the two groups where youth did speak English fluently, the discussion became more animated but was still fairly dependent on my guidance. All the discussions were tape recorded.

## 3.5 Data Analysis

[G]ood quality data ... lead to serendipitous findings and to new integrations; they help researchers to get beyond initial conceptions and to generate or revise conceptual frameworks. (Miles and Huberman 1994: 1)

Miles and Huberman (1994) was the major text that guided the development of analytical tools and processes in this study. Drawing on critical realists such as Bhaskar and Harré, they assert that social phenomena exist not only in the mind but also in an objective world. Because people believe in social constructs and structures, they become real, have an influence, and may be inquired into. Analysis involves looking for the structures, processes and mechanisms that are at the core of events in order to account for these events. People's actions in society reveal their meaning-making.

Data analysis took place in a couple of stages. The initial phase entailed coding and organizing the raw data (e.g. survey and interview transcripts) into matrices using both the research questions and the theoretical model. The second stage entailed working with the data to identify themes and patterns, which could be displayed in the results chapters. These data then became the basis for another phase of analysis, during which new conceptual frameworks were developed and insights generated.

### 3.5.1 Analytical matrices

I used analytical matrices extensively to display and categorise the data from both the surveys and the interviews (Miles and Huberman 1994). In the case of the two surveys (Appendices F & G), I transcribed all responses, whether numerical or narrative, into Excel spreadsheets (see extract in Table 3.1). This enabled me firstly to quantify responses to questions with tick-box answers, so that they could be displayed graphically.

Q2: What do you do in your spare time?						
With friends	Computer / TV	SMS / phone	Sport / exercise	Help at home	Help community	Other
	1			1		
1	1			1		
1	1		1			Play soccer, sing in choir
1			1	1		Go to dance practice
1						Play soccer, play-station

**Table 3.1:** Data from the questionnaires were entered into an Excel spreadsheet, enabling tick-box answers to be quantified.

I also used these spreadsheets to analyse the transcripts of interviews with programme providers. Instead of coding segments of individual interview transcripts by theme, I cut sections of the narrative that related to particular questions and themes out of the

transcript, and pasted them into a spreadsheet. I pasted each section of text into a unique cell in the spreadsheet under the relevant theme column, and labeled it with the question number and respondent's initials (see extract in Table 3.2). Later I compiled all responses from the different programme presenters that related to a particular question or theme into separate files.

<b>Interview Q2: What led to your interest in nature?</b>  <b>Comments</b>	<b>Intrinsic</b>	<b>Family</b>	<b>Access</b>	<b>Books</b>	<b>Other media</b>	<b>Work / training</b>	<b>Enviro crisis</b>	<b>Other</b>
<b>AB 2A</b> My relationship with nature has always been a very, very close one. I grew up in Newlands, and then we moved out onto the Cape Flats. My grandfather had a very good relationship to the earth and he grew things ... by the time I was 8 I knew that I wanted to teach biology. When we moved onto the Cape Flats it was very wild. It was great fun to be outside and playing. Building your huts and messing with the hairy worms.	1	1	1			1		
<b>CD 2A</b> I grew up in Hanover Park. I won't say I was a gangster but I was involved with the wrong crowd at one stage. I then got taken by the scruff of my neck by my dad and I got sent on a Veld & Vlei. I was 16 years old and it completely changed my life ... it was good for my self esteem, my confidence, and it sort of steered me in a direction where I believed I could do anything.		1	1					1
<b>EF 2A</b> It was a calling – it became clear what I wanted to do. I also volunteered - (mentions places) and developed confidence. When I was with the (employer), I went to (course). It was a highlight for me. It gave me another perspective how to facilitate discussion. So now we tell the group: "Ask Nature to give you the courage to speak."	1					1		

**Table 3.2:** An example of a section of a spreadsheet in which relevant comments from interviews with programme presenters were compiled. Sections relating to particular questions and themes were excised from the transcripts and pasted under the relevant column in a spreadsheet. The code refers to the respondent and question number.

### 3.5.2 Use of theoretical models to guide analysis

Miles and Huberman (1994) explain that a conceptual framework can help frame the research questions, focus the data collection process, and provide codes for the analysis. I used concepts from the models illustrating identity development as an embodied process of reflexivity (Figures 2.3 & 2.4) to help me analyse questionnaire responses that described how youth related to nature (see matrix segment, Appendix K). I wanted to see how youth reflected on their relationships with nature in relation to natural, practical and social aspects of their realities. I also wanted to see whether or not nature featured as a

concern in the lives of youth, as Archer (2003) contends that identity development entails the recognition and ordering of ultimate and subsidiary concerns.

Two questions in the General Questionnaire in particular, namely *Q5: How do you personally feel about nature?* and *Q7: Have you had any memorable experiences in nature?* generated a wealth of comments, which I initially coded as relating to the natural, practical and/or social orders, and then categorized more specifically as themes emerged (see examples from the Natural and Social Orders in Appendix K). I was then able to sum the records in each column to get a feel for the frequency of occurrence of different themes.

I used responses to *Q5: How do you personally feel about nature?* to assess whether or not youth generally experienced a sense of alienation or belonging in relation to nature. I took positive comments as representing a sense of belonging, and negative comments as suggesting alienation. I also included a 'no comment' and an 'ambivalent' category, as some comments were non-committal, or both positive and negative.

One of the advantages of transcribing all the questionnaire responses into spreadsheets was that no matter how far the analysis progressed, the original comments remained part of the matrix and could easily be referred to should it be necessary to verify an assertion. Furthermore, clusters of statements relating to a particular theme could easily be selected by promoting all records with a check in that particular theme column, and saving all statements relating to that theme in a file for further analysis.

### **3.5.3 Analytic memos**

After analyzing each group's set of questionnaire responses, I wrote analytic memos to record my reflections on their responses. I recorded observations about the group itself (e.g. from the observation schedule), commented on which themes were dominant or absent, and noted any obvious patterns or trends in the data. These memos were valuable summaries and enabled me to compare the responses of different groups relatively easily.

### **3.5.4 Displaying quantitative data graphically**

Both the General and Evaluation Questionnaires included questions that could be analysed quantitatively. For the most part, quantitative analysis was limited to summing

data and displaying results in simple graphs, which made it easy to observe trends. No statistical analyses were done, as the point of quantification was descriptive rather than predictive. Miles and Huberman (1994) note that this kind of counting is appropriate in a qualitative study, as it enables one to visualize the research outcomes more clearly, including unexpected outcomes.

### **3.5.5 Presenting qualitative data as poems**

Miles & Huberman (1994: 110) describe an approach to presenting qualitative data (e.g. from interview transcripts) that manages to condense the data while preserving the emotional content of the original narrative: that is, the conversion of transcripts into poems. They explain that the researcher uses only the words and tone of the respondent, but can use poetic devices (e.g. format, repetition) to convey the narrative. I chose to use this approach in order to conserve the emotional quality of many of the statements written by youth in their questionnaires.

Most poems drew on comments from a number of respondents. I first analysed the responses using matrices, and categorised them according to themes (e.g. comments relating to the Social Order that dealt with social pressures; or comments classified as relating to the Natural Order that had to do with encounters with animals). I then collated all the comments relating to each category into a separate file, clustered similar comments, and looked for those that represented the particular ideas or opinions in a way that would be best expressed in a poem. I then used these statements to construct poems that illustrated different themes, issues or insights.

### **3.5.6 Metaphor as meaning-making**

The ultimate aim of poetic expression is to touch the universal through the particular ... to move the discourse to what defines us all – what we share as humans. (Brady 2005: 998)

In the early stages of this study, I developed conceptual models to guide the inquiry (Figure 2.3 & 2.4) and help me to observe things that might otherwise have escaped my notice. However, in the final stages of the study I felt that, in addition to revising the original models, a nature-based metaphor might help me integrate and represent the many insights that had emerged through engaging with the people and places involved in this research.

Research is often represented as a journey, so I decided to embark on an actual journey, following the river in whose catchment I live from its source to the sea. I needed time to allow all the tributaries of my reading, listening, observing, thinking and feeling to flow together clearly and strongly. I needed an opportunity to engage in a reflexive and embodied manner with the literature and the results of the research, and to attend to the ‘call of the world’.

Brady (2005: 998) recognises metaphor as “a tool for discovering and positing the relations among things.” Metaphor has potential to reveal the links between the layers of a depth ontology like critical realism, and to be the means by which the voice of the world becomes audible and interpretable.

I therefore took a draft of the Literature Review and Results chapters, embodying the ideas of a scholarly community as well as empirical evidence gathered from my engagement with a local community of practice, on a hike down my local river. Along the way, I spent time with the ideas in a flow of places, remaining alert to wisdom that might arrive on the wind, in reflections on water or, as it happened, in the emergence of unruly weeds. A topographical metaphor proved valuable in helping me to structure the literature review (Chapter 2), and the seven stages of the hike provided insights and structure for discussions on belonging/alienation (Section 6.3), identity development (Section 6.4), and nature-based programmes (Section 7.4)

Experience tells us how we are situated ... It manifests an awareness that is not confined above the neck to the head, but is embodied in the whole living and breathing and moving body, and is not only embodied, but in fact reaches out into the surrounding field. (Jacobs 2008: 93)

## **3.6 Ethics and accountability**

### **3.6.1 Ethical considerations**

The University of Cape Town requires postgraduate students involved in research that involves human subjects to abide by a Code of Conduct for Research, and to sign a contract<sup>27</sup> to this effect. In addition, the Western Cape Education Department required me to adhere to certain conditions in order to work with schools (Appendix C).

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<sup>27</sup> <http://web.uct.ac.za/depts/educate/download/ethicsform.rtf>, retrieved 15 January 2008

Ethical research practice (Chambliss and Schutt, 2010; Cohen *et al* 2007) incorporates a number of elements:

**(a) Conducting research honestly and openly:**

Chambliss and Schutt (2010: 40) warn that “[r]esearch distorted by political or personal pressures to find particular outcomes ... is unlikely to be carried out in an honest and open fashion.” My decision to embark upon this research journey was motivated by my concern for what I perceived to be the loss of a notion of nature in environmental education, and therefore I cannot pretend to feel detached, disinterested or entirely objective in relation to the outcomes of this research project. However, I choose to make my subjective perspective known, to remain open to the possibility that my concerns may be unfounded or irrelevant, and to conduct the research as honestly as possible.

While I have mainly consulted literature that supports my contentions, I have endeavoured to frame the research questions and undertake the empirical aspects of the study in a way that gives voice to a wide range of opinions. I selected respondents in as unbiased a manner as possible, involving diverse service providers (Figure 4.2; Appendix A) and schools (Appendix B). I recorded the data as thoroughly and accurately as possible, for example tape recording most of the interviews and transcribing both the interviews and survey responses verbatim. Tampering with the data was limited to correcting spelling or grammar mistakes that either interfered with the meaning of a quote, or which were automatically corrected by the computer’s spell-checker. In Chapters Four and Five, and in various Appendices, I presented the findings as clearly as possible within the constraints of space (e.g. using graphs to indicate trends, and codes to refer to original statements), and avoided being selective or unrepresentative in representing data. Furthermore, I am willing to allow researchers who might dispute my interpretations to view anonymous versions of the interview and survey transcripts.

**(b) Providing information to research participants:**

I provided research participants with information about myself as researcher and my research intentions both in introductory discussions and in an information/consent form (Appendix L). I introduced myself and explained the background to the research in the introductory presentation I gave when consulting youth.

**(c) Obtaining permission to work with schools:**

I applied to the Western Cape Education Department and the individual schools for permission to consult learners. In all but one case the schools, acting as *in loco parentis*, gave permission; in one case a school sent a circular to the parents/guardians requesting permission, which was granted.

**(d) Obtaining informed consent from research participants:**

I asked service providers and teachers to sign duplicate copies of a consent form (Appendix L), which provided information about me, the research project, and what we could and could not expect from one another. I made it clear when administering the youth questionnaires that their completion was not compulsory, and told the groups that I was grateful for the opportunity to hear the opinions of youth. Other than the few occasions when group coordinators made attendance at a survey session optional, and the entire group (e.g. club) did not attend the session, I found that youth willingly completed the survey forms.

**(e) Confidentiality:**

Although the information gathered from respondents was not sensitive, intimate or discrediting (Cohen *et al* 2007), I made it clear during interview and survey sessions, and in the consent form, that people's comments would be kept anonymous in order to respect confidentiality. I kept a record of the names of interviewees and questionnaire respondents in the original transcripts but developed coding systems for the schools, centres, and participants to ensure that the identities of both respondents and locations were not revealed in the thesis.

### **3.6.2 Research quality**

Validity and reliability, which are critical concepts when ensuring the quality of quantitative research, are less useful when considering the authenticity of qualitative studies (Chambliss & Schutt 2010). According to Merleau-Ponty (1962), the perceiver and the perceived co-constitute the phenomenon of perception; the assumption that people who come from different backgrounds and perspectives might observe a situation in the same way is therefore flawed. Our perspectives are *necessarily* partial, corrigible and contingent. Having said that, for research to be trustworthy, a great deal of attention must be paid to ensuring that research methods and techniques are carefully,

systematically and methodically designed and implemented, so that they effectively probe the research questions, and avoid introducing ambiguity or bias.

Chambliss and Schutt (2010) suggest three criteria with which to assess the authenticity of qualitative research: the credibility of the informant, the spontaneity of responses to the researcher's questions, and the possible influence of researcher or respondent on the responses of other group members. I have no reason to question the *credibility* of the programme presenters who participated in the interviews, or the youth who participated in the survey. There was a high degree of *spontaneity* in both the interviews and the questionnaire responses. During the interviews, educators and youth development workers displayed a critical interest in the questions, and shared their commitment, experience and opinions. While a minority of young respondents appeared disinterested, either leaving out some of the survey questions or writing short responses, many expressed themselves at length and with emotion, which suggested a commitment to sharing their experiences and opinions.

In relation to the question of *the influence of the researcher* on the responses, the questionnaires were in fact administered by various people (e.g. myself, teachers, education officers, and youth). I did not detect obvious differences in the attitudes expressed by youth who completed surveys administered by different people. I therefore do not think that the questionnaire administrators unduly influenced the authenticity of the results. It is, however, likely that researchers with different personalities, opinions, experiences or interests might elicit different responses in the semi-structured interviews, or notice different things when observing nature-based programmes. Within the limitations of my own perspective, however, I tried to substantiate the interview data by triangulating with other sources of data, such as programme observations, document analyses, and the evaluative feedback of youth who participated in programmes.

### **3.6.3 Language limitations**

My inability to communicate fluently in two of the official languages of the Western Cape proved to be a limitation at times during this study. It undermined my ability to communicate effectively with youth whose first languages were either Afrikaans or isiXhosa. There were two instances when this compromised the quality of the data:

- A number of the comments in the survey forms from School F were either incomprehensible, or reflected a lack of understanding of the questions. This

group was younger than the age I had hoped to work with, and although none of the learners expressed concern about the questions while they were completing the questionnaires, their answers indicated that some had found the questions difficult to understand. Unfortunately I could not afford to have the questionnaires and responses translated.

- Two of the four focus group interviews were relatively stilted due to my lack of fluency in Afrikaans and isiXhosa. It was difficult for some youth to express themselves confidently in English, and I sometimes found it difficult to hear their comments as some spoke quietly because they were shy about expressing themselves in English.

### **3.7 Conclusion**

The approach to research methodology in this study developed reflexively in relation to both my exposure to ideas in the literature, and to the empirical findings of the research. In this iterative interplay that is the praxis of research, I have tried to ensure that the research methodology used was consistent with the intention, approach, and spirit of the research.

The next two chapters present the essential findings of the study. Chapter Four presents findings from the case studies of nature-based programmes for young people offered by schools and other organisations in Cape Town. Chapter Five presents the results of the surveys in which youth described their feelings about nature and nature-based programmes.

# Chapter 4: Findings

## Nature-based Programmes for Youth



*I love nature. I feel so open if I walk in nature.  
(D-GQ5.15)*

# Chapter 4: Findings

## Nature-based programmes for youth

### 4.1 Introduction

This is the first of two chapters that present the essential findings of this study. It reports on the results of the case studies of nature-based programmes for young people offered by schools and other organisations in Cape Town. Chapter Five presents the results of the surveys in which youth described their feelings about nature and nature-based programmes.

This chapter addresses the following research sub-questions (see Section 1.2):

- What factors deter organisations involved in nature-based education from working with adolescents?
- What nature-based education programmes are available for adolescents in Cape Town? What are the goals and features of these programmes?
- What ontological assumptions do programme presenters make about nature and the human-nature relationship? How do these assumptions inform the ways in which programmes are presented and nature is represented?
- To what extent, and how, do nature-based education and awareness programmes provide opportunities for adolescents from diverse backgrounds in Cape Town to:
  - > Understand/develop a sense of belonging in relation to the natural order?
  - > Engage with processes of identity formation?
- Do these nature-based programmes encourage learners to be reflexive? If so, how is reflexivity understood and experienced?

I selected programmes (see Appendix B) that involved high school youth and which represented a range of different nature-based approaches. In Appendix B, Tables 1-3 summarise the features of a wide variety of nature-based programmes provided by schools and other organisations in Cape Town. Tables 1 and 2 list the programmes focused on in this study, while Table 3 lists additional programmes that were also identified during a previous survey (see Section 4.2.1 below) but not investigated in any detail in this study, either because they did not work with high schools, or because the

programmes they offered were very similar to others investigated in this study, and time did not permit me to investigate all programmes in depth.

Appendix A, Table 2 lists the programmes I observed, those evaluated by youth, and the programme presenters interviewed. In some cases, I was unable to investigate programmes in depth because they did not run excursions for high school groups during my fieldwork period. However, as part of the broader investigation, I consulted the presenters of some of these programmes, as well as others who seldom worked with high school learners.

In order to maintain the anonymity of programmes and presenters, I coded schools and groups using capital letters A-S, and the organisations presenting programmes using lower case letters a-u (see Appendices A & B). In this chapter I refer to individual respondents using the programme presenter codes (e.g. Int-o1 refers to the first of two respondents involved in Programme o).

This chapter begins with a brief investigation into why relatively few nature-based centres in Cape Town offer programmes for high school youth. I then present feedback from interviews with programme presenters on their *nature ontologies*, or their views of nature and the human-nature relationship. I develop a classification system, based on Escobar's (1999) notion of 'hybrid natures' and use this to propose and illustrate three dominant nature ontologies held by programme presenters.

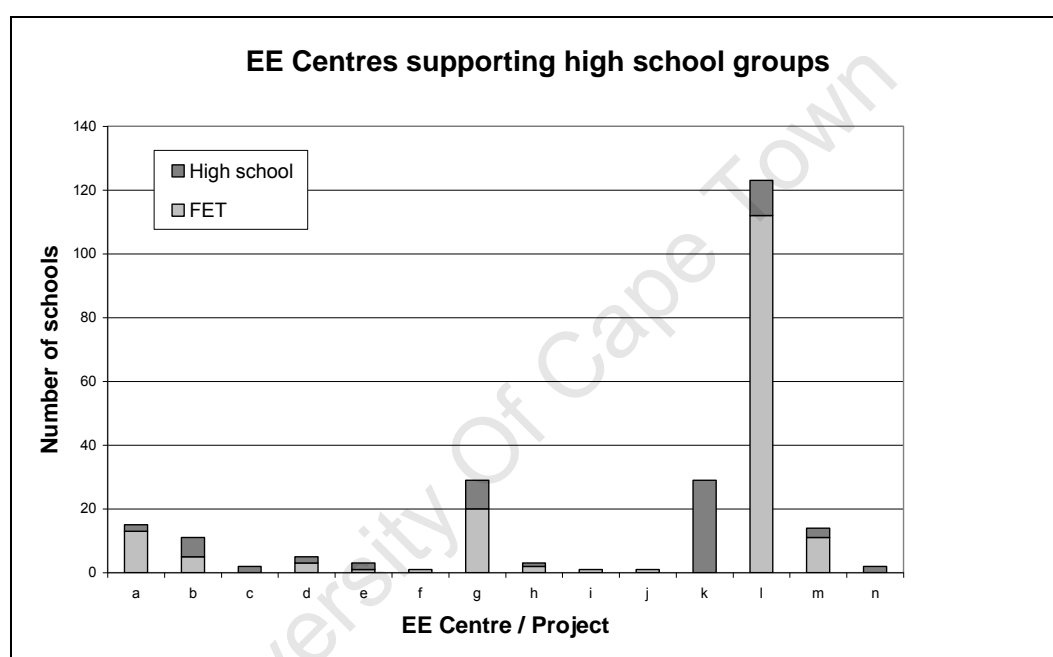
Drawing on Archer's (2002) suggestion that identity development is a reflexive process that takes place in natural, social and practical orders of reality, I then review the goals of these programmes to investigate how they support youth identity development processes.

Finally, I use these two aspects of the programmes (nature ontologies and identity development) to construct a matrix, which I use to map and reflect upon the range of nature-based programmes available for high school youth in Cape Town.

## 4.2 Provision of nature-based programmes for schools

### 4.2.1 A prior survey of nature-based programmes in Cape Town

A prior survey<sup>28</sup> of nature-based environmental education centres and programmes in Cape Town revealed that relatively few worked with high school learners on a regular basis. Figure 4.1 shows the programmes that were part of the previous survey. Site names have been replaced with codes (a-n) in order to ensure their anonymity (see Appendix B, Tables 1 & 3 for more information on these programmes). Having previously been a senior high school teacher, this finding concerned me, and was one of the factors that motivated me to embark upon this study.



**Figure 4.1:** Number of high schools visiting nature-based environmental education centres in Cape Town during 2006. Where data were available, the number of FET groups (Grades 10-12) is indicated.

Only three sites (g, k & l) recorded visits from more than 20 high schools in 2006. Of these, the figure for Site k (29) reflected entry permits to a protected natural area and most of these schools conducted their own programmes. This was also the case for most schools visiting Site m. Site l appeared to support a very large number of high schools (123), but in reality most of these schools did not send whole classes on programmes; instead most were represented by very few learners who participated in after-school programmes like matric revision classes and a week-long holiday programme on ecology (Appendix A, Table 2, Programme R). Thus probably only four or five centres offered guided nature-based programmes for high schools on a fairly regular basis that year.

<sup>28</sup> [http://www.panda.org.za/pub/workshops/EE/docs/Presentaion%20\(Ally%20Ashwell\).ppt](http://www.panda.org.za/pub/workshops/EE/docs/Presentaion%20(Ally%20Ashwell).ppt), retrieved 2 April 2007

#### 4.2.2 Reasons for limited support of high schools

Before discussing the programmes investigated in the current study in more detail, I consider briefly why relatively few organisations were found to offer nature-based programmes for high schools on a regular basis. The three reasons most often cited were:

- the challenge of working with adolescents;
- a lack of capacity to work with adolescents; and
- little demand for excursions from high schools.

##### (a) Teens are challenging to work with:

Most education officers interviewed were accustomed to working with primary schools but not with high schools, and generally found high school learners challenging:

I think [education officers] are scared of [teenagers]. You know, people don't know them. I see it with my own teachers ... I taught matrices for quite a few years. I taught high school ... you know, they haven't taught high school yet, they're used to primary school kids and they're scared of high school kids. Especially today – you know what goes on in high school. (Int-h)

There was general agreement that it is more challenging to work with high school youth than with primary school children. Concerns included that teenagers had “other things on their minds” (Int-s1), that they didn't want to listen, and that they were uncommunicative. Int-u had found some teenagers “smart-alecky” and disrespectful. Int-r said that many schools were “too scared because of anti-social behaviour” to organise Grade 9 camps any more. Two respondents specifically mentioned concerns around alcohol, and boys getting into the tents of the girls.

Int-o1, who was in his mid-twenties, said that he avoided working with high school youth because they were too similar in age to himself, and many of the girls were dating young men his age. He felt that they didn't want to listen to him, saying that he would rather work with children because he believed that he could still influence them to make positive life choices regarding drugs and teenage pregnancy. He viewed teenagers as being “ignorant of these things because they are already doing it”.

Int-r observed that, between Grades 7 and 9, outdoor education approaches that worked with primary school groups no longer seemed to be effective and were deemed ‘un-cool’. He complained that teenagers at that stage could behave objectionably: “the hormones and the imbalances that go on in them - it's unbelievable”. He described one of the high

school camps that he had coordinated as “horrific”; during the programme learners had sworn at him and jeered, and teachers had refused to intervene, explaining that they were terrified of the learners due to the status of their parents. Since that experience, he admitted that he had tended to avoid working with high school groups.

Apart from these more extreme cases of antisocial behaviour, one education officer felt that the increasing independence of adolescents presented a challenge:

It's probably harder work at the high schools because, being older, the older ones probably have more of an idea of what they want to do, whereas the younger ones are easier to manage. (Int-u)

Int-h, who had previously been a high school teacher and who stated that he would love to work with more teenagers, felt that peer pressure had “never been as huge in the teenage community” as it currently was. He did, however, emphasise that some of the best groups he had ever run had been high school groups.

Int-r acknowledged that as teenagers got older they became easier to work with:

Once they get over Grade 9, they're different, hey. They change. I've had quite a few high school groups like prefects at Grade 12, and they're amazing kids, they're really focused.

An interesting observation relating to the challenge of working with teens was that their reactions to experiences were usually:

... not an instant amazement thing. They first check it out. They don't show immediate enthusiasm. It takes a bit of time. It's a more gradual sort of excitement. (Int-h)

Environmental educators accustomed to the spontaneous and enthusiastic responses of younger children might find the relatively guarded responses of adolescents disappointing. Similarly Int-o1 found it unsatisfying that high school youth were more reluctant to “open up and share their feelings”, which he felt was an important element of the therapeutic aspect of his programme.

**(b) Centres lack the capacity to work with high schools:**

Both the 2007 survey and this study revealed wide disparities in the qualifications and experience of environmental education officers. While in some organisations all or most full-time education officers were qualified and experienced school teachers (e.g. a, d, g, l & m), in other organisations (e.g. b, f, i, j & n), inexperienced junior staff members or students were required to run the education programmes. In 2009, in approximately 25

conservation areas managed by local, provincial and national government conservation departments in Cape Town, only three education officers were qualified and experienced school teachers. All other education officers were either conservation officers or students, part-time assistants, volunteers, or staff without a conservation qualification. Under these circumstances, it is not surprising that most of the education programmes offered in these natural areas are for children rather than adolescents.

Respondents admitted that preparing programmes for high school groups required much more work than primary school groups. Furthermore, some natural areas were so popular with primary schools that their programmes ran at full capacity without having to involve high schools. There were misgivings about not supporting high schools, however:

Maybe institutions, unlike me, are quite happy just to have the primary schools. You tell the sponsors: don't worry, we have enough kids. Do it the easy way. But do it the meaningful way - well. It requires more work, but we need to respond better. (Int-1)

**(c) Teachers aren't taking high school learners out for field trips:**

Int-q complained that some conservation organisations were using a circular 'supply and demand' argument as an excuse for not offering programmes for high schools. She said that organisations weren't offering programmes because high schools weren't requesting them. She felt that it was up to the organisations to stimulate a demand by developing appropriate programmes. However, Int-g2 felt that a number of centres lacked the capacity to offer high quality curriculum-based programmes for high schools. She felt that high schools would therefore not be willing to organise field trips to these venues.

Various respondents suggested reasons why few high schools took their learners on excursions, including that the changes in education policy (e.g. roles of educators, curriculum changes, approaches to assessment) had put teachers under too much pressure. Int-1 highlighted the relative complexity of subject choices and time tables at high school compared with primary school, and the difficulty of negotiating time away from school when only part of a grade was involved in an excursion. He also observed that in communities where parents could afford to help with lifts, they tended to be less involved when their children went to high school, both because teens were reluctant to have their parents involved, and because both parents tended to work full time once their children entered high school.

Another respondent blamed teachers for being disinterested:

I think nowadays teachers can't be bothered. It's too much effort for them. It's a very big teacher's problem. Laziness, lack of interest in what they do. (Int-h)

Int-q, who herself had children in both primary and high schools, reported that her daughter in primary school went on numerous outings, while her teenage son was very seldom taken out. She mentioned that a directive had been issued by the Western Cape Education Department (WCED) asking high schools to avoid charging learners extra for outings as many families were finding it difficult to afford school fees. Indeed, the ever-rising cost of transport has become a major factor deterring schools from organising class excursions.

#### 4.2.3 Reasons for supporting high schools

Despite the challenges, some of the more experienced service providers stated that it was both necessary and rewarding to work with teenagers:

... if I can get [the learners] to buy in it's incredible. So what I'm trying to tell you in the end: it is possible to get adolescents to be interested in this stuff, it's definitely possible. It depends on their educators and how you do it. (Int-h)

This respondent observed that youth tended to participate most effectively when teachers saw the field trip as an integral part of the school's learning programme and prepared learners for the excursion. He felt that his programmes were most effective when:

... the kids come here with a mission in mind. They come here and they're prepared for it. I find working with teenagers they absolutely need structure – even more so than small kids. They need to know exactly what goes on ... It's the most important thing working with teenagers. (Int-h)

Some centres did work effectively with teens. Two organisations shared how they had managed to increase the number of high school groups visiting their education centres:

- **Centre g** designed school visit programmes that were based on the FET curriculum and assigned only experienced education officers to these groups to ensure that programmes were effectively presented. In addition to getting the WCED to promote these new programmes, teachers who attended the excursions were impressed by their quality and relevance and spread the word to colleagues in other schools. This resulted in more high schools making bookings.

- **Centre I** offered matric biology revision classes as well as an intensive holiday programme on ecology, which were attended by individual learners from a number of high schools. This centre experienced an increase in the number of high school class visits after these programmes were introduced, as learners returned to their schools and encouraged their teachers to book excursions.

## 4.3 Case Study results: programmes offered for high schools

### 4.3.1 Nature-based programmes investigated

A wide variety of nature-based programmes were investigated during the course of this study and their main features are summarised in Appendix B. These included programmes presented by high schools (s1-7: four private schools, three state schools), as well as by environmental education projects (nine programmes), and youth development organisations (four programmes). Providers included government departments, non-governmental organisations, trusts, private companies and individuals. Activities ranged from short curriculum-based lessons on various aspects of nature and conservation, to field trips, adventure camps and wilderness experiences (see Appendix B, Tables 1-3).

### 4.3.2 Attitudes of programme presenters to nature

After interviewing programme coordinators, I analysed the interview transcripts in the light of Soper's (1995) nature-sceptical and nature-endorsing categories (Section 2.8.1). Although a couple of respondents voiced reservations about the notion of nature, none represented Soper's nature-sceptical category, in which nature is viewed solely as a linguistic construction. Instead, their diverse responses all reflected fundamentally realist, nature-endorsing views. These responses were consistent with Bonnett's (2007) notion of nature as *self-arising* – that which exists prior to and independently of human constructions and interpretations, for example:

Anything that's not manmade and built. So it's natural – the way it evolved in that particular area. (Int-g1)

Also, very few referred to the people-nature relationship in dualistic terms. Most emphasised the *interconnectedness* of people and nature, although their particular ontological perspective influenced what they meant by this (see below). Out of 16 programme presenters who were asked how they viewed the people-nature relationship,

11 stated that a close relationship with nature was something intrinsic. Comments included: “I always loved nature” (Int-f) and:

My mom says I’ve always been a bug freak ... since I was in nappies ... my relationship with nature has always been a very, very close one. (Int-g1)

Respondents stated that this inherent sense of closeness to nature had influenced their choice of career. Eleven reported that having had easy access to nature in childhood had influenced them to work in the environmental field. Nine acknowledged the role of adult mentors like family members and teachers in developing their interest, and ten referred to courses and work opportunities. On the other hand, only two respondents said that the environmental crisis had motivated their choice of career.

### 4.3.3 Nature ontologies

While the presenters shared an underlying, realist conception of nature, the ways in which nature as the self-arising became real to them related to both their embodied experiences (actual events) and cultural (empirical) impressions and representations of nature. I used Escobar’s (1999) idea of hybrid natures and Pietarinen’s (1994) typology of Western attitudes to nature (Section 2.8) to determine what could be called the programme presenters’ *nature ontologies*. This section groups the respondents into three categories that represent the range of ontological assumptions about nature and the human-nature relationship noted in the interviews (Table 4.1).

Escobar’s hybrid accounts of nature represent different cultural representations of a realist notion of nature. I used two of his three categories, namely Capitalist Nature and Organic Nature, as well a category I constructed, Ecological Nature, to classify and describe the views of presenters of nature-based programmes (Table 4.1). Escobar’s third category, Techno-Nature<sup>29</sup>, was not reflected in their interviews and is therefore not included here. I listed the interview respondents whose comments reflected these different views in the table. Examples of their statements that justify this classification follow in Section 4.3.4.

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<sup>29</sup> Nature in hybrid relations with the artificial and the virtual; represents the transformation of nature at a deeper ontological level.

Hybrid Natures	Author	Definition	Respondents
<b>Organic Nature</b>	Escobar 1999	An integrated biophysical, human and supernatural experience, culturally established and maintained through rituals and practices. Nature and culture are ontologically linked. (c.f. Mysticism, Pietarinen 1994)	l, o, p, s1, s3, u
<b>Ecological Nature</b>	own category	Nature as the biophysical environment, comprising interacting living and non-living entities and systems. Nature and human beings are ontologically linked as biophysical entities. (c.f. Naturism, Pietarinen 1994)	f, g, h, k, r, s3, s4
<b>Capitalist Nature</b>	Escobar 1999	A resource to be managed or a commodity to be traded and consumed. Nature and culture are ontologically distinct. (c.f. Utilism, Pietarinen 1994)	f, s1

**Table 4.1:** Hybrid accounts of nature reflecting different ontological assumptions about nature and the human-nature relationship. Interviewees who represented these views are listed.

#### 4.3.4 The influence of ontological assumptions on programmes

The ways in which the programme presenters viewed nature (their nature ontologies) were generally reflected in the ways in which they presented their programmes and represented nature and the human-nature relationship in their interviews.

##### (a) **Organic Nature:**

Descriptions of nature that reflected the ontological perspective described as Organic Nature included:

As Africans we believe that nature has always been within us. Our ancestors would go to the mountain and pray for rain. Boys will go to the bush for initiation and find healing. We use everything natural for healing. (Int-o1)

I believe that Nature is one of the places where you come in contact with this peace, humanity, life ... it's how African people used to live. We used to live through nature. Nature is the provider. We used to respect Nature. And for me having gone to the bush for quite a long time, it was one of those moments whereby I discovered the power of just sitting and watching nature, looking to animals, away from the city. (Int-t)

For me, everything is energy. We people are energy, the mountain is energy, nature is energy, and we're all interconnected ... people can feel more connected to one's creator in nature. (Int-u)

Int-p, whose youth development programmes included rites of passage, reflected this view when he said:

We try to connect them to the natural rhythms of the environment ... living really in touch with nature and the way it should always have been.

**(b) Ecological Nature:**

Comments about nature that reflected the perspective described as Ecological Nature included:

The natural environment, that's what it means to me: the natural ecosystem ... (Int-h)

It's the planet, it's beyond the planet ... it includes the rocks, the water, the sun ... the plants, the animals, and most importantly the relationship between them all, and how all of them contribute to life. (Int-l)

It's how everything works together as a system ... whenever I'm thinking about nature, I'm thinking which bird, which insect, which flower ... it's that interdependence, including man. (Int-g2)

Most of these respondents presented programmes that enriched the school curriculum. There was a large focus on learning about nature and the environment, which was generally portrayed in ecological terms.

Members of this group recognised that culture was an integral part of nature, but unlike Escobar's category of Organic Nature, tended to view culture as artefacts in the landscape, rather than as cultural processes like ritual:

You don't just look at nature only with the fauna and flora and the geology and rock formations. It's also the landscape, whether there be any human interference there, but in an aesthetic way ... It's cultural heritage that is part of that landscape. (Int-k)

It's the natural world, but it's accessible ... it's the bushes outside there, it's the trees. It's the oak trees that have been planted 300 years ago. (Int-r)

**(c) Capitalist Nature:**

Relatively few respondents made comments that could be described as reflecting a Capitalist Nature perspective. In one case, a teacher (Int-s1) mentioned that his school's marketing officer saw their wilderness hike as a 'marketing tool' to attract learners to the school.

A comment by an education officer based in a nature reserve suggested that working in conservation made one view nature as a resource to be managed (a feature of the Capitalist Nature perspective). This may not be the dominant view of nature that a person choosing a career in nature conservation would have held originally, but it is clear how this perspective might develop:

You can talk to how many nature conservators. They work there [in nature] – they don't go to relax there. To relax I would go to another nature reserve. And then again you pick up – ah, there's erosion. You forget how to switch off as a nature conservator as compared to someone from the outside. (Int-f)

The threatened status of natural ecosystems within a rapidly developing city contributed to the managerial imperative:

I think definitely nature would not survive without people meddling in it because it's now so confined and on your doorstep. (Int-f)

**(d) Complex and ambiguous perspectives:**

In some of the interviews, the comments made about nature by a particular respondent were not limited to single categories. Instead, individuals sometimes referred to nature from more than one perspective (e.g. Int-f, s1, s3). This suggests that the human-nature relationship is rich and complex, and that what nature means to an individual (or what they are willing to report) will vary according to the context.

For example, when reflecting on her personal feelings about nature, respondent Int-g2 described nature as a place “where my body and soul come together”. This suggested a sense of the immanence of the human-nature relationship. Yet the same respondent appeared to feel uncomfortable with the term *nature* in relation to her work, explaining that it was important to teach youth to “take responsibility for the environment, not to learn about nature”. She inferred that “feely-touchy, experiential” approaches in nature were inappropriate in a context where many of their visitors came from economically disadvantaged areas:

... we are trying to relate the learning that we're doing to [the learners'] context. Because otherwise, this is something they may come to once in their lives and then ... [it] has nothing to do with us. ... We're not glorifying this situation here because we need to make what we're doing relevant to them.

A colleague (Int-g1) described her impressions of how these experiential approaches had become unpopular amongst some environmental education practitioners:

I think [nature] became slightly abused in the history of environmental education, where it became so much skewed towards that whole nature experience of taking kids out of their context – their living context not being considered to be an environment – taking them out into nature where everything would be fine. So for a lot of people nature became a negative word to use.

Being conscious of the stark differences between the site where their programme was based and the environments from which many of their visitors came, these presenters recognised the need to make their programmes relate and contribute in practical ways to

the learners' lives. Their primary approach was to support the school curriculum, and their views therefore tended to reflect an *Ecological* view of nature.

On the other hand, Int-o1 (who seemed to hold an *Organic* view of nature) did not think that potentially 'once-off' nature experiences were irrelevant to youth. For him, time in nature gave youth from townships the chance to escape from the pressures of their daily lives and to experience something new and inspirational:

We use nature to give kids a chance to deal with challenges. We want to inspire positive identity and vision ... We want to help youth to achieve their dreams – to change mindsets. We talk about what they can see ... Once they are exposed to nature, they can see what the community should look like ... We use nature as an example, so they can see it is beautiful. Then we say, "Wouldn't you like your community to look like this?"

These two cases illustrate that the ontological assumptions underpinning nature-based programmes have a significant impact on programme approaches. Experiential approaches deemed problematic by one presenter were central to another's programmes.

#### **4.3.5 Programme goals and youth identity development**

In addition to ontological assumptions about nature held by programme presenters, goals relating to nature and conservation were also influenced by international and national policy agendas, organisational mandates and strategies, and the needs of local communities. Some respondents were familiar with and referred to stated institutional goals, mission statements or vision statements. Others, however, seemed unsure about official goals and instead tended to share their own personal aims and opinions.

Because of my interest in adolescents, in addition to programme goals relating to nature and conservation, I also wanted to find out how programmes aimed to support youth identity development. I used Archer's (2002) categories relating to identity development as an embodied process of reflexivity in natural, social and practical orders of reality to identify and sort comments relating to programme goals and imperatives. In some programmes there was considerable integration of goals relating to all three categories; other programmes tended to focus on particular aspects, such as psycho-social development or curriculum-related learning:

##### **(a) Natural order:**

Goals relating to the natural order included promoting healthy living (e.g. through being physically active) (Int-k) and developing therapeutic programmes for youth (Int-o, p).

Int-p claimed that an outdoor programme had changed his life. As an adult he had therefore decided to run similar programmes to help youth at risk.

A number of programmes (g, h, k, l, r, s1 & s4) focused on sustainable development and conservation. These aimed to create awareness and develop understanding of the environment and environmental issues, to change people's attitudes towards the environment, to develop a sense of responsibility towards the environment, and to encourage people to get involved in conservation. Int-s1 saw his programme as an opportunity for youth to learn to "appreciate the simplicities and necessities of life", presumably in contrast to the imperatives of a consumerist culture.

**(b) Social order:**

A number of programmes focused on youth development processes (e.g. b, h, k, o, p, r, s1-4, t & u). Goals included:

- developing positive self-identity
- social and emotional development: building friendships, cooperation, helpfulness, trust and understanding
- spiritual awareness and growth
- developing democratic values: valuing diversity; group decision-making
- building communities: contributing to a team, a community and the environment; promoting volunteerism
- leadership development
- addressing social ills: education about substance abuse, sexually transmitted infections, etc; therapeutic programmes for youth at risk
- promoting a positive vision:

We want to inspire positive identity and vision. People need to dream and have vision. I want to instil youngsters with the same vision: to know about their own values. We want to help youth to achieve their dreams, to change mindsets. (Int-o1)

Some of the education officers emphasised the social benefits of their work, for instance:

How can you ask someone to have an interest and love for nature when they don't know what love is? I think that education on the Cape Flats has to be social education first. (Int-b)

There needs to be this sense of warmth ... warm and friendly and accepting and embracing. Without having a value for self, I strongly believe there cannot be a value for a neighbour, there cannot be a value for community – and if a human community cannot be valued, then the natural community of the ecosystem cannot be valued. (Int-l)

Some programmes used outdoor activities to help youth develop social skills and positive dispositions. They monitored these processes using activities, discussions and observations:

... we don't want to structure things too much. You actually give them time, you give them options of things to do ... for two hours they just talked about what they did and what they like and what they missed about home, and what they learnt about themselves ... And each night there's meant to be a tribal council wherever they are. (Int-s1)

There's always a member of staff with them, not only for safety but for observation ... there are files on each of the kids and we make notes of their contribution ... And you start getting a very clear idea of who likes getting their hands dirty and who doesn't. (Int-s3)

**(c) Practical order:**

Most environmental education centres working with school groups (e.g. a, c, f, g, h, k & l) have done a considerable amount of work to align their programmes with the national curriculum in order to support formal education, for example:

We've rewritten our whole programme into OBE ... we're quite serious about what we're doing here and we wanted to make sure that we're going in the right direction. (Int-h)

One of the private schools (s4) organised camps for all grades, which integrated curriculum-based learning opportunities with adventure experiences and the development of outdoor skills. Two other private schools (Int-s1 & s3) that offered wilderness experiences did not focus on the formal curriculum in their outdoor adventure programmes. This reflected confidence in the value of these experiences as general youth development opportunities:

We used to have a few elements which we don't do anymore. The one was tying into the curriculum back here. We actually got them to do essays in English and Afrikaans. We did science experiments, and biology this and geography that. And we tried to do those things out there and it fell so flat ... These crumpled bits of paper get sent back to school, some of them go missing along the way. It's a mess, an absolute mess. So we scrapped that idea ... (Int-s3)

Programmes that were not aligned with the school curriculum (e.g. o, p & t) still had capacity building as an important goal. One young leader working with youth from very low-income areas believed that exposing young people to new environments and activities helped them to overcome what he described as a sense of despondency amongst the youth in his community. His programme aimed to “enrich young people and provide opportunities to replace negativities with activities” (Int-t). Another respondent from a similar context took youth on overnight hikes “to expose them to a variety of subjects relevant to their lives and thus empower them to escape the trap of poverty and the worst aspects of township life” (Int-o1).

## 4.4 Developing the nature relationship–identity development matrix

It is clear from the previous sections that nature-based programmes represent a very wide range of goals and approaches. In order to make sense of the diversity of programmes investigated, I developed a matrix to enable me to map the programmes according to the two main aspects of the study, namely the human-nature relationship, and the process of identity development. All programmes addressed both aspects, but emphases varied. Some respondents saw their goals as extremely broad, from raising awareness about the environment to promoting positive social relationships. Others were more focused, concentrating on particular aspects of these two areas of concern.

### 4.4.1 Descriptors used to map nature-based programmes

Development of the matrix tool was informed both by features of the programmes investigated and by the works of Archer (2000, 2002 & 2003), Erikson (1968), Escobar (1999), Merleau-Ponty (1962 & 1968), and Pietarinen (1994). For each of the two categories (people-nature relationship; identity development process), a set of descriptors was developed on a scale from zero to five. On the X-axis, the *people-nature relationship* was described (Table 4.2a), while descriptors relating to the process of *identity development* were plotted on the Y-axis (Table 4.2b) (see over).

*Values and descriptors used to develop the matrix:*

<b>X-axis: people-nature relationship</b>	
<b>Value</b>	<b>Nature as subject or object &amp; human-nature relationship</b>
<b>0</b>	no reference to human-nature relationship
<b>1</b>	nature as resource or commodity - object for exploitation; capitalist nature; utilism
<b>2</b>	nature as setting - object forming a backdrop for human activities; humanism/utilism
<b>3</b>	nature as object of study; humanism
<b>4</b>	nature as object to care for; ecological nature; naturism
<b>5</b>	nature as subject with which humans relate in an inter-subjective manner; organic nature; mysticism

**Table 4.2a: X- axis: the people-nature relationship:** Values and descriptors relating to the *people-nature relationship*, used to map nature-based programmes surveyed in this study.

<b>Y-axis: process of identity development</b>		
<b>Value</b>	<b>Reflexivity</b>	<b>learning/development approach</b>
<b>0</b>	no reference to reflexivity/identity development	
<b>1</b>	little evidence of reflexivity or concern with identity development	individual as object of tuition: message transfer
<b>2</b>	guided individual reflection in at least one order of reality ( <i>Archer: natural/practical/social orders</i> )	reflective individual learner: relate learning to the individual's life to a limited extent ( <i>Erikson – autonomy, industry</i> )
<b>3</b>	guided reflection with others in at least one order of reality	reflective social learner: guided learning & reflection in association with others ( <i>Erikson – trust, intimacy</i> )
<b>4</b>	encourage embodied reflexivity in at least two orders of reality	reflexive social learner: developing initiative and sociality by acting & reflecting with others ( <i>Erikson – initiative, generativity</i> )
<b>5</b>	encourage integrated reflexivity in all three orders of reality in response to concerns ( <i>Archer</i> )	Reflexive eco-social learner (learning to inter-be): agency in response to socio-ecological concerns ( <i>Erikson – identity, integrity; Merleau-Ponty – inter-subjectivity</i> )

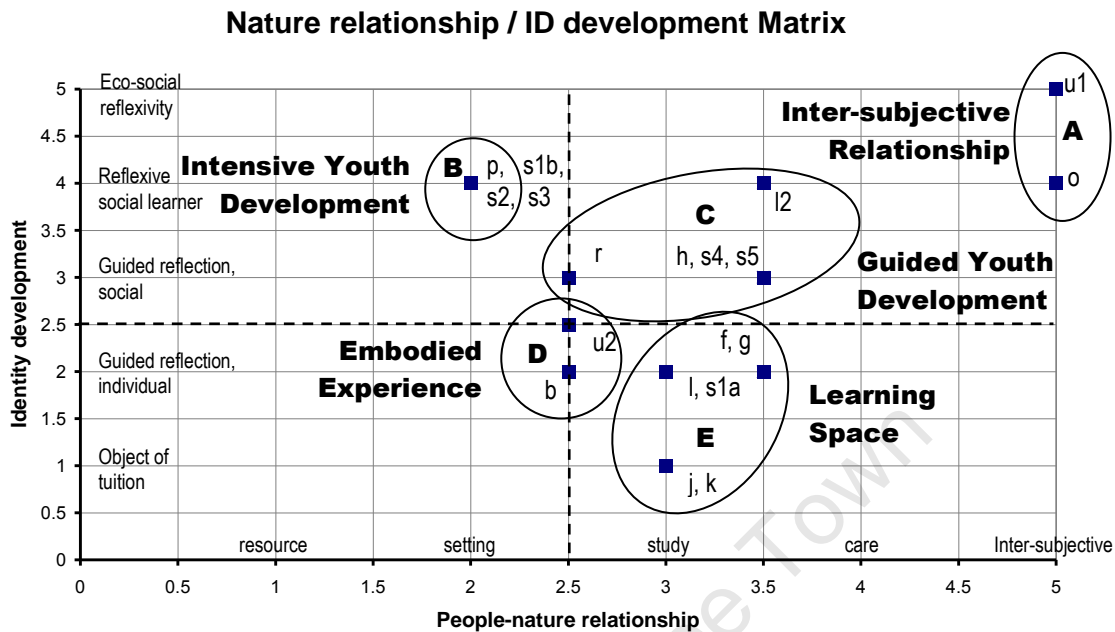
**Table 4.2b:** Values and descriptors relating to the *process of identity development*, used to map nature-based programmes surveyed in this study.

Approaches and activities of the conservation education and youth development programmes that were surveyed are summarised in Appendices M and N. Based on evidence from interviews, observations and learner evaluations, values were assigned that indicate how these programmes:

- represented the people-nature relationship (X-axis)
- supported youth with the process of identity development (Y-axis).

#### 4.4.2 Mapping nature-based programmes using the matrix

The X- and Y-values in Tables 4.2a&b were used to develop the following matrix (Figure 4.2):



**Figure 4.2:** A matrix demonstrating how various nature-based programmes represented the human-nature relationship, and supported youth with the process of identity development. The X-axis describes the human-nature relationship and the Y-axis describes support for youth identity development. To interpret these values, see Tables 4.2a&b. Intermediate values (e.g. 3.5) represent a combination of adjacent features.

In this analysis, five clusters of programmes were identified:

Cluster	Programmes	Matrix Description	Programme Features
<b>A: Inter-subjective People-Nature Relationship</b>	<b>o, u1</b>	<p>The human-nature relationship is viewed as inter-subjective.</p> <p>Reflexivity is encouraged, and this relates to two or more orders of reality (natural, social, practical).</p>	<p>u1 relates to the youth leadership development aspect of this programme. The leaders experienced a close relationship with nature and encouraged a sense of reverence towards it.</p> <p>Both groups taught youth about nature and encouraged reflexivity through solo reflection and discussion.</p>
<b>B: Intensive Youth Development</b>	<b>p, s1b, s2, s3</b>	<p>Nature is viewed primarily as a setting for youth development processes.</p> <p>These programmes encourage reflexivity in at least two orders of reality. Solo times in nature and/or regular debriefings are important components of these programmes and youth are generally supported beyond the duration of the nature-based experience.</p>	<p>The emphasis in these programmes was on the personal and social development of youth. Getting away from familiar settings into remote natural areas was a key feature.</p> <p>Programmes were between four days and one month in length.</p>
<b>C: Guided Youth Development</b>	<b>r, h, s4, s5, l2</b>	<p>Nature is viewed as a setting for youth development, a focus of study, and/or an object of care</p> <p>Guided opportunities for reflection in the group are provided in at least one order of reality</p>	<p>These programmes provided a balance between hands-on learning about nature/environment and personal/social development activities.</p> <p>Programmes were at least three days long and included camping and outdoor recreation/adventure.</p>
<b>D: Embodied Experience</b>	<b>u2, b</b>	<p>Nature is viewed as a setting for youth development and learning.</p> <p>Guided opportunities are provided for reflection, alone or with others, to apply experiences to individual contexts.</p>	<p>These programmes focused on experiencing/learning about nature during one-day hikes.</p> <p>Personal/social development opportunities were limited due to time constraints, but activities related to natural, practical and social domains.</p>
<b>E: Learning Space</b>	<b>l1, s1a, f, g, j, k</b>	<p>Nature is viewed mainly as a focus of study, and possibly of care.</p> <p>Reflection was either limited or part of guided individual or group learning activities.</p> <p>Relatively little focus on identity development processes.</p>	<p>The emphasis in these programmes was on learning about nature and the environment. Programmes included field trips and interpretative trails.</p> <p>Learning approaches varied from 'walk and talk' to active learning in groups.</p>

**Table 4.3:** Description of five clusters of nature-based programmes identified through analysis of the matrix in Figure 4.2.

Before considering each cluster in detail, a few general observations can be made:

- As noted in Chapter Two, nature is often viewed as a *resource* in the environmental education- and education for sustainable development literature. This was seldom reflected in these programmes, however, probably because the research focused on programmes that were at least partly nature-based and experiential. Classroom-based lessons in which nature is discussed conceptually may be more inclined to represent nature as resource.
- Figure 5.3c indicates that few young respondents took part regularly in community- or environmental service projects. Interviews with programme presenters suggested that it was mainly schools that provided these opportunities through clubs that involved youth in hiking, alien plant removal, litter clean-ups, and/or sustainability audits. Very few environmental organisations provided opportunities for youth to participate in conservation activities on a regular basis.
- In Figure 4.2 there were no cases in which ‘caring for nature’ was the core focus of an environmental programme. Instead, most focused on ‘learning about nature/the environment’. Observations of programmes revealed that discussions about what participants could do to care for the environment tended to be rather vague and superficial, often tacked on at the end of an excursion as a brief concluding discussion. Environmental clubs were not observed, but these may have provided youth with a context in which to care for nature and the environment in a sustained and meaningful way.

## 4.5 Using the nature relationship–identity development matrix

This section summarises how programmes in each of the clusters in Figure 4.2 / Table 4.3 supported youth identity development and/or the development of a sense of belonging to the natural order. Programme approaches varied greatly, but had the following features in common: all took place at least partly in natural areas, and all provided opportunities for youth to meet adults who were clear about their ‘ultimate concerns’ (Archer 2000, 2002), and who demonstrated the quality of generativity (Erikson 1968) through their interest in youth and youth development.

#### 4.5.1 Cluster A: Inter-subjective People-Nature Relationship

- **Programme o:** overnight mountain hikes for small groups of youth from predominantly African townships
- **Programme u:** young volunteers take groups of children and youth from various disadvantaged communities on short hikes on Table Mountain (see also Cluster D). This section considers the youth leader development component of this programme.

##### (a) Identity development:

The presenters of both programmes used hikes on Table Mountain as opportunities to inspire youth from disadvantaged areas and to share information about the natural environment. Int-o1 noted that it was important for youth who lived in townships to spend time on the mountain because:

Once they are exposed to nature, they can see what the community should look like ... We use nature as an example, so they can see it is beautiful. Then we say, "Wouldn't you like your community to look like this?" (Int-o1)

In Programme o, identity development was approached in a therapeutic manner, with youth being given time alone in nature to reflect on their lives, followed by time to share their reflections with the group. The experience of being listened to and accepted by attentive adult mentors and peers in a 'non-judgemental' natural setting created a sense of intimacy, which helped youth to trust others in the group. Most were able to share and address in some way previously unresolved personal concerns. In addition to working therapeutically at the individual level, the leaders of this programme were also conscious of retrieving and celebrating a sense of respect for nature, which they related to traditional African culture.

In Programme u, the volunteer youth leaders were generally highly motivated, referring to their love of the mountain and their commitment to helping the youth in their communities. Volunteering as hike leaders enabled them to take action in response to their socio-ecological concerns. Developing a reflexive orientation in relation to their natural, social and practical contexts enabled them to respond appropriately to groups and to their natural surroundings.

Some of the youth leaders were no longer teenagers, having worked in the programme for a number of years, but others were still at school. One of the youngest members of the group explained that the programme had contributed to his developing sense of identity. He valued what he had experienced and learned during his training. He felt proud of his new knowledge and was keen to share it with his friends by taking them hiking on the mountain. He spoke of the value of spending time quietly in the forest, which he described as meditation. Other youth leaders added that the programme had improved their communication skills and their confidence in working with other people.

**(b) Nature relationship:**

The leaders of both programmes appeared to relate to people and nature in an inter-subjective manner, promoting an attitude of mutual recognition and respect. For example, Programme o presenters encouraged youth to ask the mountain for permission to walk a particular section of the trail. They then walked that section in silence in order to “get in tune with Mother Nature” (int-o1).

The leaders of both programmes encouraged youth to experience nature using different senses, especially listening. There was a meditative quality to these experiences, which helped the youth to relate to their surroundings in a respectful manner and experience a sense of belonging to the natural order. These programmes also presented an ecological view of nature and emphasised human reliance upon natural systems.

Some of the presenters of these programmes noted that intimacy with, dependence on and respect for nature were features of traditional African culture. For example, Int-o1 believed that urban youth could retrieve important cultural values and sensitivities by spending time in nature. He recognised nature as providing a sense of belonging that was simultaneously physical and cultural.

**(c) Reflexivity:**

Presenters made time for youth to reflect quietly on the experience of being in nature as well as on their lives. They chose quiet places, often close to water or amongst trees, where youth could become immersed in natural sounds. One of the hike leaders, who had decided to join the programme after attending her first hike, noted:

[This] was a different experience. They told me to lie down and find out what my purpose was in life. I had never thought about my purpose. (Int-o2)

Int-o1 noted that these quiet times gave youth the opportunity to “listen to their inner voices.” He observed that “at home they wouldn’t feel the same way because of all the noise.” He noted that they avoided telling young people too much, but rather involved them in discussion so that they were constantly engaged. In addition to quiet reflection and discussion, he also asked youth to write about what they experienced on the trail.

Int-t also organised hikes (not observed) during which he encouraged youth to reflect on their lives and discuss issues relevant to them. He explained what quiet times in nature meant to him:

[In nature] you can actually go and be within yourself and start thinking and taking out your pain and trying to reflect on it. And then you go back, you know, you’re so peaceful and you can actually spread the peace among the people. ... Nature provides that opportunity, to actually listen to yourself, listen to nature and hear it speak. It speaks powerful words and it’s quite great.

#### 4.5.2 Cluster B: Intensive Youth Development

- **Programme p:** a wilderness-based youth development programme, mainly for youth at risk
- **Programme s1b:** 16-day outdoor adventure programme for Grade 10 learners organised by a school (see also Cluster D)
- **Programme s2:** 4-day youth development camp for Grade 11 learners organised by a school
- **Programme s3:** 28-day outdoor adventure programme for Grade 9 learners organised by a school

##### (a) Identity development:

Cluster B included youth development programmes, sometimes including rites of passage, in which youth hiked and camped in remote mountainous areas. Wilderness experiences and activities were often used as metaphors of individual and social development:

We use lots of metaphor: in the wilderness, there’s something new to discover ... within yourself there are parts of you that you don’t really know yet. (Int-p)

This respondent noted that this approach was particularly appropriate with mid- to late adolescents:

I would rather work with 15-20 year olds. That's a good age. Because you're starting in terms of ... psychological development to move from the centre of belonging to independence. You're starting to make your own decisions, you're starting to move towards adulthood. (Int-p)

These programmes were between four days and a month in length. The sense of isolation as well as the physical and mental challenge of these longer programmes caused youth to rely upon and support one another (Int-p, s1, s2 & s3):

I remember once taking them across the river and there was a very, very small girl who struggled physically ... she was not very strong and the river was flowing reasonably swiftly, and a big boy came up behind her and scooped her up and carried her over the river, without saying a word, and deposited her on the bank. ... And afterwards I said to him, "I saw that and it was really nice." And he just said, "Ma'am she needs our help." And that's all. But that sort of thing is very unlikely to happen in the school corridors. But the awareness of each other and the willingness to put out a hand but also to take a hand ... Nobody is seen as weak or different or sidelined. They're just accepted. It's extraordinary. (Int-s2)

It's taking them out of their comfort zone. They get pushed to a limit. It's the group that takes them through: if he can, then so can I. Kids get injured, others just grab the bag: let's carry some of your stuff ... (Int-s3)

One teacher felt that boys benefited from these experiences because:

Boys want to know whether they have what it takes to be a man. Until they know this they will always be trying to prove it and at the same time shrink from anything that reveals they are not. ... Parents need to give their sons space to grow and develop. [It is an] opportunity for boys to discover more about themselves and test themselves in a variety of situations - learn new skills and develop emotional, organizational and practical intelligence [which is] as important as physical prowess or intellectual ability. (Int-s1)

Being away from everyday influences, presenters could create what one referred to as a "safe container" (Int-p), an intimate space in which youth could begin to trust one another sufficiently to speak openly. On these longer programmes, youth became more independent and could form "their own dynamic team and make their own decisions" (Int-p). Especially when working with at-risk youth, presenters created opportunities to address earlier unresolved developmental challenges and to build trust, autonomy and initiative, while demonstrating qualities of generativity and integrity (Erikson 1968):

We'll do a lot of the activities that bring up things like communication, problem solving, trust, listening skills ... we'll provide feedback. We'll provide opportunities where each of them is in a leadership position ... action learning, applying this in a very real situation. (Int-p)

The same presenter noted that the remote location of wilderness programmes encouraged youth to deal with the consequences of their behaviour. They could not continue avoiding

situations that they needed to face as their behaviour had an impact on the group, but in the wilderness there was “nowhere to hide” (Int-p).

**(b) Nature relationship:**

In these programmes, although presenters emphasised the need to look after the environment, nature was not generally viewed as an object of study. Rather, nature provided a context for youth development activities. Presenters remarked that experiencing the peace, beauty and grandeur of nature had an impact on the youth, for example:

A lot of children have never been in that kind of environment. And that's also what makes it so powerful ... they'll go and sit on the rocks overlooking the valley and watch the sun going down in a state of absolute peace ... We take them down to the river and go boulder hopping and then they leap into a very deep pool from a very high rock, and they are absolutely, literally thrilled by the experience of being in the open in that extraordinary beauty ... They're stunned at night by the stars ... the sky sometimes looks like it's been sprayed. It's just exquisitely beautiful. And they literally gasp and gaze. Some of them have cried at the sheer wonder of it. It is incredible. It is incredible. (Int-s2)

Erikson (1968) describes the life-stage challenge of early adulthood as resolving the challenge of intimacy versus isolation and developing the virtue of love. Paradoxically, the isolation of remote natural settings seemed to heighten the sense of nature's immanence, and evoke emotions associated with intimacy and love.

**(c) Reflexivity:**

All presenters of this cluster of programmes emphasised the importance of debriefing, which enabled youth to see the point of activities and draw meaning from them, for example:

The most important aspect of their programme is processing the activities that the students go through and deciding how they would apply this to daily life ... We ask them: can you think of a situation where you can apply this communication skill, and they'll give us a story ... They start to see that they can apply that skill to their daily environment. (Int-p)

On wilderness trails, debriefing usually included short discussions at the end of each day, evaluating things such as general “highs and lows”, and the effectiveness of the day's leader. Solo sessions of 24-30 hours in duration were sometimes included as a “fantastic opportunity to get out of each other's hair, get into their own heads and do some thinking and placing of themselves.” (Int-s3) Most presenters also organised an extensive debriefing session at the end of the programme, and asked participants to write reports in order to reflect on the experience.

All presenters emphasised the importance of creating a supportive social structure to support youth returning from these programmes, in order to help them integrate what they had learnt and experienced into their everyday lives.

These programmes provided opportunities for youth to explore identity development as an embodied process. They were able to engage reflexively among themselves with what Erikson (1968) described as issues of trust, autonomy and initiative. In their relationships with mentors and with the natural environment they were able to observe and experience qualities of intimacy, generativity and integrity.

Archer (2002) views identity development as an embodied process of reflexivity in relation to natural, social and practical orders of reality. This cluster of programmes provided a balance of such opportunities. The physical challenge was an opportunity for adolescents to test the strength and stamina of their developing bodies. Getting to know peers and adults in an unfamiliar setting, where survival sometimes depended on their co-operation, was an opportunity to develop and reflect on social skills. Finally, the programmes included activities that developed practical competence (e.g. survival skills, applied curriculum knowledge).

Although not observed as part of this research, outdoor or environmental clubs may also provide an opportunity for youth development in natural settings. Despite outings being of short duration, regular meetings allow for the development of trust, communication and reflection. One education officer who had started a youth group on the Cape Flats (not observed) remarked:

I hike with them once a month and they're developing ... These kids are like ... flowers developing. When you see the inside, you know that once that flower opens it will be a brighter flower because [of what] you're putting into it ... They realise that they don't have to put on a mask. And so I think they actually find identity in nature (Int-b2)

### 4.5.3 Cluster C: Guided Youth Development

- **Programme h:** environmental camps of varied duration for primary and high school learners, including curriculum-based fieldwork, adventure experiences and leadership exercises
- **Programme l2:** week-long biology programme for FET learners organised by an environmental service provider, including an intensive learning programme, ecological fieldwork, training in presentation skills, and overnight camping
- **Programme r:** two to three-day environmental camps, mainly for primary schools, including curriculum-based fieldwork, an adventure course and social issues presentations
- **Programme s4:** week-long camp for Grade 10 learners including a river adventure and curriculum-based fieldwork; part of a high school environmental programme for all grades organised by the school

Programmes in Cluster C combined curriculum-based learning and youth development approaches such as adventure, team-building and leadership development. These were usually residential programmes or courses lasting between three days and a week, often held at campsites in natural areas, most being within the metropolitan area. In a description of their annual Grade 10 environmental camp, Int-s4 listed the diversity of activities typical of this cluster of programmes:

It's a one-week canoe trip. The theme is 'Adventure and Environment'. They do writing, art and geography. They also spend four days at ... a small Moravian community. They coach sports and help with classroom work. (Int-s4)

#### (a) Identity development:

These programmes supported processes of identity development in the natural, practical and social orders. In the natural order, adventure challenges (e.g. adventure courses and canoe trails) and recreational activities (e.g. swimming and hiking) gave youth opportunities to develop and reflect on their physical capabilities:

[We have access to] a full adventure course. It's got sort of wobbly bridges and balancing beams and cargo nets and all that sort of thing. And it incorporates quite a lot of leadership and team building ... And they love it, hey. They do raft building on the farm dam here, they go on the zip line, they're in the mud, they're in the water. All their fears are conquered and that has a huge impact on them. (Int-r)

Working, playing and camping together created opportunities for youth to interact socially, often with people who were not part of their everyday social groups. One

presenter (Int-r) invited specialist organisations to educate youth about social issues like substance abuse and sexually transmitted infections. All programmes provided opportunities for youth to develop practical competence by providing curriculum enrichment in subjects like Life Sciences and Geography.

Programmes in this cluster were generally more closely supervised by adults than those in Cluster B, with independent activities being limited to youth working together to prepare presentations or socialising after formal sessions.

Some outdoor programmes were integrated into longer-term identity development processes; for instance, the programme run by school s4 was part of a broader environmental and youth development programme that involved all grades. Most environmental centres lacked the resources to get involved in follow-up programmes. They relied on the visiting schools or groups to support youth as part of ongoing processes of schooling or youth development. However, one service provider gave youth the option of joining a volunteer programme after their holiday course, stating that he wanted youth to see their centre as:

... my second home. I can use this as a place to experiment with my ideas and find out more about this career. And I want to make a difference through my career. (Int-l)

Over the years, a number of youth had joined the volunteer group, some going on to tutor on future holiday courses and some to pursue university studies in biology, as an extract from a letter from a course participant to Int-I shows:

I had wanted to be a mathematician once I finished University. Then I went on the ... Course and everything the education team taught us and showed us was fascinating and I realized then and there, this is what I want to study ... I don't regret a single thing and I'm glad I went on that course because it has definitely influenced my life, and I'm glad it did.

**(b) Nature relationship:**

Programmes in Cluster C represented nature as a setting for youth development activities, a focus of study, and/or something to care for. Programmes generally presented an ecological view of nature and the human-nature relationship, attracting schools to participate in programmes by offering hands-on curriculum-based fieldwork activities.

Because programmes were generally at least three days long, there was adequate time for outdoor recreational activities like hiking, beach activities and ball games, as well as

night-time activities like campfires, night hikes and star-gazing. Although the physical location was generally less remote than those in which Cluster B programmes took place, these experiences were sufficiently unfamiliar to have a profound impact on many urban youth:

I used to be walking along on the mountain with them. And then I would hear crying and I'd stop and I'd turn around and half of them were crying. So what's wrong? ... Aah, we're just so happy. What are you happy for? No, because we've seen the mountain for so long and now we're climbing it ... Or swimming in the water. They've lived their whole lives in Cape Town but they've never been for a swim in the sea ... So they see the mountain there, and they see the sea or they see pictures but they've never been there. So it's like foreign to them. But we expect them to be concerned ... (Int-r)

The same presenter reported that one of their two most popular activities was a night hike up the mountain. At the top, they would all lie on the ground and watch the stars in silence. When asked why he thought the youth found this activity special he observed:

Because it makes them feel that that they belong. It makes them feel that they're part of it. Because they've always felt nature is something that they're not part of. They've seen it over there, or they see it on TV. (Int-r)

O'Loughlin (2006) contends that developing a sense of belonging is a corporeal process which involves all the senses. She calls on educators to recover situational bodily encounters with nature and built environments, such as that described above. She believes that a sense of embodied 'emplacement' is needed in order to overcome the tendency in our pre-eminently visual culture to observe our environment but not to become involved.

**(c) Reflexivity:**

As in previous clusters, programmes in Cluster C involved youth in a wide range of embodied experiences (natural, social and practical), which created diverse opportunities for reflexive processes. Despite this, however, formal opportunities for youth to be reflexive appeared to be less central to these programmes than in Clusters A and B. The one exception was the school programme, about which the teacher said:

We give them open-ended writing to do at the end of the programme. ... on the hike they do five solo activities ... They also use their senses to observe their environment. They write their thoughts in their books. Reflection time is critical. They don't get enough time to think about what they're doing and where they are in their lives. (Int-s4)

Other activities in these programmes that encouraged reflexivity included guided discussions relating to presentations and activities, written fieldwork exercises, and formal programme evaluations, which asked for personal reflections.

#### 4.5.4 Cluster D: Embodied Experience

- **Programme b:** day hike for high school youth, which included learning about the environment and meeting youth from other schools
- **Programme u2:** the day hike component of a programme that trained young volunteers to take larger groups of children and youth from various disadvantaged communities on day hikes on Table Mountain (see also Cluster A)

Both programmes in Cluster D were one-day hikes on weekends. Participation was voluntary, and both happened to involve youth from two different high schools:

**(a) Identity development:**

Programmes in Cluster D tended to be offered for youth who had limited opportunities to visit natural areas, and were therefore of an introductory nature. Unlike the residential and wilderness programmes discussed above, these short programmes were limited in their potential to support psycho-social development. However, these experiential programmes gave youth the opportunity to enjoy embodied experiences in natural, social and practical domains. Youth gained general knowledge about things around them, and had adequate time to socialise with their peer group, interact with the hike leaders, challenge themselves physically on the hike, and experience their natural surroundings. They were also able to reflect on the experience individually and in their groups. Group leaders came from similar backgrounds to the hikers, and some were relatively young. Feedback from youth (Chapter 5) indicated that this enhanced the experience as they could relate easily to their group leaders.

**(b) Nature relationship:**

Programmes in Cluster D represented nature as a setting for enjoyable activities and for learning. The hikes took place on weekends and therefore did not focus on the school curriculum. Group leaders taught youth about things that they encountered in nature, including particular species, ecosystem processes, the value of nature, and environmental problems.

**(c) Reflexivity:**

Compared with the longer programmes discussed above, reflexive opportunities on these day-programmes were relatively limited. However, Group u2 had three opportunities for quiet, personal reflective time on the trail. Youth could simply experience the tranquillity of the setting, or have time to reflect on issues that were on their minds. The leaders also encouraged youth to discuss different aspects of the value of nature at relevant points along the trail.

Group b consisted of more than 100 youth, but there were enough group leaders to divide into groups of approximately ten young people each. Although Group b did not provide opportunities for quiet reflection, leaders encouraged youth to reflect on what they encountered through group discussions. Also, the long hike provided valuable informal opportunities for leaders to engage in conversations with individuals or small groups and to encourage them to reflect on both the experience and their lives.

#### **4.5.5 Cluster E: Learning Space**

- **Programme f:** nature reserve-based education centre that offered curriculum-based field trips for primary and high school learners
- **Programme g:** heritage site-based education centre that offered curriculum-based field trips for primary and high school learners
- **Programme j:** nature reserve-based education centre offering ecological field trips for primary and high school learners
- **Programme k:** nature reserve-based hiking programme offering one-day or overnight interpretative hikes or camps for a wide range of groups
- **Programme l1:** curriculum-based biology lesson for Grade 11s presented by an environmental service provider at their education centre (see also Cluster C)
- **Programme s1a:** school ecology project developed by an environmental service provider and undertaken by Grade 10 learners at school (see also Cluster B); some of the learners submitted their projects to a science expo

Cluster E represents the approaches used by the majority of organisations that offer nature-based programmes for high school youth in Cape Town. Most programmes were

one-day field trips, but one was an overnight hike, and another a school project that learners participated in over the course of a term.

While two programmes provided general nature interpretation, four were strongly curriculum linked. In the case of centre-based programmes, this helped teachers justify taking their learners out of school for an excursion. One respondent explains:

[The teachers went] back to their Circuit meetings saying, "Our boys have done this power point thing that they were assessed on based on their visit to [venue g]." And then all of a sudden the bookings started coming in. ... And this is what I've been saying to others from other centres who say, "How do you get them in?" I say, "You've got to have a programme that actually answers the curriculum, so that the teachers come, and it's efficiently taught." (Int-g2)

**(a) Identity development:**

Programmes in Cluster E tended not to focus on youth identity development *per se* (e.g. personal, social and leadership development); instead most set out to teach youth about nature and the environment through short fieldwork programmes, projects, or interpretative trails. In terms of identity development processes, therefore, this cluster of programmes tended to fulfil needs in the *practical* order, developing knowledge and skills in the environmental field.

Unlike longer residential programmes, these short programmes were limited in their potential to meaningfully support psycho-social development. Some presenters noted, however, that even short programmes could expose youth to values of respect and care for others:

You hope that something they've internalised might make a difference somewhere down the line ... even the fact that you just spoke to them with respect all day. (Int-g2)

One of the teenagers who had attended a programme at this centre confirmed that this was indeed the case:

I'm feel happy because to learn about plants and then you play a game for the few minutes and I'm feel so good in my body because I'm respect you [sic]. (F-GQ 5.23)

Programmes j and k were not aligned with the curriculum but focused on transmitting general, site-related environmental knowledge. There was little evidence of group work, active learning or discussion. The presenters did most of the talking and learner participation was limited to listening, and answering questions either verbally or in writing. In both cases, the presenters had studied to be conservation officers rather than teachers. Although a lot of information was given, occasionally it was not presented in a

way that related to the learners' lives. For example, one presenter used only Latin, English and Afrikaans names of plants, even though the home language of all but one of the young people on the hike was isiXhosa. Despite the fact that most of the youth knew very little about indigenous vegetation, the presenter often spoke about flowers that were not in season.

**(b) Nature relationship:**

In these programmes, nature was viewed mainly as a focus of study, and sometimes of care. Learning approaches varied from active learning in groups to didactic, 'walk and talk' methods:

Along the way we will have a couple of stops. We will interpret the cultural and natural heritage. We will get them to look at the views, to identify landmarks ... (Int-k)

South Africa's Revised National Curriculum Statement (FET) provides numerous opportunities for environmental learning in all subjects, and most environmental education centres offer programmes based on environmental knowledge and outcomes in the curriculum. Traditionally, field trips to natural areas have been the preserve of Life Sciences and Geography teachers, with few teachers of other subjects organising excursions to these areas. The emphasis on these subjects reflects the expertise of education officers who work for organisations that manage natural areas. Most have a background in the natural sciences, and therefore produce programmes and materials of a scientific nature. The view of nature in these programmes is therefore predominantly a scientific (ecological) one, usually with conservation management overtones.

In the four cases where the curriculum imperative was strong, the programmes tended to be highly structured with few opportunities for youth to relax and simply enjoy the natural surroundings. In Programme g learners did occasionally do quiet listening activities, however, and the education officer observed that:

You actually see the stress just dropping off the learners as they sit with their eyes closed. And once they've relaxed into it and actually becoming aware of it ... the feeling, the actual engagement with the plant ... (Int-g2)

**(c) Reflexivity:**

Compared with the longer programmes discussed previously, these short day-programmes provided learners with limited reflexive opportunities. The curriculum-related programmes were tightly managed and focused on formal learning outcomes.

Reflexive processes were mainly of a cognitive nature. They included written exercises, debriefings after activities to ensure that learning outcomes had been achieved, and discussions in which youth were asked, for example, to analyse the value of biodiversity, or to relate what they had learnt to their personal lives (e.g. how to live more sustainably).

In cases j and k very few opportunities were provided for youth to reflect on their experience of being in a natural area, or on the information they had been given about the environment. The only reflective activity on the overnight hike (k) was a debate on environmental rights *versus* human rights that some of the youth decided to hold during the evening. Other than that, however, no opportunities were provided for quiet reflection, general discussion or feedback.

## 4.5 Conclusion

The nature-based youth development and environmental education programmes described in this chapter have proven to be quite distinct in their goals, approaches and impacts. While the different approaches have merit and are suited to the contexts in which the programmes are presented, it appears from this section that each approach has something to learn from the other. Environmental education programmes (especially those represented in Clusters D and E) could benefit from paying more attention to the developmental needs and interests of youth that relate to the social order. Youth development programmes in turn (especially in Cluster B) could reflect more explicitly on the human-nature relationship, acknowledging that identity development is not simply a psycho-social process, but one that takes place within an *eco*-social context.

Taking a more inter-subjective view of the human-nature relationship might enable youth development and environmental education practitioners to find the common ground that unites rather than separates their respective fields.

The next chapter presents the responses of youth to the nature-based programmes introduced in this section, with particular reference to how these programmes supported processes of identity development and the development of a sense of belonging to the natural order.

# Chapter 5: Findings

## Youth & Nature in Cape Town



*Nature is a part of my life and I feel that people must realise that  
without nature we are nothing.  
(O-GQ 5.6)*

# Chapter 5: Findings

## Youth and nature in Cape Town

### 5.1 Introduction

This chapter presents the results of research into how a sample of adolescents in Cape Town said they felt about nature, and how they viewed the nature-based programmes discussed in Chapter Four. The sources of most of the data were the General and Evaluation Questionnaires (Appendices F & G), as well as four focus group interviews. Schools involved in the research came from different parts of the city and represented different socio-economic, racial and language groups (Table 1.1; Appendix A). I originally intended to focus on Grades 10-12, the age group least well served by nature-based programmes in Cape Town, but in some cases this was not possible, so some younger and older youth were included in the surveys and programme observations.

This chapter addresses the following research sub-questions (Section 1.2):

- What ideas and experiences of nature do young people from diverse backgrounds in Cape Town bring to nature-based programmes?
- What factors contribute towards a sense of alienation from nature amongst these adolescents?
- How do adolescents respond to these nature-based education programmes, especially in relation to:
  - > The contribution of these programmes to identity development?
  - > The development of knowledge and understanding about nature and the human-nature relationship?
  - > The appropriateness of programme content and approaches to adolescents?

The data are both quantitative and qualitative, with numerical data being presented as graphs and tables, and narrative data as quotations and poems. As described in Chapter Three, in order to present the statements of youth in a form that conveyed some of the inherent emotion, they were developed into poems (Miles & Huberman 1994). In most poems, only the respondents' words were used. On the few occasions when words were added or edited, this is indicated by a different style of font.

In order to maintain the anonymity of respondents, programmes were coded with lower case letters (Appendix B) and schools with capital letters (Appendix A). Individual

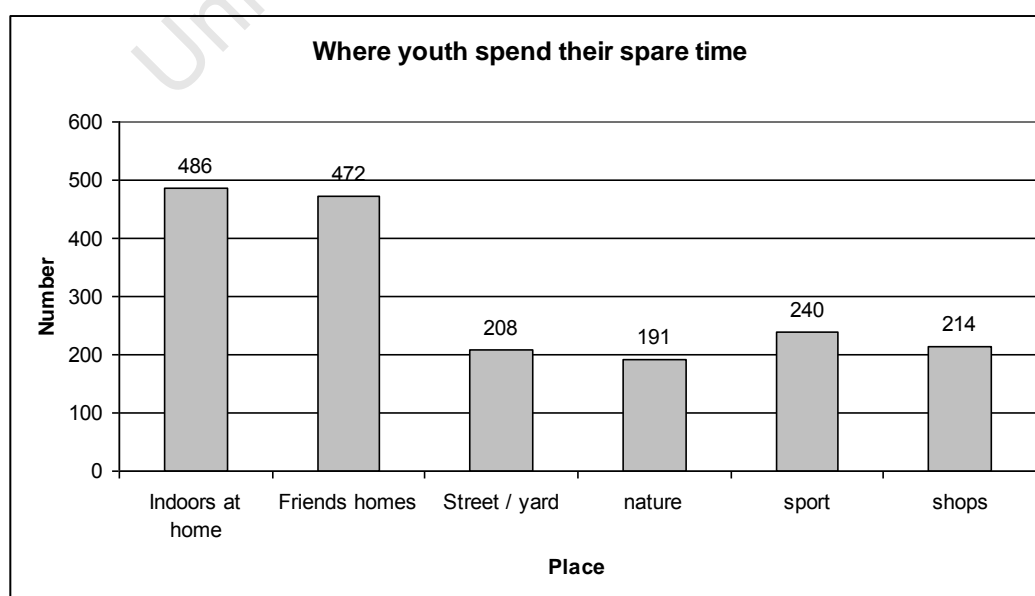
programme presenters are referred to as interviewees, e.g. Int-a is the presenter of programme a. Statements made by youth are identified by a code that comprises the school code, a reference to the questionnaire and question number, and a unique number, e.g. A-GQ 5.10 = School A, General Questionnaire, Question 5, Learner number 10.

In order to sketch a broad picture of the young people's lives, the chapter begins with some general background on how youth said they spent their leisure time.

## 5.2 How teenagers in Cape Town spend their leisure time

### 5.2.1 Where teenagers spend their leisure time

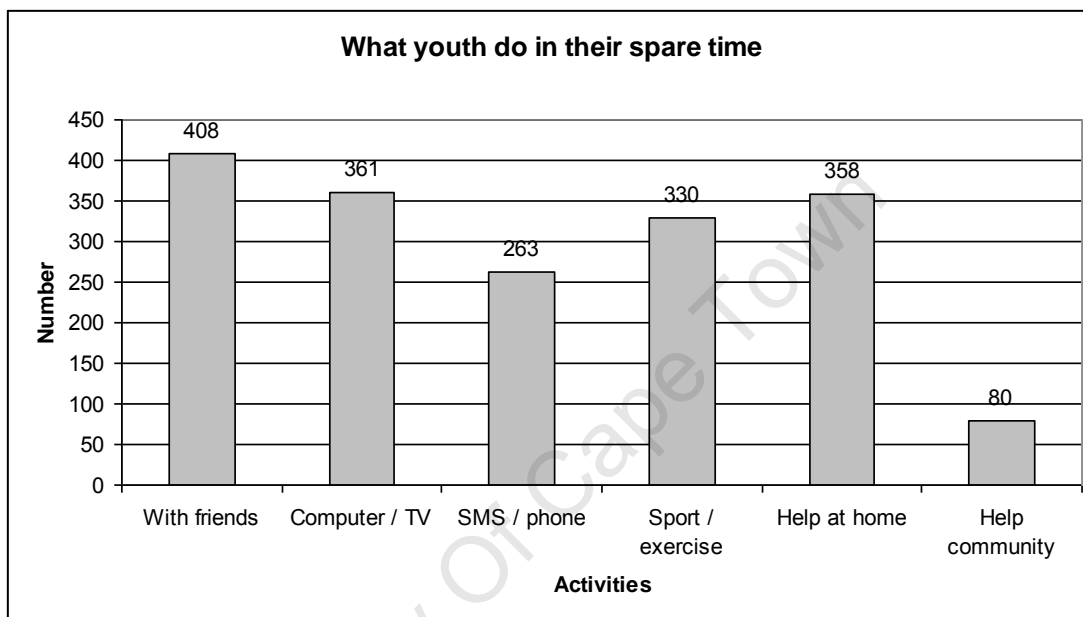
Generalisations abound that teenagers spend excessive amounts of time indoors being entertained by electronic media, or hanging around at shops or malls with their friends. This was certainly my perception, which I shared with a number of the presenters of nature-based programmes whom I interviewed. However, feedback from the youth surveyed indicates that they also spend considerable amounts of time in active, outdoor pursuits (Figure 5.1). While teenagers did report that most of their leisure time activities took place indoors (at home, at friends' homes and at the shops), this amounted to only 64.2% of responses. More than a third of their responses (35.8%) related to outdoor venues (nature, sport, and their street/yard), with these three categories being mentioned by similar numbers of respondents. This is encouraging, especially considering concerns relating to safety and transport that tend to constrain their movement (Section 2.4.4).



**Figure 5.1:** Where youth spend their spare time (top three places). Total number of responses from all youth: Indoor venues = 911 (64.2%), Outdoor venues = 509 (35.8%), Total = 1420.

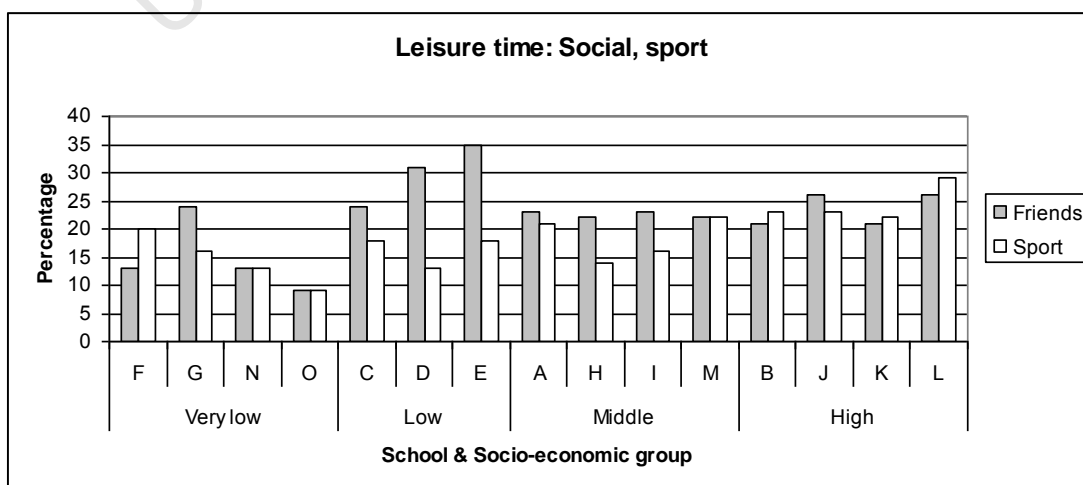
## 5.2.2 How teenagers spend their leisure time

When adolescents were asked *how* they spent their leisure time (Figure 5.2), socialising with friends, both in person (24%) and remotely by means of various communications technologies (16%), featured strongly. Very similar numbers of responses (approximately 18% each) related to the use of computers/television, sport/exercise, and helping at home. Significantly fewer respondents (4.5%) mentioned that they regularly spent time helping their community.

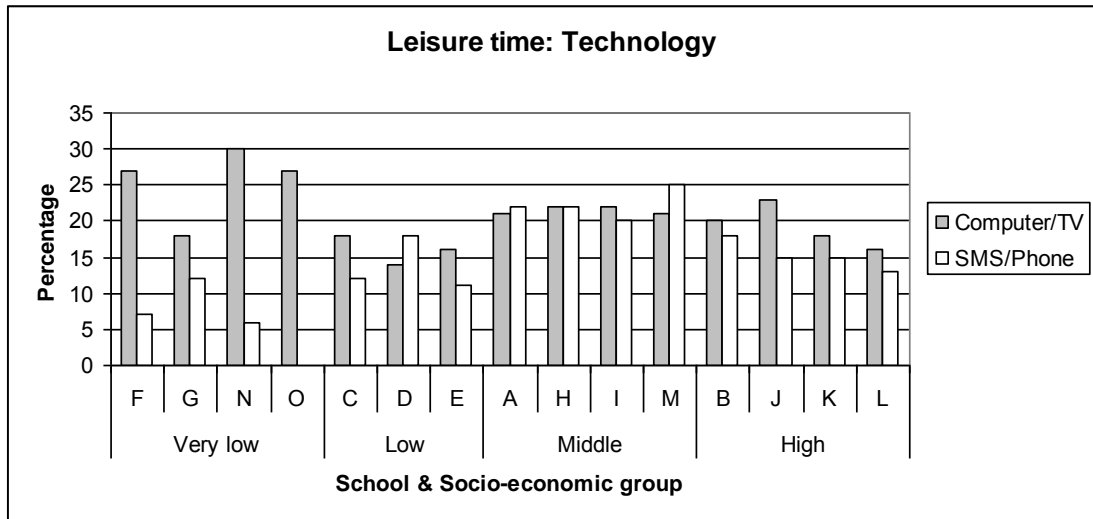


**Figure 5.2:** How youth spend their leisure time. Total responses = 1687; Friends = 24%, Computer/TV = 19%, SMS/phone = 16%, Sport = 18%, Help at home = 18%, Help community = 4.5%

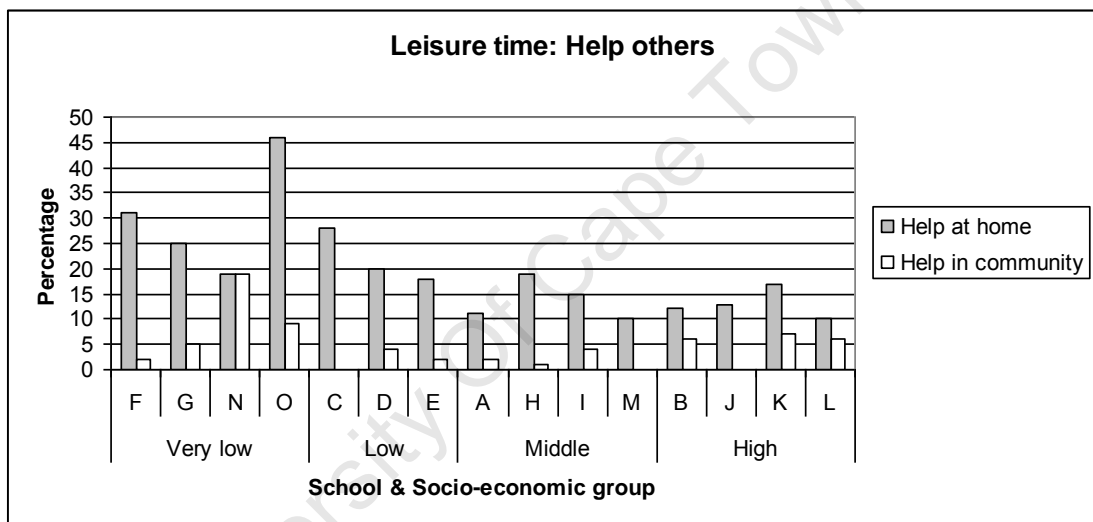
These different leisure time activities were then analysed by school (Figures 5.3a-c):



**Figure 5.3a:** The percentage of responses from schools in different socio-economic areas that relate to leisure time spent in social activities and sport.



**Figure 5.3b:** The percentage of responses from schools in different socio-economic areas that relate to leisure time spent using electronic technologies.



**Figure 5.3c:** The percentage of responses from schools in different socio-economic areas that relate to leisure time spent helping others.

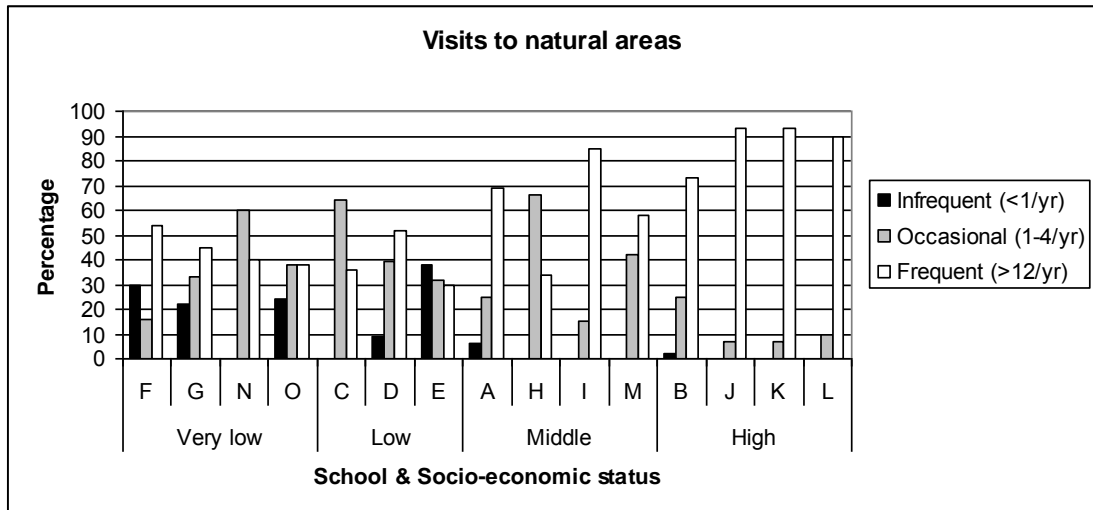
In the analysis of Figures 5.3 a-c, some trends became apparent:

- In very low income areas a higher proportion of leisure time appeared to be spent watching television and/or using computers than in other income areas. This may be due to relatively less time being spent on other activities (e.g. sports – see below), as well as concerns about the safety of youth that result in them being kept indoors.
- Youth in low-income areas reported lower involvement in sports than those in middle- and high-income areas, presumably due to relatively little organised sport at schools and poor sporting facilities in their communities. In most of the advantaged schools, on the other hand, a culture of school sport was well established and most youth were expected to participate on a regular basis.

- Youth from low-income areas appeared to spend more of their leisure time socialising with friends than youth from very low-, middle- and high-income areas.
- Youth in very low- and low-income areas recorded relatively little telephone use, presumably because of the cost of telephones, mobile phones and phone calls. Over 20% of youth in middle-income areas recorded regular telephone use; many had mobile phones and access to mxit, a relatively low-cost text messaging system that is very popular with youth.
- Youth in very low- and low-income areas were much more involved in helping at home than those from high income areas. This was particularly obvious in the case of School O, where 46% of respondents recorded regular involvement.
- Youth across the board seemed fairly uninvolved in community projects. Exceptions included Group N, which was in fact a group of first year students in a business college where they were expected to participate in community service projects as part of the ethos of the institution. Learners from School O were more involved than average, but they were all members of a club involved in advocacy work relating to HIV/AIDS.

### **5.2.3 Natural areas visited by youth**

Cape Town has a well established 'outdoor culture' due to the city's rich natural heritage, scenic beauty and mild climate. Although rapid urbanisation, the legacy of Apartheid town planning, transport issues and a high crime rate do impact negatively on people's access to natural areas, the city's beaches, parks, mountains and wetlands provide leisure and recreational opportunities for people from all socio-economic groups.

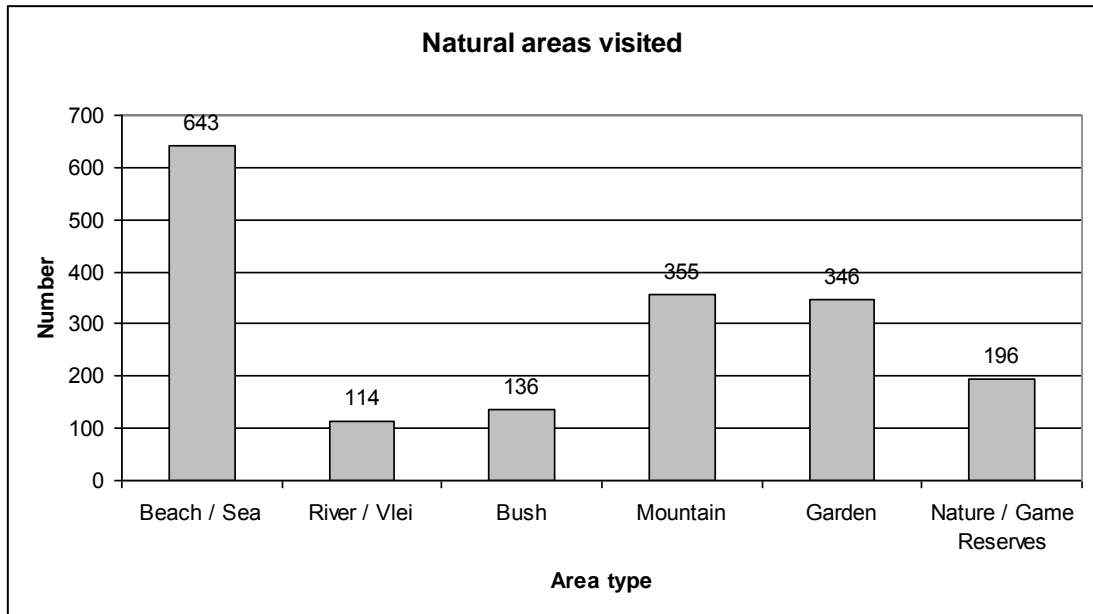


**Figure 5.4:** The frequency with which youth from different schools and socio-economic backgrounds visited natural areas. Responses are represented as percentages, as group sizes varied considerably.

Socio-economic conditions clearly impacted on the access of youth to nature in this study (Figure 5.4). Only three boys attending schools A and B in middle and high income areas reported infrequent visits to natural areas. Two said that they were more interested in technology and one admitted that he was not interested in nature because of a lack of exposure. School H was situated in a middle class suburb but most of the learners came from poorer suburbs, which were relatively far from natural areas. This may account for the high proportion (67%) of youth at this school who reported only occasional visits to nature.

Approximately 17% of respondents from schools in low and very low income areas reported infrequent visits to natural areas. However, none of the respondents at schools C and N recorded infrequent visits. These learners belonged to school outdoor clubs and visited natural areas fairly regularly. Some of the schools in low income areas were located close to community gardens (School F) or natural areas. At School G, situated within one kilometre of mountains and sea, 78% of respondents reported that they visited nature at least once a year, and many of their comments reflected a strong affinity with nature (see Section 5.3.3).

Figure 5.5 reveals that the natural areas visited most often by youth are beaches. This is followed by gardens and mountains, and to a lesser extent by nature reserves, the bush, and rivers and wetlands (vlei). The mountains, wetlands and bush areas (e.g. fynbos, bushveld) referred to are probably also nature/game reserves but may not have been recognised as such by the youth.



**Figure 5.5:** Total numbers of youth reporting visits to particular natural areas

When the three most frequently visited types of natural areas were analysed by school (Figure 5.6), only School F reported visiting gardens more frequently than the beach. A number of learners from this school mentioned a community garden in their area; the school was situated in a very low income area, approximately 10 km away from the closest safe beach, and the learners were the youngest surveyed (Grade 9) and therefore the most dependent upon adults for their mobility.

Schools N and C recorded the highest frequencies of visits to mountains. Group N had recently participated in a wilderness programme in the mountains, and Group C was a school hiking club.

In general, youth from middle and high income areas recorded relatively high instances of garden visits. This may relate to domestic gardens, but is also likely to indicate visits to public gardens like Kirstenbosch, which a number of youth mentioned in their comments. As one of Cape Town's major tourist attractions, Kirstenbosch Gardens has high entrance/membership fees; it is also not well served by affordable modes of public transport and is therefore not readily accessible to the majority of Cape Town families as a leisure venue. However, it is very popular with many middle- and high-income families, who purchase family memberships in order to visit on a regular basis. The education centre at the Gardens has an effective outreach programme, which ensures that youth from all parts of Cape Town are able to visit the Gardens for school field trips.

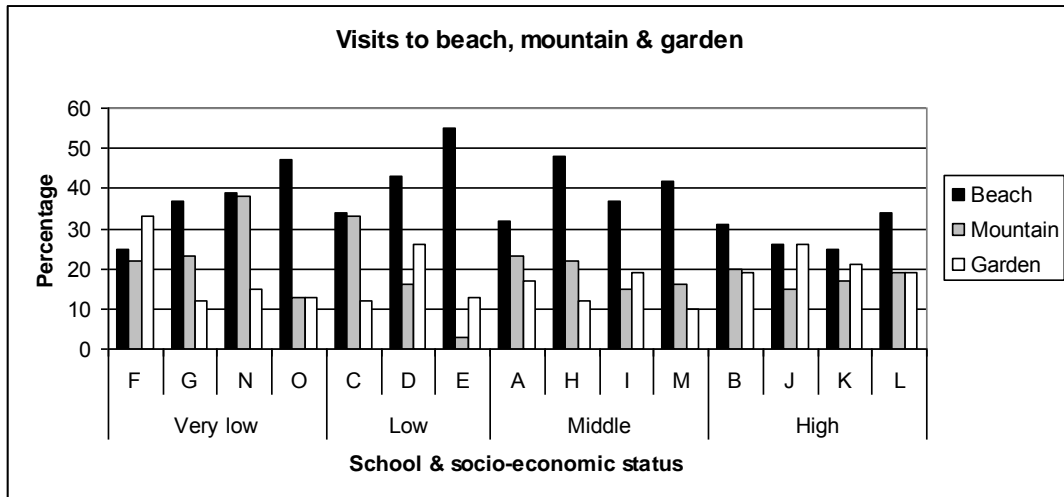


Figure 5.6: Number of youth reporting visits to beaches, mountains and gardens

### 5.2.4 Leisure activities in nature

According to Figure 5.7, youth from schools in all socio-economic areas viewed nature primarily as a place where they could relax and, secondly, exercise. This was supported by many of their written statements in the questionnaires. As in the case of general leisure time activities (Figures 5.2 & 5.3c), very few youth recorded involvement in nature-based service projects. Few youth specified which hobbies they pursued in nature, but those mentioned included gardening, fishing, birding, photography, art, scouts and horse riding. Despite general concerns about safety, 5% to 12% of respondents from 13 schools reported that they spent time alone in nature. The two schools that did not report this (Schools E & F) were both located far from safe natural areas, and were also the youngest learners surveyed.

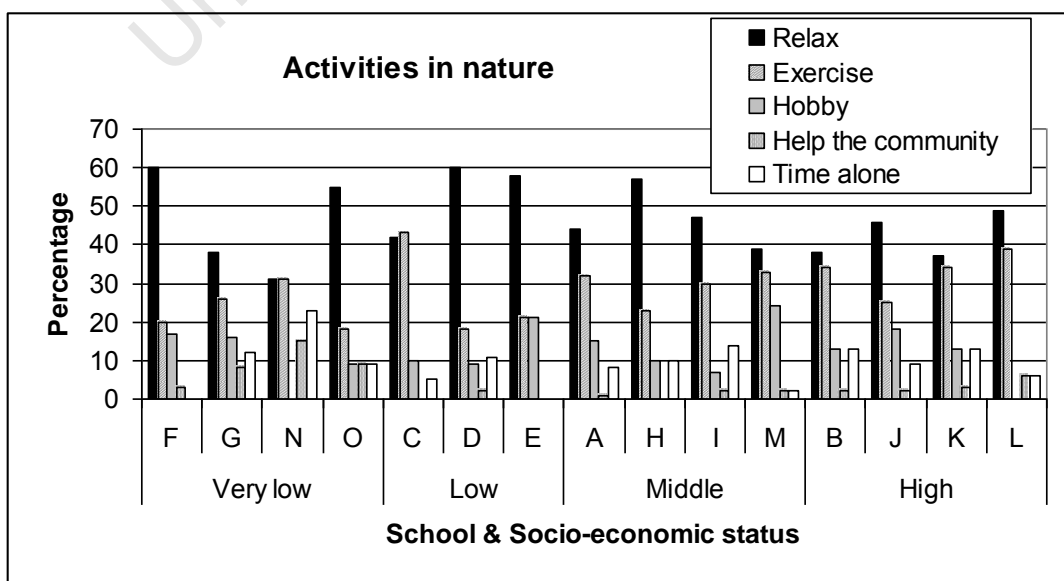


Figure 5.7: How youth from schools in different socio-economic areas spent their time in nature.

Surprisingly, 90% of the 587 young people who completed the general questionnaire stated that they would like to spend more time in nature. One learner (P-GQ 5.8) put it wistfully:

### **I don't go out much**

I love nature  
but I don't go out  
much  
(and that means  
almost never)  
and when I do  
it's just  
to the mall.

Only 10% of respondents said that they did not want to spend more time in nature, and most of these were from schools in middle- and high-income areas, where youth stated that they already spent a lot of time in nature. Others indicated that they were not interested in nature, preferred other activities, or that they were too busy and did not have time:

Generally am too busy to spend a lot of time in nature. (B-GQ 6.44)

We're too busy with school and work to make time to waste. My life is too stressful to walk around in my spare time. (I-GQ 8.7)

On the other hand, some learners recognised that, despite being busy, it was important to spend time in nature:

To have time in nature is an important escape from a busy life to clear the mind. I get inspiration from nature and feel refreshed when I have to face a busy day again. (J-GQ 5.26)

It is important to do things in nature as in our busy lives we tend to forget these things which are important. (J-GQ 5.25)

## 5.3 How youth relate to nature

### 5.3.1 Analysing the survey questions

As explained in Chapter Three, in order to analyse the survey responses, I developed an analytic matrix that allowed me to categorise responses in relation to the two parts of the research question. Paraphrased, these are:

1. Did respondents experience a sense of alienation or belonging in relation to nature?
2. Did respondents' experiences in and of nature contribute to identity development processes?

In order to answer these questions, I asked youth to describe:

- How they personally felt about nature (GQ<sup>30</sup>5);
- Whether or not they had had any memorable experiences in nature (GQ7);
- Whether or not they thought nature was relevant to teens in general (GQ8).

### 5.3.2 Evidence of a sense of alienation from nature

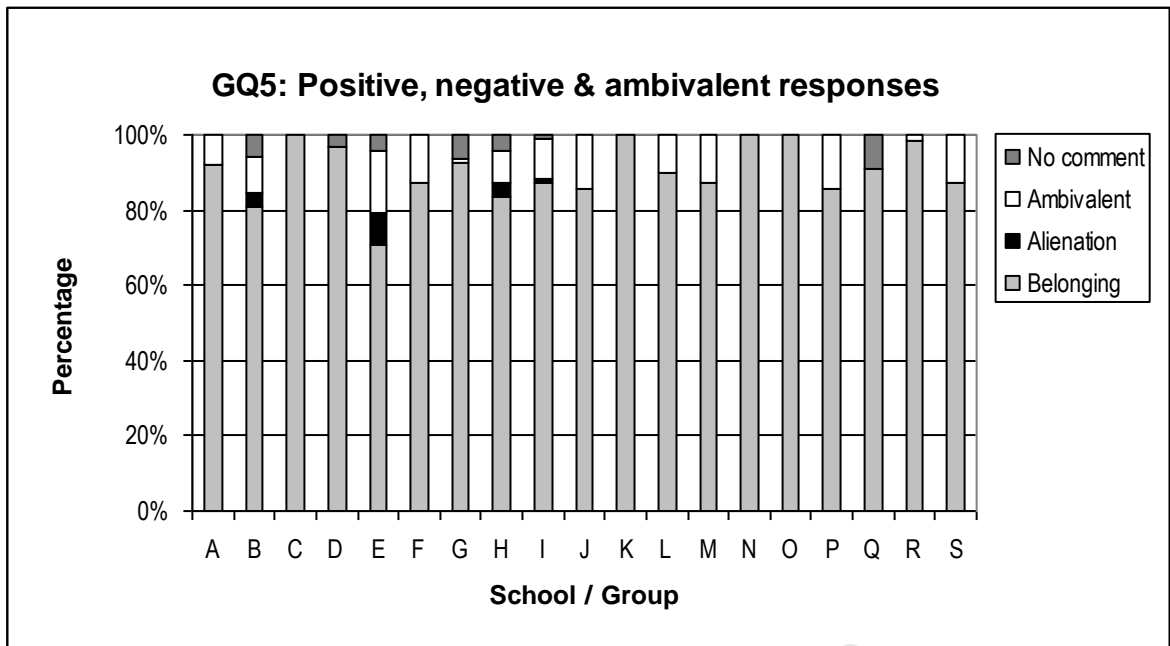
Nature should be relevant to everyone and teenagers are part of everyone. (H-GQ 8.22)

In response to *GQ5: How do you personally feel about nature?* a large majority (90%) of responses were unequivocally positive and indicated that youth experienced a sense of well-being in nature. Seven percent (7%) responded to this question in an ambivalent manner, and only about 1% (6 respondents) indicated complete disregard or dislike for nature. In response to *GQ8: Do you think nature is relevant to teenagers in general?* 71% replied that it was relevant to them while 27% felt that it was not. These responses suggest that, at least in this sample of youth from Cape Town, concerns that teenagers generally feel alienated from nature are unfounded (Table 5.1; Figure 5.8).

Question	Type of question	Negative	Positive	Ambivalent	No comment
GQ5: How do you personally feel about nature?	Written comment	1%	90%	7%	2%
GQ8: Is nature relevant to teenagers in general?	Check boxes (Y/N) + written comment	27%	71%	-	2%

**Table 5.1:** A comparison of responses to Questions 5 & 8 in the General Questionnaire

<sup>30</sup> GQ = General Questionnaire, Appendix F



**Figure 5.8:** Responses to GQ5 by each school/group, showing the percentage of responses considered to represent attitudes of alienation, belonging and ambivalence. Groups A-O were individual schools; Groups P-S comprised youth from different schools.

The very low proportion of responses that suggest a sense of alienation from nature is both surprising and encouraging. Even more inspiring were the actual comments of many of the respondents, some of which are presented below as poems and quotations.

**(a) Comments reflecting a sense of alienation from nature:**

The title of the first poem: *The 1.02%* refers to the percentage of youth who responded either negatively or in a disinterested manner to GQ5. This was taken to indicate a sense of alienation from nature. As mentioned above, only six responses fell into the *Negative* category. However, some of the responses in the *Ambivalent* category included strongly negative comments (e.g. “Nature sucks” and “I don’t care”). Three of these statements (S-GQ 5.5, F-GQ 5.5&6) were therefore included in the poem. The lines in parentheses in the poem reflect a common tendency in the *Ambivalent* category for respondents to qualify their responses with statements that suggested that, although they may have felt negative or indifferent towards nature, they understood their reliance upon it. In this poem respondents’ words have sometimes been repeated for poetic effect. Statements not made by youth are italicised and in a different font.

## The 1.02%

*How do you feel about nature?*

*She asked.*

“Indifferent”

*The 1.02% replied.*

I don't care

I don't care about nature.

I don't like it

There's nothing for teens.

I don't care

I don't care about nature

(but I feel wrong about this

*he confessed.*)

Nature doesn't concern me really

It's not a big issue for me

It's good to get away

now and again

But I rely on technology.

Nature sucks!

There's a lot of walking

I hate animals, *he declared.*

Nature sucks!

I don't mix with nature

(but we depend on it,

so it's good to take care.)

I don't care!

I don't care about nature.

I don't feel anything

*she said.*

I don't care!

I don't care about nature.

(But I will feel sad

when it's dead.)

*(Compiled from responses to GQ 5: B17&35, E21&22, F5&6, H9, S5 & I67)*

**(b) Comments reflecting ambivalent attitudes towards nature:**

Seven percent (7%) of responses were ambivalent, with youth admitting both positive and negative feelings towards nature, as this poem demonstrates:

**Ambivalence**

I'm not so involved with nature	but	I like it very much
I like nature	but	not the insects (that is why I stay away)
I enjoy it at a distance: looking driving walking past	but	being in it? getting itchy from the plants and bugs? it's boring
I won't make time to visit nature I won't go there on my own	but	I'll go with other people, and enjoy it if I'm there
some destroy pull out and cut	but	some love nature and take care
I don't really pay attention	but	know it's key to life on earth
it's boring just to learn about	but	beautiful and interesting ...
it's boring to hear about all the time	but	it would be weird if there were no trees one day
you only appreciate it	...	when it's not there

(GQ5: P15, H23, I76, I73, I83, E16, I3, F14, A38, A5, P10, I77)

Some of the ambivalence expressed in these statements relates to a lack of familiarity with nature, as suggested by the respondent who would visit nature with others but not alone. The need for embodied experiences in nature is highlighted by youth who complain that they feel bored just hearing or learning about nature, rather than being able to experience something “beautiful and interesting”. On the other hand, another respondent states that she would rather observe nature from a distance than have to experience the physical discomfort of interaction with natural elements such as weather, plants and insects. Elsewhere another respondent voiced a fear of getting “dirty” (I-GQ 7.26) when she was caught in the current in a mountain stream.

Two particularly poignant examples of ambivalent responses to GQ5 are presented in the final poem in this section. The concern expressed here is that it is difficult to continue identifying with nature in the face of its destruction. If it appears that nobody in their community is caring about nature, then these young people find it difficult to remain positive and involved.

### **Nature is not for me**

I feel good  
about nature  
but it feels  
like my feeling  
is deteriorating.

No-one motivates my attitude;  
everyone seems like not caring.

I think nature  
is something special  
but nature is not nature  
if people kill our animals,  
cut our trees.

So I would say:  
nature is not for me.

(GQ 5: S14 & E1)

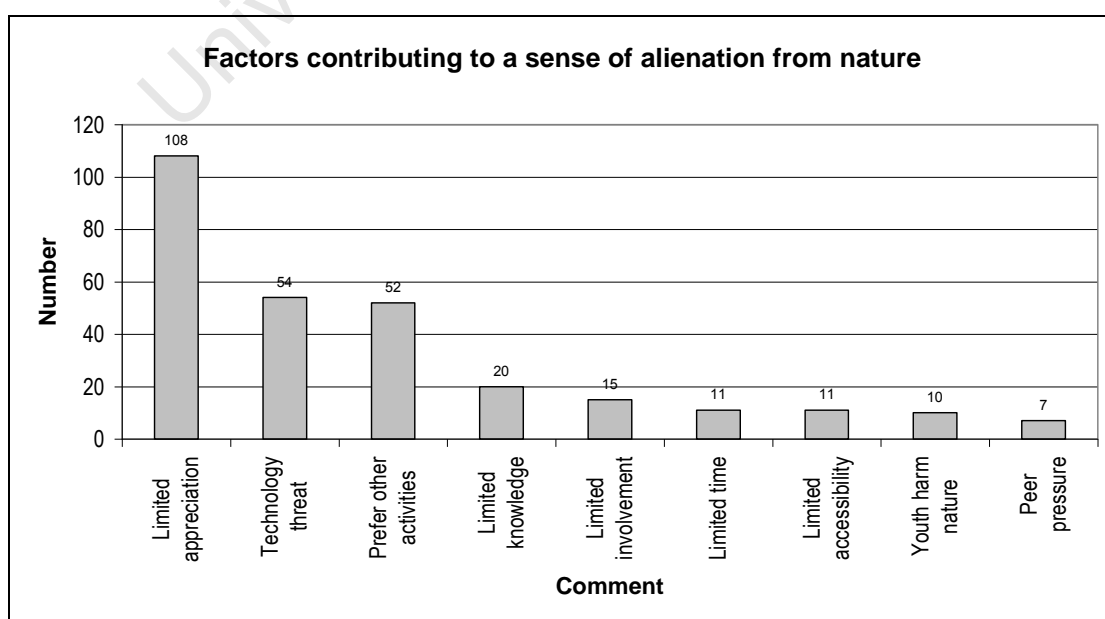
**(c) Reasons why some youth felt alienated from nature:**

The three poems above, as well as additional statements below, suggest that some youth experienced a sense of alienation from nature because they were:

- unfamiliar with natural areas:  
I've hardly done anything with nature in my life. I'm not used to it. I have no interest in it. (A-GQ 5.14)
- uninterested in nature compared to other things:  
We like to experience life, fast pace, bright lights. When you are much older you appreciate it more. You have time to reflect on nature. (A-GQ 5.13)
- uninvolved in the natural world;
- distressed about its destruction.

Similar reservations were noted in the 27% of negative responses to question GQ8: *Do you think nature is relevant to teenagers in general?* (Figure 5.9). These respondents explained that teenagers who felt that nature was irrelevant to them were probably:

- uninformed about or unfamiliar with nature
- uncaring
- uninvolved in nature or conservation
- uninterested in nature
- more interested in technology, socialising and entertainment
- too busy so that they “don’t have time to care” (A-GQ 5.18)
- influenced by their peer group.



**Figure 5.9:** Responses to GQ8 suggesting why youth might feel alienated from nature.

Considering the very high percentage (90%) of youth who spoke positively about their personal feelings about nature (Table 5.1), the negative influence of the peer group seems to be based on *assumptions* about what others think, rather than on their actual feelings.

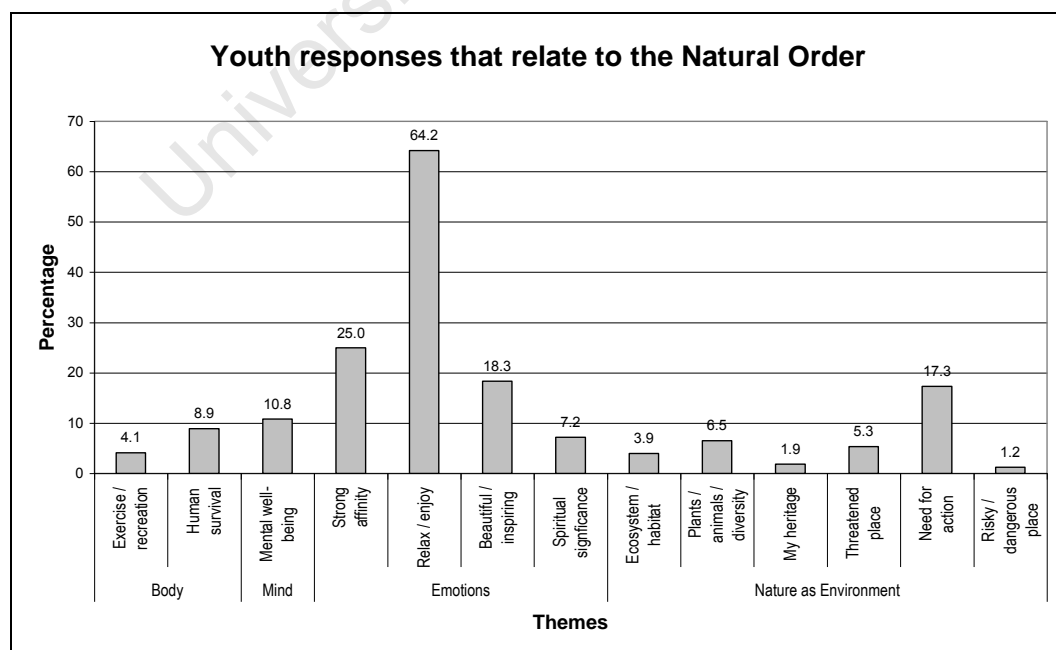
### 5.3.3 Evidence of a sense of affinity with nature

Aspects of nature that youth identified with positively were grouped according to Archer's three orders of reality: the natural, social and practical. When the comments of the 90% of youth who responded positively to *GQ5: How do you personally feel about nature?* were analysed, it was found that:

- the great majority (92%) referred to the importance of the biophysical environment, or the positive effect that nature had on their physical or emotional well-being (Natural Order);
- 6% mentioned that nature was relevant to their social lives (Social Order);
- 6% spoke of benefits relating to the practical domain of work and learning (Practical Order).

#### (a) Natural Order:

Emerging themes that related to the Natural Order are indicated in Figure 5.10:



**Figure 5.10:** Responses to GQ5 that related to the Natural Order were analysed and themes were identified (X-axis). The percentage of total respondents (n = 587) who made comments relating to each theme is shown on the Y-axis. Some respondents mentioned more than one aspect, so the total of the percentages above is greater than 100.

Youth mentioned ways in which nature enhanced their physical, mental and emotional well-being. Very few of these aspects form part of conservation education programmes:

- more than 60% liked or enjoyed nature mainly because it was a place where they could relax;
- 25% expressed a strong affinity for nature, stating that they loved nature or felt at home there;
- nearly 20% referred to nature as a beautiful or inspiring place;
- 9% acknowledged that nature was necessary for human survival;
- 7% mentioned its spiritual significance.

In terms of comments relating to *Nature as Environment* in Figure 5.10<sup>31</sup>:

- 18% expressed concern about nature, some speaking of threats to it and most stating that action needed to be taken to address concerns;
- 12% of youth referred to plants, animals, ecosystems and nature as heritage;
- only 1% described nature as a risky or dangerous place.

The following poems are made up of some of the positive responses to GQ5 and GQ8. They illustrate some of the themes referred to above:

### **Strong Affinity**

#### **At home in nature**

Nature is my third brother.  
It's in my blood  
running through the veins.

Nature is part of my life,  
part of who I am and  
what I'm about.

Nature makes me feel at home.  
There's a place for me  
to ease my mind.

I feel in love with  
my beautiful lover  
Nature.

(GQ5: u1, I58, R44, D21, u9)

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<sup>31</sup> Some respondents mentioned more than one factor, thus the percentages in the graph were not summed. Totals in this list were obtained by returning to the original statements.

## Physical well-being

### Walking with God

The sea is my playground,  
majestic, refreshing.  
Getting a barrel in the ocean  
is like walking with God.

(GQ5: B5)

## Spiritual significance

### The nature of God

In nature it's just so beautiful  
I find myself and God.  
I feel relaxed and positive  
seeing goodness in the world.

Nature is something beautiful  
that God has blessed us with.  
People ask "Is there a God?"  
I say "Look around."

I care about nature and respect it  
because it is special to God.  
I feel happy about nature  
because it's the nature of God.

(GQ5: F16, R5, C7, H12, I32, A33, G87, F1, G23)

### (b) Social Order:

In relation to the Social Order, responses to GQ5 indicated that youth appreciated nature as a place where they could spend time with family and friends and escape social pressures. Some referred specifically to identity development as a reflexive process, including the 6.5% who stated that nature was a quiet place where they could reflect on their lives, and a place where they felt accepted and could be themselves (0.5%).

In response to GQ8, youth spoke of nature as a place of escape, with 26 (24 from middle- and high income areas) stating that it was a place to escape stress and pressure, and 22 (20 from low- and very-low income areas) saying that it was a place where they could escape trouble or bad things. Ten spoke of nature as a place to socialise and have fun.

Some felt that their peers preferred alternatives to a nature-centred lifestyle, including entertainment, parties and spending time in malls (16), socialising or sending text messages (8), getting involved in ‘bad things’ (4), or simply staying indoors or playing with technology (11). However, a few sounded disillusioned with these lifestyles, some stating that nature provided a positive alternative:

Everyone needs time out. Sometimes the party, work, party mentality is just so sickening. Nature provides an alternative. (B-GQ 8.31)

I feel it is important to know about nature as it makes people realize that shopping and materialism is not all there is to life. (I-GQ 8.57)

It is important to understand your surroundings and to not be locked up in the City for so long. (L-GQ 8.8)

During adolescence teenagers do not see anything as being important. The only important thing is making an impression on their friends. (R-GQ 8.38)

Further comments from GQ5 and GQ8 that relate to the Social Order are incorporated into the poems below:

## **Escape from Social Problems**

### **Escape**

Nature helps me forget my problems  
the stress, the bullying, the jealousy;  
I can just be myself, without being judged.  
Nature's a safe place for me.

I escape from my busy life  
into a different world.  
I'm in a meditation moment,  
place of peace, love and harmony.

It's tranquil, calm and relaxes me,  
it's a place to clear the mind.  
Natural, positive energies  
refresh my body and soul.

*(GQ5: R7, S9, I60, J26, R58, G65, B15, R26, J26, B52)*

## **A better place**

Time outdoors  
keeps kids out of trouble;  
it keeps us from doing bad things.  
It's a better place where we can learn,  
not a place of gangsters and drugs.

Get away from the street,  
the drinking and sex;  
stop hanging around with boys.  
Go out on picnics, learn from the trees,  
do healthy exercise.

Nature keeps us out of trouble,  
it can keep us away from bad things.  
Maybe, just maybe,  
when exposed to nature  
those who smoke and drink  
might change.

*(GQ8: B27, G59, D13, F5, R24, G14, R3, D3, G36, G48, G73, Q4)*

## **A place to be yourself**

### **Lost and found**

In a world of instant gratification  
we lose what we want.  
In man-made environments  
we lose who we are.

In nature  
you learn that not everything  
is about the glamour.

In nature  
You remember who you are.  
It's the only place  
where you're really yourself.

*(GQ5: I60, I51, R21, I41)*

**(c) Practical Order:**

I feel very, very loving because the more I learn about nature the more I want to know. (S-GQ 5.2)

When asked how they personally felt about nature (GQ5), only 35 of 587 (6%) youth made comments that related to the Practical Order. Most (27) said that they enjoyed learning about, exploring or experiencing nature, while others had nature-based hobbies, enjoyed teaching others about it, or wanted to pursue a nature-based career.

I really love nature. I like learning about all the details in nature and the way everything works together. I love animals and espssially [sic] sea creatures. (R-GQ 5.37)

I love nature and thus I spend a lot of time there. I am a very keen birder, gardener and runner and this is when I enjoy spending time in nature. (J-GQ 5.12)

I love it and will probably end up spending time as a game ranger. (B-GQ 5.14)

Two thirds of these youth were from low- and very low income areas, while one third were from middle- and high income areas. This confirms my sense during programme observations that many youth who had had relatively little exposure to nature or nature-related information, were eager to experience and learn about it. Youth who already knew a lot about nature could be fairly critical (e.g. Schools B & I) if told things they already knew. The motivational nature of novel information or experiences is discussed elsewhere (Section 5.4.3b).

Although the Practical Order did not register highly in their initial, more emotional, responses to GQ5, a number of youth did think that learning about nature was important. They made this clear in their responses to *GQ8: Is nature relevant to teenagers in general?* 136 youth (23%) referred to the Practical Order, with comments relating to learning (105), awareness (26), hobbies or careers (12), and development of skills (3):

There is a lot that teenagers can learn from the trees, plants and animals and it will keep them from doing bad things. (R-GQ 8.24)

So we can learn the importants [sic] of nature as well as it beauty. Also to learn how to respect nature. (D-GQ 8.14)

Nature is something important to the people and children know nothing about it. Some of them maybe after school they will be tour guardes [sic] and they should know about it now. (Q-GQ 8.8)

It helps you learn about your environment and especially if you doing Human Resources or Travel and Tourism. (D-GQ 8.22)

Teenagers want to know about nature too ... some of teenagers want to be a scientist. (F-GQ 8.17)

Some recognised that as the next generation of adults they needed to learn about nature in order to act responsibly:

We as teenagers we are learning about Nature so that we can protect it. (G-GQ 8.28)

I feel the nature should be preserved, and we can use nature as an advantage to educate especially teenagers of today, seeing that we'll be the future of tomorrow. (P-GQ 5.3)

We are the parents and adults of tomorrow. So we must know now about nature because without nature there is nothing. (O-GQ 8.5)

#### **5.3.4 General observations of how youth felt about nature**

This review of responses to GQ5 and GQ8 concludes with a summary of general observations:

- Considering the dominant view in society of nature as resource, only four responses to GQ5 and GQ8 mentioned the words resource, economy or industry, and these comments were hardly exploitative in tone:

It is beautiful and not enough is done to conserve our natural resources. (A-GQ 5.18)

Nature is our producer for food ... actually producing our industrial resources. (G-GQ 5.80)

It's really natural and beautiful. Important for the economy. We're friends. (J-GQ 5.21)

If there was no nature, we would not have the resources we have to day. (A-GQ 8.31)

Others recognised nature as important for human survival, but most comments related to basic human needs such as oxygen, water, food and medicine.

- Similarly, despite the use of nature imagery in marketing and advertising, there were no references to nature as a lifestyle commodity.
- Some youth appeared to value nature for its authenticity, and sensed that it was a place where they too could be 'real'.
- Youth from all socio-economic groups felt under pressure. While learners from high income areas tended to complain about their busy lives, youth from lower income areas were more likely to mention social pressures (e.g. abuse of drugs and alcohol, and general stresses or problems). Some observed that time in nature provided relief from these pressures, either because they could relax in peaceful surroundings or get involved in positive activities and avoid "bad things":

I felt so cool and relaxed when I'm in mountain, just forgetting all about stresses/problems of my background. (S-GQ 5.9)

- Nature as a place of learning and novel experiences was mentioned more often by youth from low- and very low-income areas who had had little exposure to nature.
- More youth from high income areas referred to nature as a place for exercise and recreation, confirming the results of GQ 4.2 (Figure 5.3a).
- Proximity and frequency of access to natural areas seemed to influence how some groups felt about nature. For example, youth from School G (located in a very low income area within one kilometre of mountains and sea) wrote about nature with an astonishing depth of emotion and breadth of understanding. On the other hand, youth from School E (in a low income industrial area far from natural areas) recorded the largest number of negative comments.
- At School F, located in a very low income area, plants and gardens featured strongly in the learners' impressions of nature. This may have been related to the involvement of the school in food gardening projects, the fact that the group had recently been on a field trip to a public garden, and the existence within their area of a public park, which a number of respondents referred to in the survey. It may also have related to serious concerns about personal safety associated with bushy areas in the neighbourhood: gardens may have represented relatively safe places to experience nature.
- All but one of the groups expressed a need to address environmental concerns and to care for nature. Learners at School I were particularly well informed and concerned. While it has been mentioned that some young people felt discouraged by the degradation of nature, for others these challenges drove them to respond:
 

Over the past few years with global warming, pollution and things such as deforestation I have learnt to love nature more than ever and appreciate every inch of it ... each day more and more of our amazing Earth is being destroyed and we cannot survive without our precious fauna and flora, it's just not possible! (I-GQ 5.43)
- In all but one of the groups, the beauty of nature was mentioned, and this was associated with feelings of relaxation, happiness, gratitude, enjoyment, admiration, love, romance, and fun. In a number of cases, the recognition of beauty also encouraged the beholder to want to cherish and conserve nature so that others, including future generations, could experience its beauty.
- Finally, a sense of reciprocity was apparent in some of the responses, typically:
 

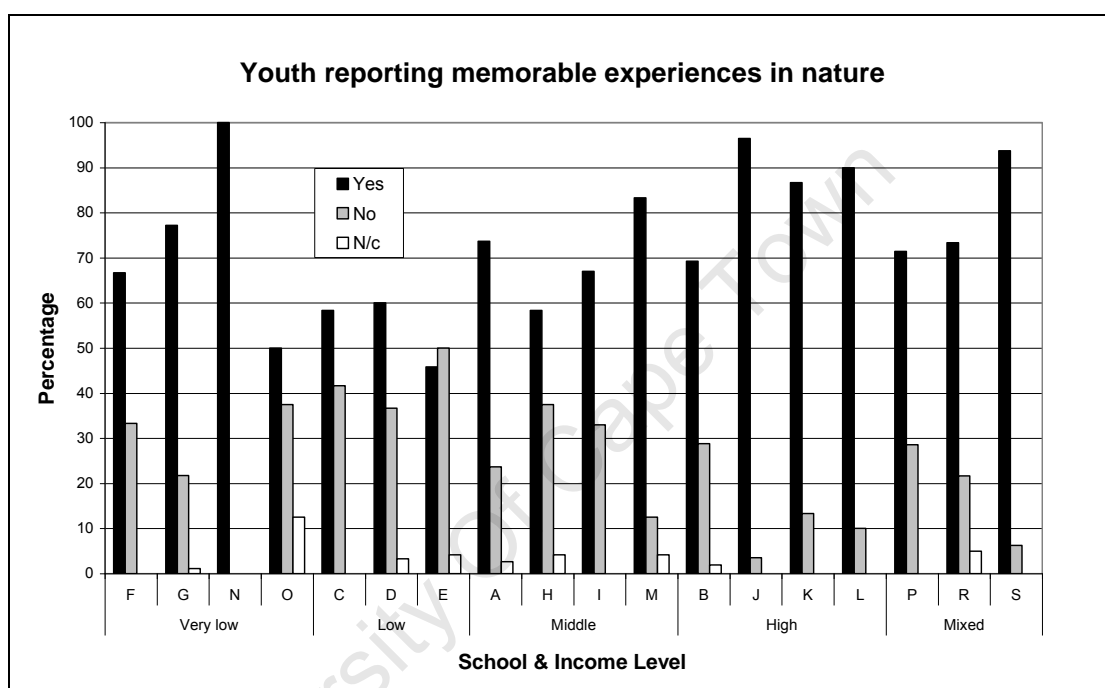
Nature cares for us, so we must care for nature. (G-GQ 5.8)

And more emphatically:

Can't live without, not appreciated enough, would give my whole life for it, my safe place where I can feel free. (R-GQ 5.43)

### 5.3.5 Memorable experiences in nature

In order to investigate youth experiences of nature in more detail, in GQ7 I asked youth to state whether or not they had had any memorable experiences in nature, and if so what the features of those experiences had been. Overall, 72% of youth said that they had, 26% said they had not, and 2% did not comment (Figure 5.11).



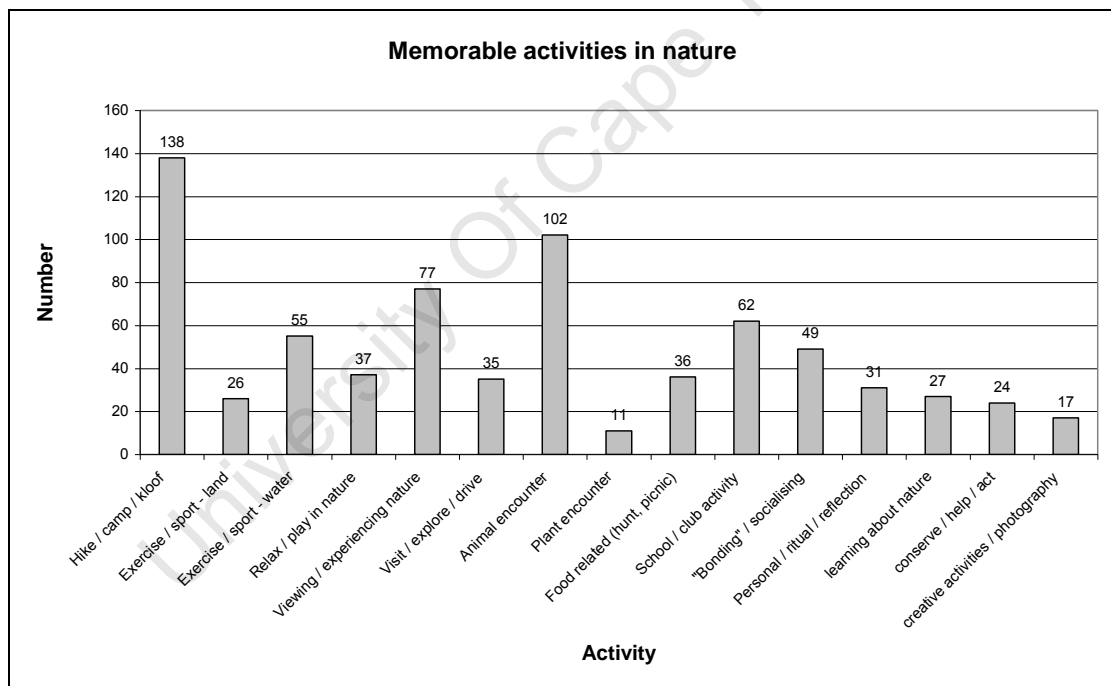
**Figure 5.11:** Responses in percentages from schools/groups to GQ7: *Have you had any memorable experiences in nature?*

Figure 5.11 reveals that youth from all socio-economic groups had had what they considered to be memorable experiences in nature. Only School E recorded more negative than positive responses. This school was located in an industrial zone relatively far from natural areas (Table 1.1), and respondents had indicated the lowest frequency of visits to nature (Figure 5.4). In contrast, the location of School G close to mountains and sea was reflected in both the breadth and depth of experiences shared.

While youth from high income areas may have had a wider *range* of experiences than many youth from poorer areas (noted in their responses), there were some cases where high proportions of respondents from very low income areas recounted memorable experiences. For example, of the four groups in which 90% or more of the respondents recounted memorable experiences, two were from very low income areas (N, S) and two

from private schools (J, L). In all four cases youth had been on overnight hikes or wilderness experiences organised by their schools. In the case of group N, all but one of the respondents referred to this as their most memorable experience.

Overall, although opportunities to access natural areas were often limited by physical distance and poverty, socio-economic factors were very poor predictors of youth recounting memorable experiences in nature, as some of the wealthiest groups recorded equivalent or fewer memorable experiences than groups from very low income areas. Many of the experiences youth described as memorable were quite simple. Recognising these experiences seemed to depend more on the responsiveness of the subject than on the content of the experience itself. As with responses to all other survey questions in this study, this observation confirms that people from all walks of life share an appreciation for nature, no matter what their gender, nationality, or socio-economic status.



**Figure 5.12:** The number of youth who referred to particular types of nature-based activities as memorable.

When asked to describe their memorable experiences, the most commonly recorded *activities* (Figure 5.12) included:

- Hiking and camping (23.5% of respondents)
- Encounters with animals (17.4%)
- Views/general encounters with nature (13.1%)

Other activities included exercise, relaxation, learning, creative activities and involvement in conservation projects.

**(a) Hiking and camping:**

A number of youth, especially from middle- and high-income areas, mentioned camping and hiking with their families and friends. On the whole, however, schools were the most important providers of these opportunities with 10.6% of youth mentioning activities organised by a school or club. Experiences varied from wealthy schools (e.g. B & L) taking learners on trips to climb Kilimanjaro or canoe on the Orange River, to relatively poor schools (e.g. C, D & G) taking youth hiking on Table Mountain at weekends.

One teenager stated that hiking trails had provided her with “Lots of GREAT experiences that opened my eyes to the world” (K-GQ 7.4). A similar comment was made by a teacher from School C who explained that many of his learners found Geography meaningless because their life experiences were so restricted that they couldn’t see the relevance of learning about other countries. However, he observed what he described as a ‘shift’ in their attitudes when he went on a hike up the mountain with them and for the first time they saw their suburb in the broader context of the city.

Youth valued hiking and camping opportunities as times to have fun, get close to friends and to nature, experience feelings of peace and freedom, and to challenge themselves physically and emotionally. Some of their memorable experiences included watching the stars at night, seeing a waterfall for the first time, and listening to natural sounds. The sensuous nature of these experiences was described vividly at times. Experiences were often enhanced by the fact that they are experienced with ‘loved ones’. A number of youth commented on the contrast between the peace of the mountain and the noise and demands of township life. A few commented that they were pleased to have been able to cope without technology for a while:

A group of friends including myself went camping and it was a real nature experience as there were no technological devices around and the food was made outdoors and there was a beach. It was fun. (A-GQ 7.15)

My family and I went climbing up a mountain to find a waterfall at the beginning of this year. When we found the waterfall everyone was speechless because it was the first one we saw with our own eyes. It was a beautiful site. (H-GQ 7.22)

My family (cousins and all) goes to the Cederberg for every second Easter ... we climb in the Cracks and to the Arch, and no matter how many times we do it, it is somehow fun with everyone. There is also a huge rock pool called Malgat, where we swim, jump off rocks and

sometimes set up a massive 'fufi' slide. It is so beautiful out there and makes me feel like a little kid. (I-GQ 7.1)

I went on a hike with the school mountain club to the top of Devil's Peak and I overcame my fear of heights and reached the top. Even though it was a small accomplishment I was proud of the fact that I overcame my fear. (R-GQ 7.48)

I went to the mountain and I saw how beautiful and peaceful plants and animals are and this poem came into my mind so I wrote it. I was very happy. Came to think of how important is the nature. (P-GQ 7.12)

**(b) Encounters with animals:**

Animal encounters seemed to create a sense of awe, especially when youth came close to animals or witnessed a birth:

One evening while collecting firewood we came across a rhino and its calf. I could feel the animal's awesome presence and the feeling I felt then was indescribable. (B-GQ 7.23)

Swimming on horseback in a river, just my horse and I. I have never felt more content or satisfied in my entire life. Nature gave us the opportunity to bond and spend magical time together ... I have never forgotten this experience and the way I felt; being in a place I wish I could never leave. (I-GQ 7.50)

**Encounters**

I saw dolphins!

That was the greatest  
to see something new  
for the very first time.

I saw a springbok  
give birth in the bush!

It felt so special  
to experience such a thing.

I saw a butterfly  
come out of its cocoon!

It was amazing  
out of this world.

I saw a baby  
whale being born!

It was extraordinary  
I felt honoured.

(R-GQ 7.44, G-GQ 7.34, C-GQ 7.16, G-GQ 7.43)

Only 11 respondents, about one tenth of the number who mentioned encounters with animals, specifically mentioned experiences related to plants:

I went on a family hike up a huge ravine/gorge. It took a total of 8 hours to get to the top and another 8 hours to get to the bottom of the other side. I never knew just how detailed and full of beautiful, untouched flowers, trees and animals mountains really had! (I-GQ 7.89)

**(c) Views and general encounters with nature:**

Memorable encounters with nature varied from picnics with friends on the beach, to climbing mountains and looking at the view; from watching the sun set, to seeing stars or phosphorescence at night; from visiting game reserves to attending an outdoor concert in the rain; and from school tours to family holidays. Both local and exotic experiences were recounted as memorable:

The soft air blowing, trees giving out pure oxygen, birds singing and the sea roaring up waves which came down and roared and came down again. I loved it. It helped me to relax. And I was alone. At the beach. (G-GQ 7.83)

One of the most memorable was the Orange River. I was with my family and friends and I just loved rowing and the challenges of the rapids and enjoying the beauty that was around. I was also absolutely amazed by the stars at night and my friends and I stayed up for hours just stargazing. (I-GQ 7.87)

In the case of a group of youth leaders who regularly conducted trails on Table Mountain, their nature encounters had a particularly inter-subjective quality:

When I'm under trees I know that they are singing. (Q-GQ 7.3)

I was arm robbed the other day and I was gun pointed so I was feeling really bad and lost. But when I went for a walk in the garden I came out feeling a lot better. Nature has wonders for all of us. (Q-GQ 7.4)

I fell in love with nature the first time I walked through the Garden. (Q-GQ 7.9)

**(d) Learning in/about nature:**

Only 27 (4.6%) respondents mentioned that their most meaningful experiences of nature had to do with learning. Of these only one learner (School I) came from a middle-income area; all other learners were from very low- (F, G, O, Q & S; n = 21) or low- (C, D & E; n = 5) income areas. This suggests that in communities where access to nature is limited, educational outings may represent one of the few opportunities youth have to encounter nature. Some youth commented on the importance of being exposed to new things:

The things that I saw did really inspire me – things that I never heard of and I would like to go for more information. (G-GQ 5.42)

These learning experiences had the potential to introduce youth to new interests:

This [hike] was for [Life Orientation] and I had to do this to get marks. I did not really want to do this but at the end of the day I had learned so much about nature and from that day I have loved nature and wanted to learn more. (C-GQ 5.4)

**(e) Time alone & with others:**

In terms of the social value of memorable experiences, 8.3% of respondents stated that socialising or ‘bonding’ with their friends or spending time with their families was an important part of the experience:

I was with my friends and nature at the same time and that was brilliant. (A-GQ 7.11)

It was in the holidays at Camps Bay beach. Me and my family went to relax there and I felt like we were a real family. (D-GQ 7.13)

Me and my family were camping there but now I'm big and go there with friends and other loved ones. (G-GQ 7.59)

I enjoy the time I spend in nature, especially on the beach with my friends. It is there where I truly feel relaxed and can just escape from the busyness of the world. (I-GQ 7.18)

It was in festive season. I was at beach with my family. We were spending some quality time together. We saw how beautiful sea is. (O-GQ 7.4)

Building friendship with other students in other school, because I feel like they are my family. I don't get this chance at home because I am the only child at home. (S-GQ 7.4)

On the other hand, 5.3% of youth mentioned solo times, which were important as periods for reflection, ritual or the development of independence (see over: *Alone with nature*).

## Alone with nature

Being alone,  
soft air blowing, sea roaring;  
Nature makes me the happiest,  
at peace with life.  
How much joy I have in myself!

Hiking alone  
I can go where I want,  
stay as long as I want,  
listen to sounds  
every time different.

Paddling alone ...  
a grey shape! I stayed still,  
first scared, then at peace.  
A giant sting-ray  
swam around me.

Feeling alone,  
aware of the dangers:  
Nature's power is very strong.  
The wave kept me under,  
there was no one to help me  
and I didn't know how to swim.

Walking alone,  
all moody, on the beach;  
listening to the ocean  
made me soft.  
I went home and apologised.

All night alone  
a place to relax,  
to breathe, to reflect.  
After that night  
I felt liberated, blessed.

Happy alone,  
overwhelming, unexplainable.  
I never saw what I saw with my eyes!  
I found a fountain ... not man-made ...  
a jackal digging in the ground.

*(G-GQ7.83 & 16 & 31, D-GQ7.5 & 17, B-GQ7.31 & 37 & 42,  
R-GQ7.57 & 30, M-GQ7.10 & 21, I-GQ7.19, 46 & 82, N-GQ7.3 & 4)*

**(f) Emotional responses:**

Only 6.8% of emotions expressed referred to negative experiences or feelings like fear, pain or sadness. In a number of these cases, however, there was a sense of resolution, such as the overcoming of a fear or physical challenge. All other respondents spoke of positive experiences, with 28.4% expressing generally positive emotions (e.g. carefree, enjoyment, freedom, freshness and happiness).

Some (7.8%) commented that experiences had been fun, exciting or novel. Others emphasised relaxation (6.8%) and physical or emotional escape (2.2%). While relaxation featured strongly in responses to GQ5 (24.2%), it was mentioned here by relatively few respondents. This suggests that, while relaxation may have contributed to the generally positive way in which youth viewed nature, they found other types of experiences more meaningful.

We all need to get out sometime alone or with friends and just have a place to relax and breathe and Nature does that for us. (I-GQ 7.82)

Others described their experiences in more strongly inter-subjective or responsive terms, referring to emotions such as awe and humility (4.9%), communing with and belonging to nature (4.6%), aesthetic and sensory experiences (6.8%), and healing or life-changing experiences (3.4%).

I felt so much closer to the nature. The emotions were so high ... I was very excited to learn more and get personal with nature and its beauty. (C-GQ 7.6)

Six percent (6%) of respondents mentioned swimming, diving and surfing. Some experiences were frightening, as when youth who couldn't swim described being caught in currents or dumped by waves. But experiences like learning to dive or surf introduced youth to a new world that literally enveloped them and filled them with wonder:

**Underwater magic**

In a magical place  
we just lay still  
the most beautifullest fish  
surrounding us.

Breathing underwater  
one with the ocean  
in a beautiful new world  
I appreciated life.

(I-GQ7.63, R-GQ7.15, R-GQ7.42, B-GQ7.5)

The experience of being in nature was a spiritual experience for some respondents:

I was at the sea alone in April. I prayed and spoke to God about all of my problems and then after I felt a bit better. (D-GQ 7.12)

The most memorable experience in Nature I have was on the Wilderness camp. We were in the wild for 7 days. I enjoyed every minute of it. I was spiritually connected to God. (N-GQ 7.5)

Thirteen youth mentioned that listening to sounds in nature was memorable. It seemed to calm them, and was a very different experience from everyday life.

### Listening to nature

Listening to nature  
I experienced its value,  
listening to the ocean  
made me soft.  
Hearing every little sound  
it was beautiful  
but we never have the chance  
anymore.

Gazing at the stars  
in absolute silence,  
listening to the birds  
we closed our eyes.  
The quietness of nature,  
sound, air and smell  
came together  
perfectly.

Taking in the sounds  
breathing fresh air,  
trust me, it's so different  
where I come from.  
It was quiet  
I felt like I'm in heaven  
I was relieved –  
all bad feelings  
gone.

(Q-GQ7.2, D-GQ7.25, I-GQ7.20 & 72, R-GQ7.51, S-GQ7.7 & 12)

## 5.4 Responses of youth to nature-based programmes

### 5.4.1 Programmes evaluated by youth

This section presents the responses of adolescents in Cape Town to the nature-based programmes in which they participated. Their feedback was gathered by means of the Evaluation Questionnaire (Appendix G).

I was not able to observe all the programmes the youth evaluated, to interview all the presenters, or to have participants evaluate all the programmes that I did observe (none in Cluster A). Due to a lack of high school bookings at some centres during the research fieldwork period, it was also not possible to observe programmes offered by all the presenters interviewed (Section 4.3). The groups that gave feedback and the programmes they evaluated are summarised in Table 5.2 below:

Cluster	Progr. Code	School & Grade	Type of programme	Methods	
				Int	Obs
<b>B: Intensive Youth Development</b>	<b>p</b>	N; College Yr 1	Leadership / rite of passage camp	Yes	No
	<b>s1b</b>	B2; Gd 11	Adventure / rite of passage hike	Yes	No
	<b>s2</b>	H; Gd 11- 12	Youth development camp	Yes	No
	<b>s3</b>	J; Gd 10-11	Adventure / rite of passage hike	Yes	No
<b>C: Guided Youth Development</b>	<b>l2</b>	Various; Gd 10-12	Intensive biology course / camp	Yes	Yes
	<b>s4</b>	L; Gd 10	Ecology & adventure camp	Yes	No
	<b>s5</b>	A; Gd 10	Conservation camp	No	No
<b>D: Embodied Experience</b>	<b>b</b>	D; Gd 12	One-day conservation hike	No	Yes
	<b>b</b>	E; Gd 8-11	One-day conservation hike	No	Yes
	<b>u2</b>	O; Gd 10-11	One-day mountain hike	Yes	Yes
<b>E: Learning Space</b>	<b>g1</b>	F; Gd 9	Curriculum-based field trip	Yes	Yes
	<b>g2</b>	I; Gd 10	Curriculum-based field trip	Yes	Yes
	<b>g3</b>	I; Gd 11	Curriculum-based field trip	Yes	Yes
	<b>s1a</b>	B1; Gd 10	Curriculum-based ecology project	Yes	No

**Table 5.2:** Nature-based programmes evaluated by youth from schools in Cape Town. Programmes are grouped according to the clusters described in Table 4.3. In addition to evaluation forms received, the table indicates which presenters were interviewed (Int) and which programmes were observed (Obs).

## 5.4.2 Identity development & the human-nature relationship

In the Evaluation Questionnaire (Appendix G, Q1), youth rated the extent to which nature-based programmes had contributed to their:

- understanding of nature;
- sense of belonging to the natural order; and
- thinking about nature and the environment.

They also commented on whether or not these programmes had helped them to:

- understand themselves better;
- feel better about themselves; and
- think about important issues in their lives.

Their responses are displayed in graphical form in Appendices M & N, grouped according to the programme clusters developed in Table 4.3.

Programmes differed from one another in many ways, including in their goals, locations, activities, presenters and participants. Even in cases where youth from different schools attended the same excursion (e.g. Programme b, attended by Schools D & E), or different schools/classes attended different programmes offered by the same organisation (e.g. Site g, visited by Schools F & I), there were sometimes clear differences in youth responses. Thus, the comments that follow about the responses of participants to programmes should be treated as observations relating to particular cases, rather than as confident generalisations.

It was generally the case that the aims of particular programmes were reflected in the responses of the youth. For example, participants recognised that programmes in Cluster B (Intensive Youth Development, notably p & s2) that aimed to support psycho-social development helped them to think about important issues in their lives and to understand themselves better. These programmes did not aim to teach youth about nature and the environment, and in fact they received a low rating in relation to this aspect (Appendix M), even though programmes had taken place in wilderness areas.

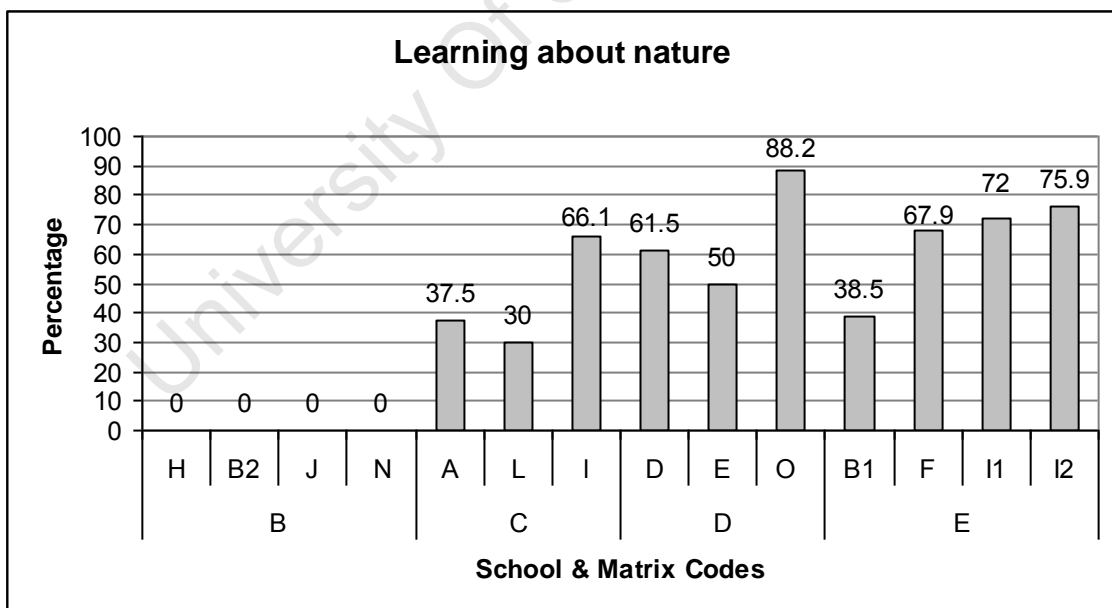
Similarly, programmes in Cluster E (Learning Space), which aimed to teach youth about ecology and the environment, tended (with few exceptions) to score highly on

encouraging youth to think about nature, but relatively poorly on helping youth to think about important issues in their lives (Appendices M & N).

The following three sections summarise what youth had to say about how programmes in the various clusters helped them to *learn* about nature, *relate* to nature emotionally, and *reflect* more deeply on nature and the human-nature relationship. Their comments and ratings of programmes suggested that learning about nature and feeling emotionally close to nature did not automatically translate into youth thinking more deeply about nature and their relationship to it.

### 5.4.3 Learning about nature

The Evaluation Questionnaire (Appendix G, Q2) asked youth to write about the aspects of nature-based programmes they had attended that had been most relevant to them. These responses were analysed to see how many youth felt that learning about nature or the human-nature relationship had been the most relevant aspect. These results are displayed in Figure 5.13:



**Figure 5.13:** Percentage of youth attending different nature-based programmes who mentioned that learning about nature or the human-nature relationship was one of the most relevant aspects of the programme. Groups are categorised by matrix cluster (see Table 5.2).

As in Section 5.4.2 and Appendices M and N, these results also show that programmes that aimed to teach youth about nature and the environment (Clusters C-E) generally achieved this goal. On the other hand, none of the youth participating in intensive youth development programmes (Cluster B) mentioned learning about nature, even though they spent considerable amounts of time in remote natural areas.

In their programme evaluations youth mentioned various factors that contributed to them learning about nature and the environment. These included their existing interest and motivation to learn, the novelty and relevance of the information, and the experiential nature of the programme.

**(a) Learner interest and motivation:**

Youth rated Programme 1 in Cluster C (Guided Youth Development) very highly in terms of developing their knowledge of nature and the environment. This was an intensive week-long programme held during the school holidays. The youth who attended it had an existing interest in biology, and had to write a motivation to attend the course. Once on the course, the relevance of the information to their school subjects and future careers, the enthusiasm of the presenters, and the experience of meeting and working with youth from a wide range of schools helped to enhance already high levels of motivation to learn:

Definitely meeting new 'cool' friends. It's nice having new friends and developing new friendships. You learn to respect each other and accept other people for who they are and what they believe. (I2-EQ 2.15)

In this country it's kind of challenging to connect with or find opportunities to learn about my career. So the whole aspect of it was appealing. (I2-EQ 3.22)

Everyone's enthusiasm and excitement. The presenters all have a very great way of connecting with us and making us feel at home, like a family. (I2-EQ 3.46)

Youth in all programme clusters enjoyed being outdoors and in the company of friends; these factors contributed to their motivation to learn about nature:

It brought fun into learning. This way we didn't get bored and we learnt without even realising it. (A-EQ 3.9)

Learning about nature and not needing technology. Team building – feeling the outdoor experience. (B1-EQ 3.18)

Nature are meant [sic] a lot to me because I like to be with a nature because I love it. I wish I could study a lot about Nature and know more than I know. (F-EQ 2.5)

Meeting new people and listening to what they think nature is and what they think should be done. Discovering and understanding our world and our connection with it. (I2-EQ 3.60)

**(b) Novelty and relevance of knowledge to youth:**

In Clusters D and E, prior learning and experience appeared to have an impact on the levels of learning about nature. The programmes in these clusters are grouped as follows:

- **Cluster D:** Weekend hikes along the coast (Schools D & E) and on the mountain (School O). Two of these schools reported the highest levels of learning about nature in Clusters D and E (Appendix M). Many of these youth admitted that they had had little prior knowledge or experience of nature. Much of what they learnt was of an introductory nature:

What really grabbed my attention is that up until that day I really never understood the importance of nature. It really made me realise that people take advantage of nature because they are not well educated. (D-EQ 2.12)

The best part was when they were telling us about plant. I was so excited because I did not know about plant really And it help me to learn about my invormet [sic]. (E-EQ 2.17)

It was relevant because at the beach you see how birds was flying. I feel great about the nature and became more exciting. [sic] You learn many things about nature. (E-EQ 2.39)

Teenagers don't realise what nature is really about. This programme is more relevant for them because they should know what and how nature is towards them and how they [are part] of mother-nature. (D-EQ 3.9)

Plants also need protection, exactly like us, because they [are] our producers. It was nice to learn that because I didn't know that much about nature. (E-EQ 3.19)

I think the tour was based on youth so they can learn more about nature ... we still got opportunities to learn and our fathers and mothers didn't have a chance to learn. (O-EQ 3.1)

- **Cluster E, Programme g:** Field trips to a heritage site for Schools F (Grade 9) and I (Grades 10 & 11). Despite these programmes being fairly intensive and carefully designed to fulfil curriculum requirements, responses to EQ1 suggested a slightly smaller focus on learning than in Cluster D (above). However in response to EQ2, there were many positive comments about teaching and learning approaches, reflecting relatively high levels of conceptual learning, including:

We were discussing the relationship between producers ... [and] consumers. I guess I didn't really think too much about what would happen if one were to take one of the levels away – in my naivety I thought that if one were to eliminate the producers, only the herbivores would be affected, not the entire food chain. (1a-EQ 2.25)

When we got to walk up the mountain to see the different biomes. I liked this because it was more fun then being taught about it and not being able to see it for yourself. (1a-EQ 2.38)

The most important part of this outing was to see how nature works in terms of the ecosystem. I thoroughly enjoyed learning about which animal feeds on what source (like how plants are the main source of food and without it animals and maybe even people wouldn't exist). It made me appreciate nature more. I also really enjoyed the environment around me. (1a-EQ 2.43)

Learning about photosynthesis and the food web really helped me to understand my class work better especially because we were out in nature and learnt about it physically. (1a-EQ 2.47)

I enjoyed learning about the different types of plants and their uses. The way in which sustainable development was approached was very clever and well done. (1b-EQ 2.12)

We were treated as young adults and were expected to receive and interpret in-depth information. (1b-EQ 3.16)

It was an eye-opening experience learning all the things plants are used for. It never crossed my mind how much we are indebted to plants because they are responsible for creation of skin products, medicine and lots more. (1b-EQ 2.23)

- **Cluster E, Programme s1a:** An ecology project carried out at a school with the support of a service provider. This group had the lowest percentage of responses relating to learning about nature, despite this hands-on project taking place over the course of a term and being integrated into the school curriculum. Some youth were fairly dismissive about the project:

Honestly this meant nothing to me except marks. (B1-EQ 2.5)

Only teenagers that are interested ... should do this experiment, because some students found the experiment extremely boring. (B1-EQ 3.13)

Others, however, were motivated to take the project seriously partly because it gave them the chance to compete in a science festival:

This project was special because I did so well at the [science festival] and now have the opportunity to present my findings [nationally]. (B1-EQ5.10)

The youth from schools D, E and O who attended the hikes organised by programmes b and u (above) may have emphasised learning as an outcome because they were relatively unfamiliar with natural areas, so most of the information shared was new to them. In contrast, learners at Schools B and I were from relatively privileged backgrounds and had had many previous opportunities to visit natural areas. They already had high levels of subject knowledge, and in some cases were quite critical that the programmes they attended did not teach them anything new. These sorts of comments explain the reluctance of some education officers who lack senior science curriculum knowledge to offer educational programmes for high school learners:

Learning about how energy is made through cellular respiration. We have already learnt about it at school with similar activities and it was quite pointless repeating it. (1a-EQ 2.30)

It wasn't really relevant to the things we were learning at the time in class. I feel that the 'tour guides' weren't really well informed about the things they were teaching us. (1b-EQ 2.21)

**(c) The experiential nature of programmes:**

Notwithstanding the reservations above, learners in this cluster were generally positive about learning in nature. They described their experiences in richly embodied terms and reported that learning about nature in an experiential way simplified learning and made it more meaningful:

Being outside in nature made the whole learning experience more visual and easier to understand. The surrounding[s] ... were beautiful and a great way to learn outside of the classroom. (Ia-EQ 2.20)

Walking in the forest ... allowed me to see what I was learning about and I remembered more when I saw what we were discussing. (Ia-EQ 2.27)

While we were learning about nature, we were surrounded by it, which help[ed] me to get a better idea of the facts we were told. The surroundings that I encountered were so beautiful and fresh. It helped me to appreciate the nature that surrounded us. (Ia-EQ 2.49)

Others felt that their field trip would have been more meaningful had the focus been less on learning about things they could have covered in class, and more about a broader appreciation of the place they had visited:

Make it less about class work and more about the exploration of nature itself and the world we live in – meaning the things we need to do to save the environment ... We complain about harming the environment more than actually taking care of it. (Ia-EQ 3.10)

Despite the fact that it is good to know and learn about what you are viewing, just the experience of spending time in nature is good enough. You should be able to learn about nature through yourself. (Ib-EQ 2.19)

Youth appreciated being able to experience the diversity of nature and to encounter particular species, rather than just learning about general principles and limited textbook examples as they did at school:

Climbing the mountain and being educated about the various types of fynbos. I learnt things which I never knew and instead of looking at fynbos as a whole, we learnt about each individual plant and its importance. (A-EQ2.16)

Observing the different flowers and plants. I've never realised that there were so many beautiful things in nature. It was my first experience to observe the environment and think of nothing else except nature. (D-EQ 2.17)

When we walked around the forest and learnt about all the different plants, especially the extinct ones, it was quite an eye opener as to how privileged we are to live in a world with such a variety of life forms and how different they all are, and that we have to take care of them to preserve them otherwise we will have nothing natural left in our world. (Ia-EQ 2. 30)

This programme help[ed] me most on the tourism things cause I am a tourism learner [and need] to know what is the most important thing about nature. (O-EQ 2.9)

#### 5.4.4 Relating to nature

All three clusters of programmes reflected similar patterns of responses in relation to a sense of being part of nature. The group that took part in a month-long wilderness trail (Cluster B, School J) reported the highest proportion of ‘definite’ responses (54%) to the question about whether or not the programme had helped them to feel part of nature. Even Group R in Cluster C (an intensive biology course for learners from various schools) and School E in Cluster D (a one-day hike along the coast) reported more than 40% ‘definite’ responses. This feedback suggests that beaches and protected natural areas in urban areas should not be underestimated as places where youth can experience a sense of connection with nature.

Various respondents reported that programmes had helped them to feel part of nature:

Teenagers don't realise what nature is really about. This programme is more relevant for them because they should know what and how nature is towards them and how they [are part] of mother-nature. (D-EQ 3.9)

The most meaningful part of the programme was the hike because I felt so much closer to nature and I felt calm and relaxed. (I2-EQ 2.40)

Walking through [site g] and learning about the extraordinary plants of our country ... The best part was the peacefulness which overcame me when I was in nature. (Ia-EQ 2.57)

Activities in nature that helped youth to experience a sense of belonging or ‘impacement’ in nature (O’Loughlin 2006) were generally very simple and included hiking, quiet listening activities and solo times. In Cluster D, for example, the programme in which the highest percentage of youth reported that they felt close to nature was a short hike on the mountain one weekend, during which the presenters encouraged the youth to do three short listening activities. Most of the youth had never been on the mountain before and this was a novel experience for them.

In Cluster E (Learning Space), School F also recorded a high proportion of positive responses to the question about feeling part of nature. Although this group participated in a fairly pressurised curriculum-based programme, youth also spent time sitting in a natural area and participating in activities that encouraged them to relate closely to plants, both through the sense of touch and also by role-playing similarities between plants and people. For most members of this group it was their first visit to that particular heritage site, so the novelty of the experience may also have contributed to their positive responses.

In contrast, programme s1a at School B did not seem to generate a sense of closeness with nature. The learners undertook a practical ecological project but it appeared that observing nature through the lens of a scientific investigation and doing the project ‘for marks’ may have caused learners to relate to nature as a focus of study (Section 4.4.2) rather than in more inter-subjective ways.

#### 5.4.5 Thinking more deeply about nature

Despite the obvious value to youth of experiential nature encounters, the graphical representations of their responses (Appendix M) suggest that learning about nature and feeling part of nature did not automatically result in young people reflecting or *thinking more deeply* about nature and the environment. Programmes that scored highest in this regard (Programmes l & g: School I) tended to deal overtly with environmental issues (e.g. sustainable development, over-consumption of natural resources, threatened species). They provided youth with information about an issue and asked them to suggest how the issue could be addressed or how they personally could live more sustainably.

I was ‘woken up’ by some of the things we learnt about – how fast we are destroying the world and how one little change made by everyone can make a difference and slow down the rate at which we are losing nature. Such as recycle everyday products (paper, glass, tins). (la-EQ 3.9)

It all gave me a better understanding of how nature all works together and how we as humans are so selfish to take away the only place they have to live in to suit our lifestyles and luxury. (la-EQ 2.51)

On one of the hikes (Cluster D, Group u2), the presenters discussed aspects of the natural environment and environmental issues with youth and gave them opportunities for quiet reflection, which helped them to think more deeply about nature and the environment:

The time we were in the waterfall, the facilitators told us to close our eyes. It meant a lot because by the time I was closing my eyes I thought of ways on how people can protect our nature or the environment at large. That day I thought of something important. That’s what really make[s] me proud. (O-EQ 2.16)

Comments like this suggest that reflection on the meaning of activities is very important to adolescents. In one case (School Ia), an ice-breaker activity, which had the potential to illustrate particular ecological concepts very effectively, was inadequately discussed.

Consequently, many respondents criticised the game as childish and embarrassing:

The part of this programme which was least relevant to me was the game in which we participated in. In this game we played a type of musical chairs, and I did not understand how this related. (la-EQ 2.7)

Another programme, however, used equally ‘silly’ games in a youth development context, but participants referred to them as meaningful because of the thorough debriefings after each activity:

The activities that you do and at the end of it, it has a true meaning that you could relate to. (H-EQ 2.4)

Everything meaningful had to do with fun and games which brought everyone together and made us unified in a way. (H-EQ 3.18)

The next section presents feedback from youth on the value of nature-based programmes in Clusters B-E as youth development opportunities.

#### **5.4.6 Nature as a context for youth development processes**

##### **(a) Cluster B:**

Natural areas, in particular wilderness areas, have long been recognised as a valuable context for youth development programmes. In this study, youth development was the primary focus of programmes in Cluster B (Intensive Youth Development). According to feedback from youth, they valued programmes that:

- were well established, with a good reputation and experienced presenters:  
... everyone who went on the camp said it was one of their best highlights of their high school career, and they advised me to go on it. (H-EQ 3.30)
- created an atmosphere of respect, acceptance and trust:  
There was not any part of the programme that was not meaningful, ‘cause it taught us about life from the word go, about trust, respect, judgement and the list goes on. (H-EQ 2.29)
- offered activities that challenged the youth in some way:  
The whole physical aspect of [the hike] meant a lot to me as I learnt that I can push my body to a certain level. [It] also helped me to become more independent. (J-EQ 2.13)
- provided time for reflection:  
The free time alone in nature. I was able to rid the strain and stress of Cape Town and think about the chaos in my life. (B2-EQ 2.12)  
The hiking ... was probably the most important time for me. It allowed me to think about life and the environment, and what I could improve when I got back home. (B2-EQ 2.26)  
The solo night because you got the chance to know yourself and know our abilities and the fact that whatever can come your way or opsticles [sic] you can overcome them. (N-EQ 2.5)

Youth development programmes p (School N) and s2 (School H) scored very highly in terms of helping adolescents to understand themselves better, think about important issues in their lives, and feel better about themselves (Appendix N):

This programme was all about exploring and expressing yourself as a teenager. This was also about entering your maturity stage. (H-EQ 3.7)

It teaches a person how to be mature at an early age. It is life change [sic] in a way that as a person you open up and feel comfortable in your own space to show you don't always need someone. (N-EQ 3.1)

Programmes p and s2 were run by people experienced in youth development, and used many exercises and regular reflection to enable youth to understand their behaviours and interactions:

The group discussions where we opened up to one another about important issues in our lives. Also the team building exercises where we help one another physically and mentally. (H-EQ 2.23)

We were talking about problems that affect us daily. We played meaningful games that helped us understand things better. (H-EQ 3.16)

The two long school hikes (Schools B2 & J) were run by experienced school teachers who were convinced about the value of these opportunities for personal and social development. They gave youth a great deal of responsibility, encouraged independence, and required them to live together under challenging circumstances for an extended period of time:

Having to deal with different situations and coping with the same people for a long time ... taught me to be patient. (B2-EQ 3.26)

Leading [the group on a hike] was very relevant as it taught you how to cope in tough situations. (J-EQ 2.10)

We were taken out of our comfort zones and forced to be independent and survive without our parents and technology. (J-EQ 2.22)

**(b) Clusters C-E:**

Although programmes in Clusters C, D and E focused mainly on teaching youth about nature and the environment, some youth reported that these programmes also helped them to understand themselves better, think about important issues in their lives and feel better about themselves. As in Cluster B, many of these programmes included solos, quiet listening exercises in nature, or discussion times, which provided opportunities for reflection:

The night hike ... it was dark and my eyes adjusted themselves so I could see things without a torch. It was peaceful and I got to think about life without any distractions. (A-EQ 2.13)

Even a day hike could provide these opportunities:

The hike ... made you become more peaceful and made you appreciate nature more ... And it made me think about my life and where it's heading. (D-EQ 2.10)

As in Cluster B, the creation of an environment of mutual respect and trust was important:

The presenters all have a very great way of connecting with us and making us feel at home, like a family (I2-EQ 3.46)

Some youth commented that when group leaders came from backgrounds similar to their own, it helped them to relate more easily to the outing:

The way in which they spoke to us was quite appealing. It was as if they were speaking 'our language'. (D-EQ 3.3)

... the outing was not based on lifestyles/tones of voices better than what we are; we did not feel inferior to anyone. (D-EQ 3.6)

In Clusters D and E, programmes attended by youth from privileged schools (B & I) appeared to score lower in terms of encouraging self-reflection than programmes attended by less privileged youth (Schools D, E, F & O). Youth from underprivileged schools were generally less familiar with the natural areas and heritage sites visited, so programmes tended to be of an introductory nature and relatively experiential in approach. Youth were generally open and responsive to these novel experiences:

It was my first time in [venue g] to learn about how nature is important into our lives. It makes me realise life is hard but a beautiful thing. Last weak [sic] it was the most important weak in my life. (F-EQ 5.5)

Youth from Schools B and I, on the other hand, were generally familiar with natural areas so programmes tended to be much more educationally demanding and curriculum focused, providing little or no time for quiet personal reflection. Although some youth felt that the field trip had influenced them to care more for the environment, a few commented that they did not think it had had any impact on them, for example:

It is just a project so I don't think that it is going to change my life. (B1-EQ 4.2)

We mostly walked around putting cards in the right order. That's not influential to me. (Ia-EQ 4.5)

Some learners felt that the field trips could have been more experiential and included time to relax and enjoy the natural surroundings:

Make it less about class work and more about the exploration of nature itself and the world we live in. (Ia-EQ 3.10)

Let us have more time just to sit and absorb the nature surrounding us, not just rush through it all trying to 'learn' as much as possible about the specific plants. (Ib-EQ 3.7)

More time to relax and enjoy the peacefulness of the place. (Ib-EQ 3.23)

#### **5.4.7 The impact of programmes on feelings of well-being**

Most of the youth commented that the programmes had made them feel better about themselves. Programmes with the highest scores were those that focused on intensive youth development (Cluster B), while those with the lowest scores included the more educationally-focused programmes in Cluster E, as well as Programme s5 in Cluster C, a school camp with a curriculum focus.

Feelings of well-being related to Archer's three orders of reflexivity:

##### **(a) Natural Order:**

The experience of being in nature was often described as peaceful, mentally and physically relaxing, and conducive to reflection:

When I was out in nature I got to appreciate the beauty of nature and think more deeply about life and the environment. (A-EQ 2.3)

The hike through the nature reserve was of most importance to me as well as the walk on the beach as that part of the program made me feel most at harmony with myself as well as opening my mind. It made me feel at peace. (D-EQ 2.6)

For one respondent, learning about nature represented a welcome alternative to the serious issues he was accustomed to being taught about:

Teenagers in this time don't like something that they know, for an example sessions on HIV, crime. They want something new. (O-EQ 3.16)

Nature also represented a place where some respondents felt physically safe:

In [site g] there's no criminals - is the quiet place and that place is made for people to think ... (F-EQ 2.11)

Being able to lie out in the open with no worry of someone attacking you. (L2-EQ 2.7)

Youth felt pride in overcoming physical challenges and in making a positive difference to the environment:

We all went out to find alien trees and cut them down. I've always wanted to do that and afterwards seeing all the trees we cut down really made me feel good about what I did. Like I really made a difference. (A-EQ 2.8)

The hikes because we were around the nature all the time and getting exercise too. Pulling out alien plants made me feel I was doing something important. (A-EQ 2.25)

Finishing the hike made me feel like a man and doing it as a team made me feel part of something. (B2-EQ)

The outdoor activities were fantastic for me because I love hands-on activities and physical challenges. (H-EQ 3.14)

**(b) Social Order:**

Youth appreciated spending time with friends, making new friends, and developing social skills:

Being in nature alone away from city, spending time by yourself or with friends away from technology. It's nice being able to bond with people when they're not on there [sic] phones and do it in person. (B2-EQ 3.13)

Parts where we interacted with other learners on the camp and I enjoyed that because I got to know everybody better, talking about issues which affect teenagers and learning to trust others and not just yourself. (H-EQ 2.20)

**(c) Practical Order:**

Youth enjoyed learning more about their environment, and developing competence and independence:

The 24 hour solo and solo hike meant the most because it gave me a feeling of freedom and independence which I don't get back home. (B2-EQ 2.14)

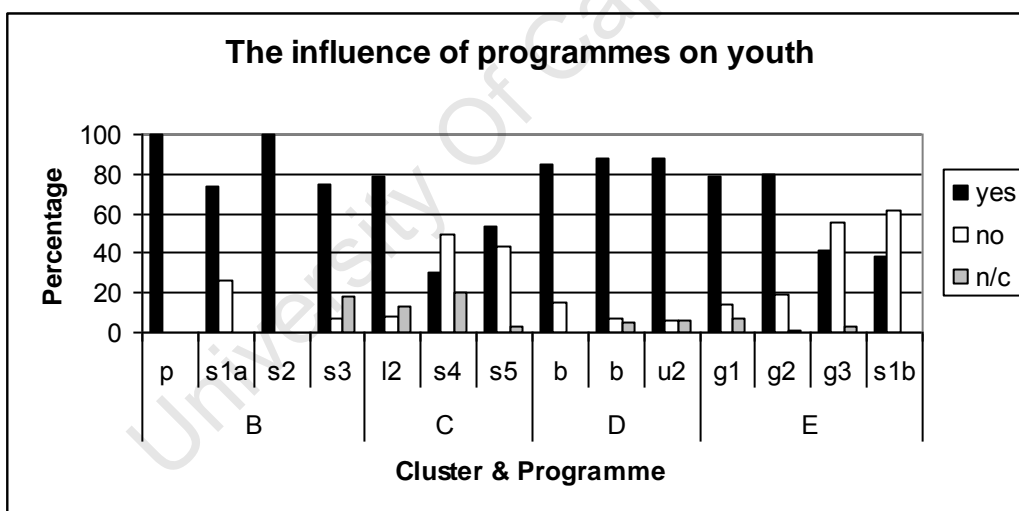
Learning about the different plants and invertebrate sea animals that live in rocky shores made me see things differently and made me feel powerful with all the knowledge I have gained. (I2-EQ 2.24)

The camp and the fact that it was during the holiday - meaning that I could do something constructive rather hover around in the townships. (I2-EQ 3.37)

I loved being self sufficient and just living in the bush. I really enjoyed living out of a backpack and not worrying about material possessions. (J-EQ 2.28)

**5.4.8 The overall influence of programmes on youth**

Overall, 75% of youth stated that they would do something differently as a result of the programmes in which they had participated (Figure 5.14).



**Figure 5.14:** Responses of youth in each programme/cluster to the question of whether or not they would act differently because of the programmes they had attended. Responses are displayed as percentages. See Table 5.2 for information on clusters and programmes.

In all programmes in Cluster B, comments related either entirely or predominantly to psycho-social benefits (e.g. growth in maturity, confidence, independence, relationships with self and others, ability to deal with problems, and appreciation for their lifestyles). A few youth commented that they had appreciated nature more since participating in wilderness hikes s1b and s3.

In Cluster C, Programme 12, a couple of youth mentioned that they had developed confidence as a result of this programme. All other positive comments about the impacts of programmes in Clusters C, D and E related to how youth felt about and related to nature and the environment. They stated that the programmes had taught them more about nature and how to appreciate and respect it. Many said that they either intended, or had already started taking action, to conserve or improve the environment (e.g. reducing resource use, recycling, not littering or polluting, planting gardens, removing alien plants, and caring for animals). A number of learners from School I mentioned that they had become more aware of consumer issues, such as the environmental impacts of different products and the need to be less self-indulgent. Finally, a number had started sharing their environmental knowledge with family and friends, and encouraging others to get involved in caring for the environment.

Of the 20% of respondents who said that they would not do anything differently as a result of these programmes, most believed that they already knew a lot about the environment and were already living in a sustainable way (e.g. making environmentally conscious choices, recycling, spending time in nature, helping their community). A couple complained that they did not have the time to get involved in conservation, one stated that he was willing to make changes but didn't know what to do, and a few declared that they were not interested in making any changes in their lives. One girl who had attended an Orange River camp felt that the experience had been "so different from normal life that it didn't relate to anything in the city" (L-EQ 4.10). Presumably the camping experience itself had not been the subject of reflection or, after having lived with relatively few luxuries for a week, this respondent might have identified ways in which to reduce her ecological footprint upon her return to the city.

#### **5.4.9 Can nature become more relevant to teenagers?**

When I prepared the General Questionnaire (Appendix F) I did not anticipate that such a high percentage of youth would feel positive about nature; hence I enquired about ways in which nature might be made more relevant (GQ9). Some youth (n=27) specifically stated that they disagreed with the assumption that nature was 'uncool', and said that youth who felt that way should change their attitudes:

Teenagers have a stupid attitude towards it and feel it is 'uncool' to enjoy. This has influenced us and needs to be changed by us. You can't change nature, it is there for us to enjoy but the attitudes of teenagers can be changed. (I-GQ 9.13)

The most frequent response (n=183) to this question was that youth needed to know more about nature, its importance to them, and the issues facing it. The request for information was greatest amongst youth with least access to nature:

Teenagers need to be exposed to Nature more, so they could understand the relevance of nature. Courses like the one we are doing is a good example. (I-GQ 9.22)

Many respondents (n=143) recognised that youth needed to be exposed to nature in order to discover its relevance. They complained that lack of time and transport, dependence on technology, entrance fees and safety concerns restricted their access:

Teenagers no longer go outdoors and appreciate what is available to us, we become consumed in material things and need to be taken out to nature more often and be reminded of its wonders through exploring and experiencing the outdoors. (I-GQ 9.26)

If we had more time to enjoy it. If nature was considered more popular and technology and modern things weren't considered so important and valuable in order to enjoy ourselves and have fun. If it wasn't so dangerous to experience nature, such as walking up the mountain, something we could not do just with your friends as it is very dangerous. (I-GQ 9.41)

Many (n=131) suggested that organising 'cool', exciting social events in natural areas, or promoting nature as a place to 'hang out' with friends would attract youth. These activities should be fun, like recreational activities, music concerts and celebrity events.

A few suggested that combining technology with nature experiences would attract youth:

Teenagers of today are so taken by technology and gadgets that if there were things like cell phones, ipods, cameras, portable small TVs, and such that were suited for the outdoors without breaking the bank, teenagers wouldn't have to choose their ability to go on mxit over phones because they could enjoy both. If phones had functions for nature e.g. the ability to be water proof, forest maps, etc children could combine nature and technology and it would ultimately become a lot more relevant. (I-GQ 9.76)

Nature-based recreational activities and sports like hiking, canoeing and beach sports (n=95), as well as nature outings and camps (n=93), were also significant:

Teenagers should get more opportunities to see nature. Outings and field trips can help and once teenagers see nature they could have a change of heart for it. (A-GQ 9.14)

Make them aware of it. Class outings, TV programmes. Not school projects (no one likes those). Youth camps, where you do fun things. (I-GQ 9.57)

Some said that their peers should be reminded of the spiritual and aesthetic value of nature (n=33):

If only they would be aware of what nature can do to your inner self, then nature would be the best place to hang out even with friends or family. (G-GQ 9.57)

It could help calm down their stress. I think instead of taking drug addicts to rehab, they should take them out to see nature. (H-GQ 9.57)

Finally, some (n=68) recognised that getting involved in conservation projects could benefit youth in many ways, from deepening their understanding of nature, to helping them to feel empowered:

Nature conservation should give classes a natural area to look after. They would clear aliens, look after the fynbos and animals. This would bring the learners closer to nature and teach them to look after it. It will also teach them that they can make a difference. (S-GQ 9.1)

## 5.5 Conclusion

Despite considerable differences in terms of their access to nature, responses indicated that, in general, young people from all parts of Cape Town felt positive about nature. The great majority of youth surveyed valued nature because they experienced a sense of well-being there (non-consumptive value); very few mentioned that they valued nature because it was a resource for human consumption. This confirms the observations of Le Maitre *et al* (1997), Manuel (2006), and Msimango (1988), who also recorded what they considered to be surprisingly positive responses to nature by youth, including those from socio-economically challenging backgrounds.

Youth evaluations of a range of nature-based programmes indicated that nature is a valuable setting for psycho-social development processes (identity development), environmental learning, and the development of a sense of ‘emplacement’ or belonging in relation to nature.

The ways in which youth engaged with nature during these programmes, and the outcomes of these experiences, were strongly influenced by programme goals and activities. This was especially so in relation to youth thinking more deeply about their own personal and social development, or about their place in the natural world. If opportunities were provided for quiet reflection and/or reflective discussions, youth were much more likely to integrate what they had learnt and experienced into their own developing sense of self than if opportunities for reflection were not available.

The notion of ‘embodied reflexivity’ was a useful concept when reflecting on the responses of youth to their experiences of being in natural areas. Archer (2000 & 2002) observes that our emotions are commentaries on the reflexive process of identity development, which relates to natural, social and practical orders of our reality. Experiential programmes in nature created integrated opportunities for embodied

reflexivity; for example, the experience of sitting quietly and listening to natural sounds had a calming effect on mind and body, and helped youth to experience a sense of implacement, or belonging, within the natural order. This in turn seemed to help youth become more open to reflecting on other aspects of their lives, in particular issues relating to their personal and social development. Similarly, long hikes posed both a physical and a social challenge as youth pushed their bodies to the limit and learnt to relate better to their peers. They also learnt more about their natural surroundings and developed practical survival skills, all of which helped them to grow in confidence and maturity.

A number of youth reported that spending time quietly in nature not only helped them to deal with stressful situations, or to come to their own decisions about issues free of peer pressure, but also helped them to feel spiritually connected to God, eliciting a sense of awe and reverence. In their review of environmental education methods, O'Donoghue and Janse van Rensburg (1995:6) criticised approaches that they felt represented "a retreat back to nature and a subculture of earth-love spiritualisation." Unfortunately, despite the deep value these experiences clearly hold for youth, this critique has undermined confidence in the use of approaches that encourage aesthetic appreciation of and perceptive openness to nature (c.f. Int-g2, Section 4.3.4d).

Nature-based programmes that provided youth with experiences, learning opportunities and challenges in natural, social and practical orders tended to generate high levels of interest and motivation. This may be because these programmes provided a wide range of opportunities for youth with diverse interests and abilities to be recognised for their particular strengths. Developing a sense of self-respect or self-esteem is vital for adolescents facing the challenges of identity development (Erikson 1968; McDonald 1999). Programmes that focused narrowly on academic learning outcomes, for example, and which overlooked the importance of social and physical development to youth, tended not only to have limited appeal but, as suggested by the data, could prove relatively ineffective as learning opportunities.

# Chapter 6

## Discussion



*I love that there is no one around you to judge the way you are.  
You can just be yourself and enjoy everything nature has to offer.  
(9-G25.19)*

# Chapter 6

## Discussion

### 6.1 Introduction

#### 6.1.1 Reviewing the research questions

This study set out to investigate the value of nature-based education and youth development programmes to adolescents in Cape Town, in relation to:

- their understanding of and sense of belonging to the natural order, and
- the process of identity formation.

Chapters Four and Five represent the first level of analysis in the study. They addressed most of the sub-questions posed in Section 1.2.2, and have already established:

- The types of nature-based programmes available to adolescents in Cape Town;
- Why some organisations preferred not to offer programmes for adolescents;
- Programme presenters' ontological assumptions about nature;
- Young people's prior ideas and experiences of nature;
- Reasons why some youth felt alienated from nature; and
- The impact of these nature-based programmes on young people's:
  - > knowledge and understanding of nature,
  - > sense of belonging in nature,
  - > identity formation processes, and
  - > reflexive engagement with their own development and with their relationships with people and nature.

This chapter reflects on these findings (Chapters 4 & 5) in the light of the theories presented in Chapter Two in order to address the main research question:

What is the value of nature-based education and awareness programmes to adolescents in Cape Town, particularly in relation to:

- their understanding of and sense of belonging to the natural order, and
- the process of identity formation?

Chapter Seven will address the implications of this research for the theory of adolescent identity development and the practice of nature-based programmes.

### 6.1.2 Chapter overview

This chapter begins with a brief overview of ways in which respondents viewed their relationship with nature. I then consider the first major theme of the study: *alienation and belonging* in some depth, drawing on the findings in Chapter Five, as well as on insights from seven reflective hikes in nature. I undertook these hikes in an attempt to apply the theory of embodiment and inter-corporeality (Chapter 2) methodologically. Finally, using Erikson's (1968) eight stages of psycho-social development as a framework, I reflect on the second major theme of the study: the value of nature and nature-based programmes to *adolescent identity development*; I draw on findings from Chapters Four and Five, as well as on insights obtained during the reflective hikes.

## 6.2 Youth and nature in Cape Town

### 6.2.1 A general sense of relationality

The teenagers surveyed in this study viewed nature in diverse ways, from outright dislike: Nature sucks (S-GQ 5.5), and shallow acquaintance: I enjoy looking at nature rather than being in nature (I-GQ 5.76), to enjoyment: Nature is fresh and exciting, there is lots and lots to learn and discover in nature everyday (G-GQ 5.44), and intimacy: I feel in love with ... my beautiful lover nature (u1-GQ 5.9). Whatever their feelings, however, none questioned the notion of nature or its existence.

The responses of youth to questions about nature did not reflect any obvious patterns based on typical demographic categories of race, class or gender, echoing Strife's (2008) observation that children's socioeconomic backgrounds did not appear to predict their environmental concern. For example, the four schools in which 100% of youth responded positively to the question of how they felt about nature (Figure 5.8) represented a very wide range of contexts (Table 1.1):

- C: a state school in a low income area;
- K: a private girls' school in a leafy suburb;
- N: a private business college for youth from low-income areas; and
- O: a state-run commercial high school in a very low income area.

The great majority of youth (90%, Table 5.1) from all backgrounds identified positively with nature. Adolescents in Cape Town appeared to share a sense of openness to nature that defied sociological categories, and avoided the dominant view of nature as resource.

It is beyond the scope of this study to determine whether this unexpected sense of relationality should be interpreted as a cultural construction of youth living in a scenic coastal city, or as a deeply ontological feature of our humanity. To my mind, their responses (Section 5.3.3) present a view of nature that, after Merleau-Ponty, is constitutive of humanity (Langer 1989), contributing in diverse ways to our being human, and to human well-being (Section 2.4).

The moving way in which many youth described their feelings about nature supports Merleau-Ponty's (1962 & 1964) contention that our pre-reflective bodily existence is inherently meaningful. The sense of reverie youth experienced while snorkelling or watching the stars is reminiscent of Merleau-Ponty's description of the phenomenal field, the unified situation in which subject and object are founded. Furthermore, many youth described their feelings about nature in inter-subjective terms, responding with expressions of love and mutuality to their experiences of finding inspiration, rejuvenation, clarity and acceptance in nature (Poems: *At home in nature; Escape*):

I feel good. It makes me feel like I'm one of the earth citizens, the breeze of the sea and even the sound of the birds. (G-GQ 5.13)

Nature talks to me and I talk to it. (R-GQ 5.7)

## 6.2.2 Evidence of alienation

The highest proportion of negative or ambivalent comments about nature occurred at School E (Figure 5.8), even though the actual number (n=5) was small. These comments appear in the poems: *The 1.02%* (lines 7, 8 & 13), *Ambivalence* (verse 3), and *Nature is not for me* (verse 2). This study did not attempt to determine causality in terms of attitudes of youth towards nature, however this school was located in an industrial area and the closest natural area was five kilometres away (Table 1.2) Lack of access to nature may therefore have influenced their responses, as these comments suggest:

I love nature, but just never get the opportunity to get out that much. If I can get that opportunity, I would grab it with both hands. (E-GQ 5.14)

I have a lot of stupid questions about the nature but I'm very interesting [sic] in knowing about it. (E-GQ 5.17)

Despite this, the majority of youth in this group spoke positively about nature:

We must protect nature with our hearts. (E-GQ 5.5)

I feel that nature truly shown my inner self and it make me feels relax [sic]. (E-GQ 5.12)

I feel really good about nature cause I wanna learn about the things of our country. (E-GQ 5.23)

In addition to physical inaccessibility contributing to a sense of alienation from nature, there was evidence of the distancing influence of a predominantly visual culture (O'Loughlin 2006). Some youth said that they preferred to observe rather than experience nature because they found aspects of nature uncomfortable (Poem: *Ambivalence*). One boy (B-GQ 5.17) admitted that technology (predominantly a visual medium) was far more important than nature to him. A lack of embodied emplacement seemed to contribute to a sense of indifference (*ibid*).

One girl (D-GQ 5.22) who visited nature only once or twice a year said she disliked nature because it had nothing to offer teenagers. Her view was very different from that of others whose embodied experiences in nature had convinced them of its value. One youth indicated that it did not take much to overcome a sense of alienation from nature:

I was never really intrusted [sic] in nature but since 26:08:08 [field trip to a local nature reserve] I love nature. (G-GQ 5.67)

Finally, in very few cases there was evidence that what Louv (2006, Section 2.7.5a) calls *ecophobia* or the fear of ecological deterioration, was contributing to a sense of alienation from nature (Section 5.3.2b, Poem: *Nature is not for me*).

### 6.2.3 Valuing nature

When asked how they felt about nature (GQ5), most youth wrote about *experiences* of physical, mental, emotional and spiritual well-being (91.8%), rather than *learning* about nature (6.0%) (Appendix O). Most youth who referred to learning about nature as significant had had limited prior exposure to nature other than an educational excursion. Youth wrote much more frequently about embodied experiences of nature than about cognitive concepts, reflecting Merleau-Ponty's contention that our *experience* of being-in-the-world precedes our *ideas* of the world (Langer 1989).

Bonnett (2002) states that if sustainability is to become an attitude of mind we need to become open to nature's many facets. Two aspects that youth appreciated most were relaxing in nature (nearly 65%) and appreciating its beauty (18%); many youth (25%) also admitted to having a strong affinity for nature, and to *already* being deeply concerned about nature (18%). These insights should encourage the conservation and environmental education communities to engage more with teenagers in nature. Specific aspects of the youth-nature relationship are considered in Section 6.3.

### 6.3 Reflections on alienation and belonging

Having often experienced nature's call as metaphor, and determined to put into practice the theory of embodiment and inter-corporeality (e.g. Abram 1996; Merleau-Ponty 1962 & 1964; O'Loughlin 2006; Postma 2006) I decided to do some early preparation for writing this Discussion chapter in natural settings. I wanted to seek place-based insights to help consolidate my thoughts about the first major theme of the study: *belonging to the natural order*. I undertook a series of short hikes and canoe trips in order to reflect on the data and the literature in the river catchment in which I live. I was seeking what Payne (in press) calls an "ecocentric intersection of an aesthetics, ethics and politics of environmental education research." At each of the seven stages of the hike, I found places to draw and write in response to what I was reading and experiencing through the senses.

I initially planned to reflect on how youth had described their experiences of 'belonging to nature.' But ironically, at every point along the river, I was met not by unsullied naturalness and the warm embrace of unconditional belonging, but rather by unavoidable reminders of the experience of alienation. The hike troubled the waters of belonging for me, forcing me to make "much finer observations of issues of identity, alienation and belonging" (page 22) than I had anticipated.

Despite the resonance I felt with Merleau-Ponty's (1962 & 1964) ideas of a pre-reflective relationship with the world, in practice I found that my experience of having worked in the field of environmental education for many years had profoundly shaped the way in which I experienced nature. As will be seen in the reflective passages that follow, I found it very difficult to remove the analytical lenses that caused me to identify issues associated with what I beheld. In particular, my environmental lenses unfailingly classified plant and animal species as either native or alien. As will be seen below, this powerful cultural construction can have sinister implications for relationships with self, society and the natural world.

This tendency to perceive alienation in what I experienced was in stark contrast to the unexpectedly positive responses of youth, who appeared far more able than I to experience nature in its 'suchness'. I suspect that, over the years, my strong focus on environmental issues has blinded me to many of the other aspects of nature that are

important to youth, and consequently to numerous opportunities to support youth in their struggles for subjectivity (McDonald 1999).

In the sections that follow, I juxtapose short pieces of free writing inspired by my encounters along the river (margin text, pristina font), with reflections on different aspects of the youth-nature relationship in the research findings (main text). The short pieces trace my personal struggles with the dualistic assumptions and implications of my own ecological world view. The voices of youth, in contrast, draw attention to the breadth of value to be found in an embodied relationship with the more-than-human world. The seven short pieces also helped to shape later sections on identity development (Section 6.3) and nature-based programmes (Section 7.4).

University Of Cape Town

### 6.3.1 Nature as a place of reverence and refuge

#### *Headwaters & cave*

*I seek an experience of belonging, but alienation haunts me even on the fynbos-clad mountains of the National Park, I settle down to draw and write in the shade of a cluster of Monterey pines on an outcrop fringed by Australian blackwoods. Memories of the xenophobic violence of May 2008 confront me: Somali and Zimbabwean shop keepers were out-competing local traders – so these unwanted invaders had to be cut down, just like foreign trees whispering in the wind. I too am an alien – a white Jamaican. An accusing thought surfaces: What right do I have to be here?*

*The mountain stream runs strongly after unseasonal November rains. I immerse myself in its iced-tea cold-brownness, relieved as the rapids drown the voices of rejection. Reaching Prinseskasteel<sup>32</sup> Cave, once the refuge of a Khoi<sup>33</sup> princess, I imagine her surveying the wild shrub-lands and marshes below, now tamed and transformed by centuries of settlers.*

*Looking back at that day's notes, I read, "When you think you know what you're looking at, look again. What is there may be quite unlike your concept of it."*

[Nature] gives teenagers a sense of knowing that there's more to what the eyes see ... it's our quickest escape [sic] from our fast pace world. (R-GQ 8.16)

The mountain stage of the hike exemplified two aspects of the sense of belonging to nature described by youth: for some nature was a place of spiritual connection and for others a refuge from trouble.

In most religious traditions, mountains are places to which people retreat to commune with God and seek inspiration and wisdom. Similarly, youth responded with awe to experiences of nature's beauty or majesty. Its peacefulness contributed to a sense of spiritual well-being (Section 5.3.3a; 5.3.5f):

I find Nature overwhelming and magnificently beautiful. (D-GQ 5.5)

I feel that nature is magical and a really peaceful and beautiful place to be in and to relax your soul, body and spirit. (E-GQ 5.11)

Some young hike leaders (Programme u1) spoke about being in love with nature, listening to nature, and hearing it speak, suggesting an inter-subjective relationship with the world (Merleau-Ponty 1968).

A Khoi princess sought refuge in these mountains; youth described nature as a place where they could escape from the demands and dangers of their lives:

Keeps you away from gangsterism ... can learn from nature. (D-GQ 8.3)

Nature is healthy for a teenager. We are under such pressure in this day and age, we are busy and often pushed hard. We need nature to get away from those kinds of stresses. (I-GQ 8.29)

<sup>32</sup> The princess's castle (Afrikaans): the cave is reputed to have been the refuge of a Khoi princess prior to European settlement at the Cape.

<sup>33</sup> Nomadic pastoralists who first introduced sheep and later cattle to the Cape

Physical elevation gave youth a new perspective on their situations, both literally and figuratively (e.g. Section 5.3.5a, School C); they reported that nature enabled them to ‘clear their minds’, to be themselves and reflect on their lives (Section 5.3.3b). One programme presenter observed:

I have noticed that when we talk about problematic things where we are living, we get bogged down. We can't find the answer. We always focus on problems but it goes nowhere. We need to get away. By comparison, we can find positive solutions on Table Mountain, and we can go back to the community with answers. The environment has a way of changing perspectives. (Int-o2)

Considering the sense of acceptance and belonging about which many youth spoke when referring to nature, it was disturbing that the theme of alienation arose in the most ‘natural’ section of my reflective hike. Alien trees became a metaphor for the issue of alienation from self, society and nature. They reminded me of the many levels of alienation affecting youth in Cape Town: from xenophobia affecting migrants from the rest of the continent, to local youth disadvantaged by the legacy of Apartheid; from the impacts of growing up in an increasingly individualised, virtual and environmentally risky world; to the everyday emotional trials of adolescence (Sections 2.3, 2.5 & 2.6).

As the extreme case of xenophobia indicates, viewing others as alien may allow one to justify harming them. Teenagers involved in this study understood that a lack of exposure to nature could result in them finding nature boring (B-GQ 8.51) or doing it harm:

Many people do not have gardens in their yards so teenagers don't spend time in nature. They would rather harm nature ... (P-GQ 8.3)

However, only about 10% of youth actually expressed personal feelings of alienation from nature, with indifference rather than animosity being the predominant response (Section 5.3.2a, Poem: *The 1.02%*). On the other hand, in a focus group discussion, members of the environmental club at School J confirmed Bauman's (2000) contention that to be *with* others creates the possibility of being *for* others. They stated that they had grown up in close contact with nature, and that this had resulted in their interest, appreciation and involvement in caring for the environment:

The whole reason I love nature is because I've been brought up with it ... I was exposed at a very young age, when I was 2. My dad was involved with it – he was on a game reserve. That's why I'm into it. (Boy, School J)

### 6.3.2 Nature as a place to play

#### *Arboretum & plantations*

*My second walk is in the Tokai  
Arboretum and plantation.  
Members of one of the last troops  
of baboons on the Cape Peninsula  
scamper past as I sit amongst the  
pines.*

*I recoil from the bleak invasions of  
Australian eucalypts and  
pitto-sporum, introduced to serve  
our needs but now marching  
defiantly beyond their controlled  
existences in plantations and  
hedges.*

*But in the Arboretum, diverse  
giants from around the world  
create a dappled, scented silence so  
still that a falling leaf startles me.  
The eco-fascist dictum of 'native  
good, alien bad' has a hollow ring  
in this magical place of four-year-  
olds' fairy parties and fallen-  
branch shelters built by small boys.  
I ask myself, "How can we hate the  
oak and pine that stand so tall and  
cast their shade upon a sweltering  
shrub-land, thirsty for green?"*

Many youth recognised the recreational and inspirational value of nature (Appendix O):

More than anything I think that before we grow up too quickly we need to learn to be like a real kid and nature provides that playground for you. (I-GQ 8.1)

Nature is great for enjoying and relaxing. It provides a good environment for recreational activities like exercising. (B-GQ 5.47)

Nature ... gives us inspiration, such as being innovative in design and shape. (I-GQ 8.2)

Opportunities for children to play creatively in nature (as observed in the Arboretum) are declining all over the world as humanity becomes increasingly urbanised. This is having negative impacts on the physical, intellectual and social development of youth (Louv 2006; Postma 2006; Section 2.4).

Roff (2008 pers. comm.) observed that youth accustomed to engaging with electronic media often found nature slow, quiet, dull, or uncontrollable. Indeed, some youth who lacked exposure to nature said they felt uncomfortable there or considered it boring (Section 5.3.2a&b).

Respondents were by no means uncritical of some of the aspects of youth culture that kept them away from nature, however (Figure 5.9):

It's important to get away from a growing materialistic world and to be in nature. (B-GQ 8.34)

I feel it is important to know about nature as it makes people realize that shopping and materialism is not all there is to life. (I-GQ 8.57)

Teenagers should spend more time in nature and be connected with that sense of peace and mindfulness. Technology is taking over and leading teenagers away from nature. (N-GQ 8.1)

### 6.3.3 Nature as a place to learn

#### *Fallow farmland*

*At the last remaining farm on the Keyser's River, water weeds from the Amazon choke the efficiently straight water course, and riparian growth is limited to a couple of windswept Australian wattles. A flock of European starlings wheels and settles in the branches above me.*

*The poverty of ploughed soil, no longer resplendent in its cloak of lowland fynbos, nor producing food, brings me to tears. I look up at Prinseskasteel Cave – also known as Elephant's Eye – and ask "How do you view us? Do you resent the invasion of your lowlands, or welcome our industry, structures, strategies and dreams?"*

*On the farm dam, oblivious to their origins, swim two swans: one black, the other white. One from the south, one from the north, neither is native, yet both have been chosen for their clear contrast, their shared grace.*

*I reach a turning point.*

Despite the fact that it is good to know and learn about what you are viewing, just the experience of spending time in nature is good enough. You should be able to learn about nature through yourself. (Ib-EQ 2.19)

[Nature] gets them into a stage that leads them into a journey of self-discovery. (N-GQ 8.5)

In Section 5.4.3 youth indicated that they appreciated opportunities to learn in experiential ways in nature; they were motivated by the informality of learning outdoors and found it easier to understand things they could actually sense. However, some educational programmes appeared to focus narrowly on cognitive outcomes, overlooking opportunities for youth to engage both more lightly (sociality and enjoyment) and more deeply (embodied reflexivity) with and in nature. Ironically, this sometimes detracted from the motivation to learn.

Adolescents are dealing with the challenges of identity development, and natural areas are clearly conducive to reflection, so limiting learning in nature to learning about the *science* of nature, represents a lost opportunity. There are many other ways in which youth, through what Bonnett (2009: 46) calls “respectful intimacy” can relate experiences in nature to their own lives, as reflected in this statement:

No matter how cool we think we are, we always have a lot to learn. I think that being in nature can teach any person a lot, either about themselves or about what to do in certain situations, or about others. (I-GQ 8.1)

Ecology, founded in the positivism of the natural sciences, has always felt to me like a comforting ‘Just So’ story: a view of the world as it is. Bonnett, however, reminds us that the ecological story too is an abstraction, presenting “an environment composed of functionaries” (*ibid*).

As described in *Fallow Farmland* (above), at the farm I experienced viscerally just how powerfully conservation ecology as a perspective on nature had undermined my ability to be respectfully intimate with so-called ‘alien’ life forms. Reflecting on how radically cultivation had transformed natural ecosystems, I felt the pain of loss of natural diversity and resentment towards the species that I considered to be out of place.

But in that place I also realised that my entrenched habit of classifying organisms as native or alien, and rejecting the latter, was symptomatic of the dualistic thinking that I routinely reject in this study (e.g. Abram 1997; Merleau-Ponty 1962; O’Loughlin 2006; Postma 2006). This became the time to set aside what Liston (2007: 387) describes as the “arid, dry, and disembodied” reason of critical pedagogy and to consider my surroundings with an attitude of attentive love. Liston quotes Iris Murdoch:

The love which brings the right answer is an exercise of justice and realism and really looking. The difficulty is to keep the attention fixed upon the real situation and to prevent it from returning surreptitiously to the self with consolations of ... resentment ... and despair. ... It is a task to come to see the world as it is. (Murdoch, in Liston 2007: 390)

This experience of *embodied reflexivity* was a turning point for me: it enabled me to put aside the analytical lens (native/alien) that I had worn unreflectively for so long, and look anew at the ‘suchness’ of all around me. As I walked on, I paused next to a lone peanut butter cassia from central Africa, drawn by the rich yellow of its flower spikes. I was struck by its beauty. Walking back to my car through a field of spent lupins, their dried pods rattled in the wind. I smiled to think that they were applauding my change of heart.

### 6.3.4 Nature as a place to engage

#### *Urban opportunities*

*Where do I feel at home? What is familiar, what strange? Today I enter the world of commerce and industry, and for the first time on my solo trek I feel afraid.*

*Making quick sorties from my car to road bridges, I contemplate the river confined in its concrete canal.*

*It flows unappreciated, clogged with Kentucky cartons, past the backyards of businesses. Why do we turn away from this element that is so much part of us? Why is there no safe access along the banks for workers and walkers to pause and reflect?*

*Young plovers forage on exposed sandbanks, a fat chameleon rolls its eyes in the reeds. I sit in my car in a cul de sac in the industrial area, conspicuous in my curiosity, observing smokers soaking up the sun, perched on a packing case next to a broken plastic chair.*

*In the midst of drab factories and illegal dumping, at the end of the street someone has planted a small garden. A bright yellow-daisy bush begs the question, "Must the colour grey denote the urban? Must we seek nature beyond the city limits?"*

We live in an era where living sustainably needs to become a priority to the new generation who are the leaders of our future. How can you nurture something you don't fully understand? Nature needs to be taken seriously; it's a pity that teenagers of today don't really care. (I-GQ 8.60)

In Section 5.3.2, the poem *Nature is not for me* illustrates what Louv (2006) calls *ecophobia*, or the reluctance to identify with threatened nature in a society that doesn't seem to care. Yet amidst the rhetoric of 'the uncaring other' was evidence that many teenagers were aware of the need to live more sustainably and were involved in everyday efforts to do so in their homes and schools.

In their evaluations (Section 5.4.8), 80% of youth credited nature-based programmes with helping them to change attitudes and practices (Section 5.4.5), saying that they had become more aware of their dependence on the environment, were behaving more responsibly, and even considering conservation-related careers:

I now look at nature in a different way, respecting it more than I did and enjoying it more. (E-EQ 4.29)

I will try and recycle more. Now that I have seen how beautiful nature is, I don't want it to be changed or harmed in any way. So I am willing to do my part for the community. (Ia-EQ 4.62)

I was thinking there is no future in nature and environment. I was thinking about business and engineering, but [after the programme] I decided to change. (O-EQ 4.3)

Survey responses suggested that the notion of 'sustainable lifestyles' was having an influence mainly on youth from economically and educationally privileged backgrounds, but it also appeared that this was generating a certain level of complacency:

I feel I live an eco-friendly and sustainable life as is, so no major changes can be made. (Ia-EQ 4.26)

I won't change anything that I do, because I never did anything before the outing that needed changing. I never used to harm nature in the first place. (Ia-EQ 4.43)

O'Loughlin (2006) asserts that our predominantly visual culture creates a distance between subject and object. I experienced this on my visit to the industrial area, as I viewed the canal from my car. Without an experience of embodied implacement, I had to rely on memories of exploring the river with friends some months before; my concept of the river had become abstract.

Similarly, urban living insulates us from many of the eco-social impacts of our everyday lives as consumers, 'green' or otherwise. Advertising presents youth with a hyper-real world of material abundance, unconstrained by actual resource limitations or the impacts of waste generation.

Particularly for youth from affluent urban communities, overnight hikes may be the only times when they experience living with a minimum of material possessions (Section 5.4.7c, J-EQ 2.28) and are able to appreciate their personal impacts on the natural world directly. However, as illustrated by the story of the girl who could not apply the experience of a river rafting trip to her everyday life (Section 5.4.8, L-EQ 4.10), insights from nature experiences may be limited if there are no opportunities to reflect on them. Grounding visions of sustainable living in reflective experiences in the natural world may provide youth with insights and inspiration to encourage the emergence of agency that is both responsive and more responsible towards nature and society.

I now treat nature and our mother earth ... with respect ... giving back what we get. (D-EQ 4.8)

### 6.3.5 Nature as a place to care

#### *Murder most fowl*

*Paddling in one of the northern channels of the Zandvlei wetland I witness the not-so-public hanging of an African darter. The barbs on his beak must have prevented him from removing the woven fabric he had speared, mistaking it for a fish. The other end, entangled in the branch, had become the hangman's noose.*

*Arriving home later, my neighbour asks, "Did you hear about the mallard cull?" Now I realise why the past two days have been unusually quiet at the water's edge. The conservation authorities are systematically culling all the domestic ducks at Zandvlei to protect the genetic integrity of the native yellow-billed duck, which bands of mallards routinely gang-rape.*

*Pollution and threats to biodiversity – these are just two of a plethora of issues that demand of us not merely a romantic engagement with nature, but a marriage of deep commitment, overshadowed by the possibility that we share a terminal condition.*

The positive feelings youth had for nature (Figure 5.10) reflected many facets of an attitude of love, from romance, to friendship, nurturance, reverence, and sacrifice:

Nature is quite a very beautiful place. It's not man made but God made it and I love nature because it's adurable [sic]. (G-GQ 5.83)

I adore nature. Without it I don't think my life would be the same. ... I love the new fresh ground smell ... I really have a passion for appreciating nature. (I-GQ 5.70)

I love the experience of being around nature. However, I am devastated at the rate at which pollution and urbanisation are harming natural areas - especially in my own neighbourhood. (K-GQ 5.3)

Can't live without, not appreciated enough, would give my whole life for it, my safe place where I can feel free. (R-GQ 5.43)

Nature is my third brother. I guess it is in my blood running through the veins. (u1-GQ 5.1)

Nature is that out of which humanity has arisen, and that with which our fortunes are linked. When youth spoke about their love for nature, it was usually related to love for self or humanity. Some nature-based programmes drew on, and further developed, this understanding of the human-nature relationship, helping to stimulate the desire to care:

It's important to preserve nature and people should start caring about nature at a young age. (I-GQ 8.84)

Teenagers need to be aware of nature because everything we as humans do affects nature. (R-GQ 8.34)

Humans are ontologically linked with nature in material, ecological and phenomenal ways. But as the stories from Zandvlei (left) illustrate, this relationship is complex and paradoxical, requiring love that is robust, mature, and able to make meaning with wisdom, and entertain contradiction with compassion.

Love and a will to care are unlikely to arise from purely intellectual exercises, which characterise most high school education experiences. Bonnett (2007: 716) emphasises the importance of developing “acquaintanceship” with the world through embodied experiences that enable learners to engage “less through a cognitive ordering and more through a receptive sensing that is less susceptible to abstract generalization and objectification.” He contends that love is the ability to discover the reality of another and to receive the other as it is. This can be challenging in modern society as it requires:

... suspension of the mastery motive and the adoption of an attitude that is neither an indifference nor a possessive desiring, but rather a dialogical openness that incorporates a sense of the well-being of things themselves. The self-arising cannot reveal itself to the eye that primarily seeks to organize, to manage, and to manipulate. (*ibid*)

In response to GQ5, one quarter of youth admitted to having a strong affinity for nature (most using the word love; Figure 5.10); they often related this to prior embodied experiences in nature, which were generally relaxing, recreational or aesthetic, rather than to formal learning experiences. It is often assumed (even by adolescents themselves) that teenagers do not care about nature, but this assumption has not been borne out by these findings, which show that many desired the mutual well-being of self and nature.

Realising how valuable embodied experiences of nature are to the development of caring dispositions, the conservation and environmental education communities need to enable more youth to access these opportunities. Furthermore, understanding that many young people already care deeply about their world, opportunities need to be developed to enable youth to express in action their existing dispositions of love.

### 6.3.6 Nature as a place for community participation

#### *Flowing together*

*Nearly there. On a perfectly still morning I paddle Kate's canoe slowly towards the estuary mouth. The water level is high enough to skim easily over the prawn beds, but too high to slide under the road bridge. I can't quite make it to the sea today.*

*Floating and slowly rotating, I am surrounded, enveloped, immersed in 360-degrees of mountains and morning commuters, reeds and rooftops, seagulls and streetlamps. All are reflected in the brackish water where sea meets the combined offerings of streams, storm-water drains, and leaky sewer pipes.*

*The river receives all, carries all – our best intentions, our worst transgressions. Here amongst the flotsam of weekend picnics I finally feel I belong.*

*We're all in it together. And it's a picture!*

I feel that it is very important to be involved and aware of nature and what is going on around in your world. I feel that you need to be involved with nature – not only by enjoying it, but by taking part in the upkeep and help of your world. We want to have a world left for the generations to come and there isn't going to be one if we are not careful and do not help to preserve it! (I-GQ 5.89)

Although youth in this study generally felt positive about nature (Table 5.1), very few admitted to being involved in caring for it (Figure 5.7). To explore this apparent lack of reciprocity, I shared feedback from the research with four groups of youth<sup>34</sup> and involved them in focus group discussions. They confirmed the survey findings that time constraints and access problems limited their ability to get involved, but also revealed that nobody from the conservation community had invited them to participate in projects.

Participants in all focus groups were surprised to hear about the very high percentage of teenagers who had commented positively about nature in their questionnaires, and some expressed delight about this. However, some explained that a need to belong to the peer group was a reason why teenagers felt reluctant to get involved in caring for nature:

It has to be like an in-thing ... they don't want to be an outsider where they're different or do things differently. 'Cause then they will be seen as strange. (Boy, School A)

One boy (School J) complained that people who loved nature were called hippies, which put people off getting involved, while another (School C) refused to participate in a school environmental project fearing that his friends would call him 'the caretaker', referring to a low-status occupation of school cleaner.

<sup>34</sup> Schools A, C and J, and the youth group organised by Int-t. The groups at Schools A and C had been on two GPS hikes along the local river that I had organised earlier in the year.

On the other hand, sport was considered 'cool' because everybody at school participated. The youth had also enjoyed the river hike I had organised, as everyone had been doing the same thing, and they could socialise with youth from other schools. At the same time, social occasions brought out other adolescent anxieties; for example, one boy (School A) said that he had initially been nervous about the hike because he was shy about meeting new people and unfamiliar with hiking, so he didn't know how he would perform in front of his peers. His concerns reflect Soudien's (2007a) observation that identity development involves youth repositioning themselves as 'self' or 'other' in various contexts.

Social motivators were just one aspect. One boy (School J) thought that his peers would only care for nature if they were rewarded for doing so, such as receiving community service credits. Youth appeared easily discouraged, both if they were not acknowledged for their contributions, and if their efforts did not seem to make a lasting difference, as in picking up litter, or planting trees that died. Some were put off by the cynical responses of their peers who thought that their efforts were in vain:

Most people say that we're destroying nature so since we're already in the process, why do anything about it? (Girl, School A)

And you kind of get judged, labelled. You're not really going to help that much, so why are you doing it? That's kind of off-putting in a way. (Girl, School J)

Youth had reservations about my suggestion that they might get involved in 'Friends Groups'<sup>35</sup>. If they could participate as a group of youth, they thought it might be interesting, but they would not like to be the only young person in the group:

It's not that you don't like [older people], it's just that you don't have much in common besides the fact that you're trying to conserve nature. (Girl, School A)

The tendency of older nature enthusiasts to show off their knowledge was also 'off-putting' to the uninitiated:

The older generation are so knowledgeable ... We get there like stupid little school children and don't know what's going on. They talk about these huge words that they use and all these terminologies. It's going to take me a lot of effort to learn all that, so let's not do it. I'll rather do something that I know and that I can do well. (Boy, School A)

These comments confirm McDonald's (1999) contention that young people have a critical need to be respected and to 'maintain face' in their struggles for identity. Nature-based programmes have much to offer adolescents during their moratoria, but youth are far more likely to respond with reciprocity if their involvement contributes positively to their self-esteem.

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<sup>35</sup> Groups of mainly older volunteers who support the conservation of natural areas

### 6.3.7 Nature as a place of belonging

#### *Time and tide*

*Schools break up today for the summer holidays. Beach cleaners are at work early, preparing for the crowds. Already the first walkers, surfers and sun-seekers are arriving.*

*At the sand bar that blocks the estuary mouth, I'm intrigued by adolescent mullet massing in gyrating swarms, anonymously similar in their age cohorts, individuals drawing confidence from togetherness. We, like they, are drawn by primordial urges – to breed, to feed, to mass at the edge of adulthood waiting for the tide to liberate us, to sweep us ready-or-not into the depths of the next life stage. But for now, let's play a little longer in the shallows of our moratoria.*

*A bird calls in the dunes. A security guard sings and dances his way down the beach. A theology graduate from Fort Hare University, he fends off the frustration of being unable to fulfil his calling by praising The Mighty for this new day. As we chat, unknowingly he closes the circle for me. "In The Mighty there is no black or white, no xenophobia. You are my sister, I am your brother. If you need me, I am here. If I need you, you will be there."*

*I wade into the sea, and immerse myself in the elements of The Mighty – earth, water, wind, sun and space.*

Nature shows us how different elements and hence people can live together in harmony and appreciate one another. It teaches us to take care of the environment and to sustain its beauty. It allows us to feel free and gives us inspiration. (I-GQ 8.2)

Thinking about how difficult it had been to immerse myself in the flow of polar opposites – alienation and belonging – on my reflective hike, I noticed that most of the adolescents surveyed seem oblivious to the nature-culture dualism that has plagued environmental discourse for so long. None of them spoke about the interests of people and nature as being mutually exclusive; hardly any viewed nature primarily as resource; and even though some contended that nature was a tad 'uncool' for teens, this was usually what they assumed *others* felt, but seldom their personal opinion.

Perhaps this generation – global, post-modern, post-Apartheid – has managed to shake off the shackles of Descartes in the nick of time, to integrate the wisdoms of multiple traditions, and to embrace complexity rather than mechanism as their meta-narrative. The children of this interconnected Age, more informed but closer to the edge of collapse than any previous generation, may be better prepared than those who have gone before to learn the language of inter-subjectivity with the world. I am encouraged by those amongst them who, in the midst of their own struggles for subjectivity (McDonald 1999), seem ready to accept this as their calling and their responsibility:

Nature is the only way of understanding our existence and the future of mankind. (J-GQ 8.9)

Nature is relevant because we are the one who suppose to explore the nature more than the old ones because we are the future of this world. (O-GQ 8.7)

I think nature is very beautiful and I personally think nature has a message for all of us. We just need to listen. (u-GQ 5.4)

When I set out along the river to reflect on the literature and research findings, I had no idea that by the time I reached the sea, I would have experienced a profound shift in my attitude towards alien species, and in my understanding of belonging. The experience of discovering values as I responded to the call of the world (Russon 1994) convinced me of the value of this embodied, inter-corporeal approach to research.

Oblivious to my own dualistic assumptions, I had initially assumed that my quest was to better understand what I perceived to be the positive, the good (belonging, being native). But from the outset, its polarity (being alien) demanded my attention. Welcoming both, not just conceptually in a model (the easy part) but emotionally, through embodied engagement, has been my epiphany<sup>36</sup>.

Price (2007: 96) draws on Haraway's (1997) notion of *embedded relationality* to overcome what she calls the "conundrum of relativism versus absolutism". Haraway insists that what is fundamental about the world is relationality, and that what we view as dualistic opposites are not ontologically different, but rather "questions of pattern". In this view, opposites are mutually constitutive; therefore we belong not by choosing sides, but by embracing both dark and light with compassion. We do not, as I did, set out to understand 'belonging' as some static and absolute good; rather we become open to the ebb and flow of our embedded relationality.

Through embodied reflexivity, I have come to know, not only intellectually but also experientially, that what we perceive is constituted by the other. For me a deeper sense of belonging has been constituted by the experience of alienation. I have experienced that opposites are not absolute, nor is everything relative; we ebb and flow in relation.

The capacity of natural things to stand forth as the things that they are in their unique integrity does not consist primarily in some individual isolated objective existence. They are what they are in the context of an environment that they both constitute. (Bonnett 2009: 45)

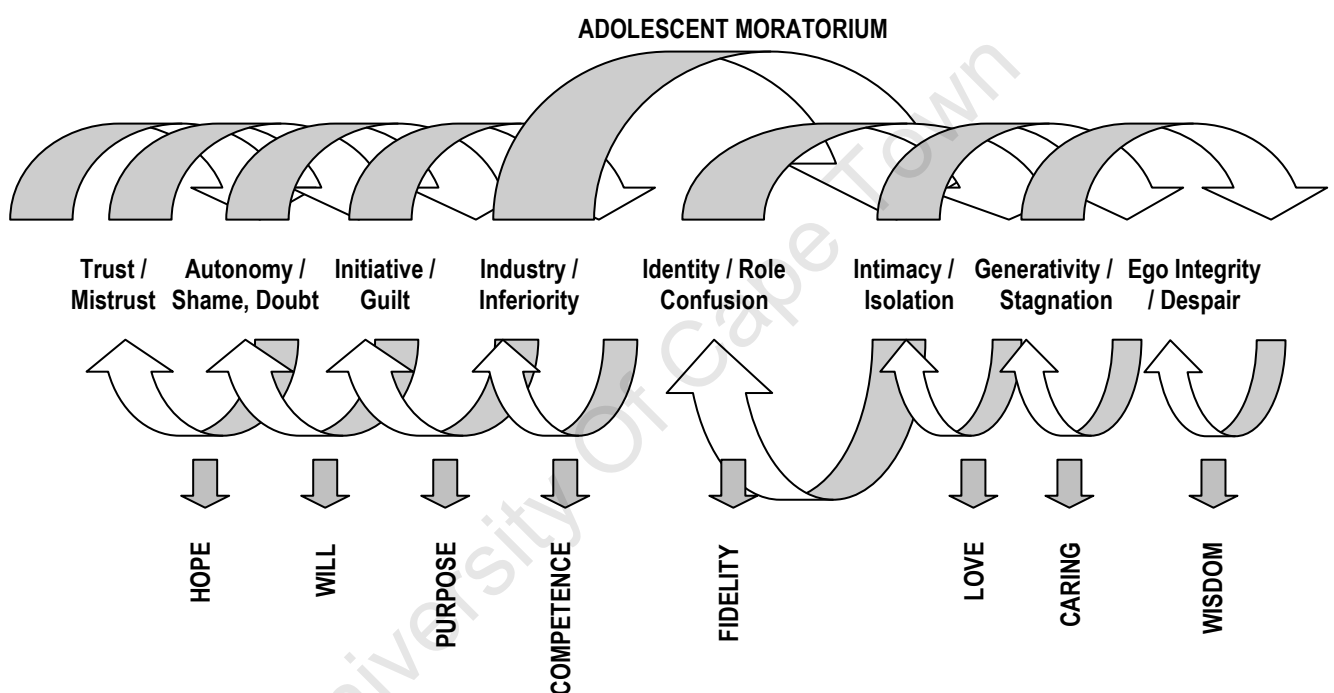
Having reflected on experiences of alienation and belonging in relation to the natural order, the next section focuses on the other major theme of this study: the role of nature-based experiences in the process of adolescent identity development.

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<sup>36</sup> A sudden, intuitive perception of, or insight into, the reality or essential meaning of something; usually initiated by some simple, homely, or commonplace occurrence or experience.  
<http://dictionary.reference.com/browse/epiphany>. Retrieved 20 December 2009

## 6.4 Nature and adolescent identity development

I drew on Erikson's (1968) stages of psycho-social development (Figure 6.1) to explore the second major theme of this study: the value of nature to *adolescent identity development*. Adolescence, as a key stage of identity formation, is one of the most significant periods of transition in the life of a human being. Erikson identified adolescence as a psycho-social moratorium, a period when society accepts that, despite their rapid physiological maturation, youth are not yet ready to take on the psycho-social responsibilities of adulthood. Adolescence is a time to experiment with potential roles, to overcome role confusion, and to establish an authentic sense of identity.



**Figure 6.1:** Identity development is an ongoing, reflexive process, which continues throughout life. Erikson (1968) describes eight stages of psycho-social development between infancy and old age, each one focusing on a particular challenge (e.g. Trust/Mistrust). Each stage, if adequately completed, contributes to the development of a particular ego strength or virtue (e.g. Hope). Overcoming role confusion and developing a clear sense of identity is the key challenge of adolescence.

Identity development, according to Archer (2000 & 2003) is a life-long process through which the individual fashions a *modus vivendi*, or way of living, in relation to natural, practical and social orders of the world. Yet as Soudien (2007a) has clearly illustrated, youth from different backgrounds experience almost inconceivable differences in the variety and quality of choices available to them, and in guidance, encouragement and space to help them imagine their futures.

I initially drew on Erikson's model of psycho-social development because it helped me to understand the issue of adolescent identity development. It became clear, however, that the challenges of all other life stages he described were also relevant to teenagers. Indeed, Erikson considered the adolescent moratorium to be a further opportunity for youth to address challenges from previous life stages that they did not resolve when they were younger. And certainly qualities of love, caring and wisdom – the ego strengths developed during the stages of adulthood – are also important to teenagers.

I therefore decided to use Erikson's model as a framework to help me reflect on the value of nature-based experiences and programmes to identity development as a life-long process, but with particular reference to how the stages might relate to teenagers. Coincidentally, each of the stages of my reflective hike down the river (Section 6.1.2) resonated with one or two of Erikson's stages. Thus, in addition to discussing the literature and research findings (Sections 4.3.1 & 4.5) that relate to the value of nature to identity development, this section also includes relevant site-related insights.

#### **6.4.1 Trust versus Mistrust; Autonomy versus Shame/doubt**

The mountain stage of my reflective hike highlighted the value of programmes in Clusters A (inter-subjectivity) and B (intensive youth development). These programmes helped youth to overcome what Erikson (1968) considered to be unresolved challenges of infancy and the toddler stage, namely *trust v. mistrust*, and *autonomy v. shame/doubt*.

##### **(a) Trust versus Mistrust:**

Most programmes in Clusters A and B took place in the mountains and focused on creating an environment in which youth could learn to trust one another and themselves. Int-p, the programme director of a youth development organisation, worked mainly with youth at risk. He observed that these young people generally found it very difficult to trust others, so his programmes concentrated to a large extent on trust-building:

The 'safe container' ... we create that very deliberately ... We do lots of activities and trust building to create that space where they can start to speak openly ... over the first four days we're very much there guiding the process. Then we start to withdraw a bit. They become their own dynamic team. And they make their own decisions. (Int-p)

He was critical of what he called "band-aid solutions" like short counselling sessions, which he felt were ineffective:

Young Mary's been physically, sexually abused, she's not going to trust some adult walking into the room who then abandons her as well. A lot of these kids feel like they've been abandoned. Their sense of belonging is hugely lacking. So you can't walk into a room and say,

“Ja, little Mary, I’m going to help you.” And three days later walk out and say, “Cheers, bye. I’ve got another client.” (Int-p)

His organisation worked in collaboration with social welfare organisations, supporting groups of youth for up to a year at a time, and integrating wilderness experiences into the overall process. Members of partner organisations were trained to support youth during and after the courses:

After the course they are there to hold those kids. They meet with them regularly. Each of those kids has a mentor from the community. (Int-p)

On wilderness programmes, the imperative to trust was real. Unaccustomed to being in ‘wild nature’, many youth felt nervous in these remote settings. To survive they had to trust and rely upon others in the group. Less adventurous nature-based programmes often used games and activities to help youth to learn to trust one another, as in the case of a youth development camp in the mountains, run by a teacher at a state school:

We spend the first day playing games, mostly outside ... team building, trust building: fun, silly, sometimes quite subtle messages. And the key is in the debriefing. What have we done? Why? What happened to you? (Int-s2)

Youth confirmed that these experiences did help them to trust themselves and others, contributing to identity development, particularly in the social order:

Parts of this programme which meant the most to me were definitely the team building exercises in which we learnt to trust group members and more importantly ourselves. (H-EQ 4.26)

The aspects that appealed to me was how I must learn to trust people more, that working in a team needs everybody to participate and that we must get to know people before we judge them. (H-EQ 3.9)

[A 12-hour hike] showed what we are capable of. Was special because we were trusted and could go on our own accord. (B-EQ 4.11)

### **(b) Autonomy versus Shame/Doubt:**

Int-p said that late adolescence (16-17 years) was the time when youth moved from what he called “the centre of belonging to independence,” and started to make their own decisions as they grew to adulthood. Int-s4, a teacher at a girls’ school, observed that today’s youth “lack freedom of travel and independent movement.” He felt that it was the responsibility of environmental educators to “look at how to provide these opportunities.” Long hikes in the mountains, especially where youth were given a map and a compass and expected to lead their peers (programmes p, s1 & s3), were opportunities to *explore* and to develop *independence*, which Erikson identifies as features of autonomy.

The struggle for autonomy is the challenge of the toddler stage. According to Erikson, both overly cautious and neglectful parents can thwart children's efforts to become more independent. In a risk society, many children face either over-protection or neglect, and a number of youth commented on how unusual and empowering it was to be allowed to explore in the company of their peers:

The 24-hour solo and solo hike meant the most because it gave me a feeling of freedom and independence which I don't get back home. (B2-EQ 2.14)

The way we were taken out of our comfort zones and forced to be independent and survive without our parents and technology. (J-EQ 2.22)

It teaches a person how to be mature at an early age. It is life change [sic]... you open up and feel comfortable in your own space to show you don't always need someone. (N-EQ 3.1)

Similarly, Int-s3, the teacher who coordinated a month-long hike for Grade Nine learners at a private school, described how youth were expected to take responsibility to lead their peers in the mountains. He explained that parents were often astonished by the independence of their children when they returned from the hike:

They choose a new leader for the next day. The map [and] some instructions for the next day get handed out and they quickly discuss this and decide on things: what time shall we wake up? Shall we have breakfast here or on the road? ... And it sounds trivial ... but when they're out there, it's as real as you can get. And they buy into it in a big way. (Int-s3)

#### 6.4.2 Initiative versus Guilt

On my reflective hike, Tokai Arboretum with its evidence of children's playful imaginations and constructions was an appropriate place to reflect on how nature might help adolescents to work through the unresolved psycho-social challenge of the kindergarten child: *initiative v. guilt*. Louv (2006) notes that outdoor play stimulates inventiveness and creativity, and the capacity to sustain imaginative involvement.

Wandering and wondering, it seems, are closely related:

On Grade 7 camp ... we went to the forest. We played games in teams and had to go run around and find clues about certain things in nature. At night we had to walk through the forest with a partner. It was quite scary but it made us listen for certain sounds of animals and we had to pay attention to parts of nature to help us find our way. It was fun and made me really pay attention. (Ia-EQ 4.16)

Focus group discussions with two groups of Grade 11 learners (Schools A & C) provided further insights. These youth had participated in two hikes I had organised along a local river. Youth from School A had enjoyed relatively more exposure to nature and time to play outdoors as children, and had many imaginative ideas of how to get teens involved in nature-based activities and service (Section 6.2.6). Teens from School

C had had relatively few opportunities to play in natural areas as children, and mainly suggested things we had done together (hiking, canoeing, using a GPS<sup>37</sup>), or rather generalised ‘environmental’ actions (e.g. helping animals, protecting trees):

AA: Would you like to be more involved?

General response: Ja.

AA: What kind of things would you like to do?

Boy: [Laugh] I don't know.

Girl: Helping animals.

AA: Anyone else?

Silence

AA: Any other things you would like to be doing in nature?

Boy: There are so many.

AA: Suggest one.

Boy: Making it more available.

Girl: Block people from cutting down the trees.

[Four more prompts met with silence]

AA: OK – if we take the service element out of it, what kinds of things would you like to do in nature?

Boys: Hiking. Canoeing.

AA: Any other things?

Girl: Working with a GPS.

The learners agreed that they had thoroughly enjoyed the GPS hike, but lacked ideas and confidence to address the interview questions. Research reviewed in Section 2.4.3 credits play and exploration in nature with developmental benefits in natural, social and practical aspects of children’s lives. In order to break the self-perpetuating cycle of a lack of exposure to nature-based activities, youth need opportunities for outdoor recreation, particularly in nature, so that when they themselves become parents, they may provide their children with stimulating and beneficial play opportunities. Erikson notes that a sense of accomplishment can build confidence and quickly compensate for an earlier lack of experience. Teenagers as well as young children can benefit from spending relatively unstructured recreational, social and creative time in natural areas, where they can develop imagination and initiative.

As far as the use of games in nature-based programmes was concerned, youth were divided in terms of their value. Mixed comments suggested that, depending on how games were integrated into programmes, they could be highly effective or actually offensive. Youth seemed relatively open to recreational and team-building games. But if games were used to illustrate concepts, presenters needed to ensure that they did not

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<sup>37</sup> Global Positioning System device

undermine the self-esteem of youth by involving them in childish or trivial activities. Effective debriefings could make the difference between youth finding activities enlightening or embarrassing:

Climbing the high wall because initially we thought we couldn't climb it and that it was impossible. The mind games because I found out strengths and weaknesses about myself that I thought I didn't have. (H-EQ 2.27)

They made us feel like babies because of the pointless boring games we played. (Ia-EQ 3.19)

Have more fun activities because teenagers would like to be active, play sports and ... be free to a certain extent. (N-EQ 3.2)

Teenagers got bored if you are talking about nature to them. Teenagers expect to have fun like playing games, doing some dance ... Not to be tooled [sic] about nature. (O-EQ 3.9)

### 6.4.3 Industry *versus* Inferiority

Visiting the once productive farm on my reflective hike reminded me of the challenge of the primary school years, a time when children are particularly active and *industrious*. However, Erikson (1968) observes that children who compare themselves with their peers and find themselves lacking in competence may develop a sense of *inferiority*. This may undermine their motivation to learn and impact negatively on their school careers.

Environmental educators often observe that children and youth who have trouble learning in the classroom perform very well in outdoor environments. Nature-based programmes integrate activities in natural, social and practical orders of reality (Archer 2003). This allows many more youth to demonstrate competence and feel confident, because in these contexts not only cognitive skills are important but also physical and social competence.

In this study youth reported that outdoor learning was fun, novel, relatively effortless and relaxed, and that it was easier to understand things they could actually see, touch and smell. At a time when many teenagers are feeling disillusioned with school, experiential learning in natural areas can stimulate their curiosity and will to learn:

It brought fun into learning. This way we didn't get bored and we learnt without even realising it. (A-EQ 2.9)

Being outside in nature made the whole learning experience more visual and easier to understand. The surroundings ... were beautiful and a great way to learn outside of the classroom. (Ia-EQ 2.20)

The camp and the fact that it was during the holiday - meaning that I could do something constructive rather than hover around in the townships. (R-EQ 3.37)

#### 6.4.4 Identity versus Role confusion

Adolescence is a critical stage of *identity* development (Erikson 1968). If not successfully concluded, young people may emerge from adolescence without a clear sense of the roles they wish to play as adults. *Role confusion* often occurs when adults (in particular parents or guardians) try to influence youth to undertake courses of study or get involved in occupations to which the young person is unsuited.

One teenager from a low-income suburb located close to mountains and sea, recognised that time in nature helped youth to find out for themselves who they truly were:

In order to find your identity you don't need someone to tell you, go to nature and feel free and you'll find who you are. (G-GQ 5.7)

Other youth (Sections 6.2.1 and 6.2.6) agreed that nature allowed them to escape from the pressures of parents and peers, to clear their minds, and make their own decisions:

Help me think clearly and take a lot of pressure (negative) off me. (D-GQ 5.25)

It let your mind be free and takes you away from all the wrong doing things. (G-GQ 5.58)

[Nature] is a place where you don't have to impress others or be someone you're not. (I-GQ 8.1)

I feel that when I am in a natural environment I am able to clear my mind, relax and reflect on my own thoughts. (J-GQ 5.23)

These statements confirm Erikson's observation that allowing adolescents to explore enables them to resolve their identity; but if they are required to conform to the expectations of others, they may experience role confusion. The comments also resonate with the contention of Russon (1994) and Kwant (1996) that in responding to the 'call of the world' we discover our values, and that in living out these commitments we discover our identities.

Many of the programmes reviewed (especially Clusters A-C & programme u2) gave youth opportunities for solo reflection. In programmes s1b, s3 and p, solos were 24-30 hours long, meaning that youth spent an entire night on their own. While some found this experience threatening, for others it was an unparalleled identity development opportunity:

The solo... was the first time I had ever spent 24 hours awake and on my own. It gave me time to think about life issues and to reflect on my life. (B2-EQ 2.16)

I valued the 24 hour solo time in the veld, in which I could address some of the deeper questions in my life. (B2-EQ 2.19)

The part that meant the most to me was solo night where we were separated from one another allowing one to actually seek and find yourself and get to know who you really are. (N-EQ 2.2)

Solo night ... It made me think of my past and also made me think of what I have been doing wrong and how I could change these things to be right. (N-EQ 2.3)

In some cultures, such as the amaXhosa, the transition from childhood to adulthood is marked by a rite of passage, such as adult circumcision, and is a time of education in the traditions of the group and the responsibilities of adulthood (Pinnock 1997). In post-traditional secular societies the rites of passage that do exist (e.g. post-matric beach raves, twenty-first birthday parties, and stag nights) are often entirely lacking in gravity, representing a caricature of adulthood as a licence to behave badly. Pinnock (*ibid*), in his study of gangs on the Cape Flats, maintains that teenagers need rituals to help them enter adulthood; where these do not exist, youth will create them, as in the case of gang rituals.

There does seem to be a need for the creative and reflexive crafting of situationally meaningful rites of passage that will afford youth the space and adult support to engage with the challenges of identity development. As summarised in Section 7.3.2, some viewed nature as a formative space that was inspiring, accepting, and conducive to reflection, social interaction, and maturation. Relatively few youth in Cape Town have access to formal, extended rites of passage, such as amaXhosa initiation, or wilderness experiences organised by some private schools or youth development organisations. But the urban greyness is punctuated by patches of green and threads of blue where young people can find time and space for reflection. The challenge and opportunity for the conservation community is to make these areas safe and accessible, and to be available to engage with and inspire youth as they explore possible roles during their moratoria:

Finishing the hike made me feel like a man and doing it as a team made me feel part of something. (B2-EQ 2.31)

#### **6.4.5 Intimacy *versus* Isolation**

Beyond adolescence lie the psycho-social challenges of the stages of adulthood, which are also relevant to teenagers as they explore their world and develop their identities, and as they interact with adults who may or may not represent the qualities of love, care and wisdom (Figure 6.1). This section considers the challenge of young adulthood during which the focus is on developing the virtue of *love* (Erikson 1968).

Some comments of youth about their experiences in nature disrupted Erikson's *Intimacy-Isolation* binary. Many who had spent time alone in nature (Section d above; Section 5.3.5e, Poem: *Alone with nature*), instead of feeling lonely or isolated, experienced a deep sense of intimacy with the natural world. They described feeling accepted, and some

stated that this had helped them to overcome past conflicts. Some programmes made explicit use of remote wilderness areas to build trust and intimacy (Section 6.4.1).

As Archer (2003) reminds us, our ultimate concerns (i.e. what we love) emerge in different but interacting orders of life: natural, social and practical. Developing a sense of intimacy or isolation is not a one-dimensional experience. People may compensate for, or overcome, feelings of isolation or loss in one area of life by experiencing intimacy in another. Nature offers an intimate, accepting space where adolescents may find relief from inter- and intra-personal upheavals, and even work through conflict situations, as these two reflections indicate:

I was all mudy, [sic] did not want to speak to anyone. It was by the beach when just listening to the ocean currents it made me soft and I went back to the family. (D-GQ 7.25)

I was walking alone along a beach after a huge fight with my dad, and I got to just cry and think about what had just happened, and it made me realise that maybe I was a bit out of order, so I went home and apologized. But the most important part was that it made me take time out to think instead of just staying at home and throwing a tantrum or sulking. (I-GQ 7.46)

The intensive youth development programmes (Cluster B) all focused on helping youth to develop social competence, both through team-building activities and because youth needed to cooperate in order to survive in the remote settings (Sections 6.4.1 & 4.5.2a):

Teamwork. It taught me how to respond better to new ideas while interacting with individuals. (B2-EQ 2.32)

We were able to be open with each other and become a family of friends in our own ways. We depend and trust each other more than we did before the camp. (H-EQ 4.13)

Parts where we interacted with other learners on the camp and I enjoyed that because I got to know everybody better, talking about issues which affect teenagers and learning to trust others and not just yourself. (H-EQ 4.20)

#### **6.4.6 Generativity versus Stagnation**

Some programme coordinators were relatively young adults (early twenties) but in caring for the younger generation they demonstrated the quality of *generativity* (making a contribution to society). One young man from Khayelitsha township who was hardly older than the adolescents he served stated:

I go around and try and find out what else can I get these kids involved in, so as to broaden their horizons, and get them exposed to new ideas, to give them new experiences. ... You see the opportunity to give back, for me that's much more rewarding. I'm looking at making them the leaders here. Just empower them, expose them to new ways of thinking. I want them to go out there and be the ones to create change. That's the entire focus. If they know that they need to help somebody else, that's my vision, that's my goal. My job is finished. (Int-t)

Similarly, other presenters (Int-p, Section 4.3.5a; Int-b) explained that they had chosen their particular career because they wanted to give back to the community:

I grew up in an underprivileged community. I was never without anything. But I had friends who didn't have what they wanted or what they needed. As a teenager I often took a walk to [a local nature reserve] in the afternoons to help me cope with my situation at home. And so later I decided I'm going to give back. And I can reach them because I speak their language. (Int-b)

As the estuary nurtures young fish until they are ready to swim out to sea, the natural areas of Cape Town and the people who work in them constitute a network that has the potential to nurture young people. Nature-based programmes and clubs, through their content (caring for the environment) and the generativity of the people involved, play an important role in fostering the development of caring dispositions in youth. In this study, this was particularly the case with programmes in Cluster E, which focused on helping youth to understand environmental issues (Sections 5.4.2 & 6.2.5).

Many youth were well informed about threats to nature and the need to conserve it (Figure 5.9); but they were generally uninvolved in conservation activities (Figure 5.6). However, some youth were interested in becoming more actively involved:

I've been wondering: if we keep on cutting trees and building things where will the animals go? But when I saw [the nature reserve] my heart relaxed cause now I saw that there are people taking care of it and I'm not the only one worried. (G-EQ 2.1)

Make it less about class work and more about the exploration of nature itself and the world we live in, meaning the things we need to do to save the environment ... We complain about harming the environment more than actually taking care of it. (Ia-EQ 2.10)

Explaining about fynbos made me realise that we must take care of our natural environment and preserve them for future generations. (O-EQ 2.14)

We are harming many animals and I can make a difference. I'm no longer just the average person, I now know more about marine life and feel great about it. (R-EQ 2.34)

Opportunities to be involved in nature - very appreciated! (R-EQ 2.20)

#### 6.4.7 Integrity versus Despair

Immersion in the natural environment cuts to the chase, exposes the young directly and immediately to the very elements from which humans evolved: earth, water, air, and other living kin, large or small. Without that experience, as Chawla says, "we forget our place; we forget the larger fabric on which our lives depend." (Louv 2006: 97)

How is the Eriksonian struggle between *integrity* and *despair*, the focus of old age, relevant to adolescents? As I write this, the 2009 United Nations Climate Change Conference has just ended. There is widespread despondency that world leaders were unwilling to strike a 'real deal' to reduce carbon emissions to levels considered essential

to prevent runaway climate change. The integrity of the planet is threatened; some are starting to despair. It is a challenging time to be growing up.

Erikson's model of psycho-social development considers the individual *in relation* to society. Integrity and despair are relational, reflecting the integration or separation of self, society and nature. Just as facing alienation on my hike helped me to experience a deeper sense of belonging, tasting despair demands that we respond with integrity.

Developing an identity of integrity requires more than the achievement of a sense of *internal* consistency; it also requires that we view ourselves-in-relation, as members of an eco-social community. Adams (2007: 49) envisions people and nature "presencing together ... interrelating with one another in intimate conversation." Thus, in addition to identity development as an internal conversation (Archer 2003), we also need to listen and respond to the call of the world, through ongoing, embodied and reflexive engagement with the eco-social community.

To hear the call of the world we need to learn its languages. To do this we must take time to be present, in mind and body, to the human and more-than-human world. Mbiti (in Ogbonnaya 1994: 77) reminds us of an ancient wisdom, "I belong, therefore I am." In other words, the development of integrity emerges from the dynamic intertwining of identity and belonging. The development of integrity can indeed start at adolescence, and must continue throughout our adult life.

## 6.5 Conclusion

This chapter reflected on the value of nature to adolescents in Cape Town. Important findings included that the great majority of youth responded positively to nature, and that this was true of youth from all demographic categories. Many adolescents appeared to relate to nature in pre-reflective, embodied ways, with most of their comments relating to their experiences of physical, mental, emotional and spiritual well-being. A quarter of youth admitted to having a strong affinity for nature, which seemed to relate primarily to their embodied experiences, which were usually relaxing, recreational or aesthetic. A number of youth viewed nature as a place of refuge where they could gain perspective on their lives. It was also a place where they could learn in integrated and experiential ways.

In preparing this chapter I spent time at sites along a local river, which offered physical and metaphorical insights and helped me to organise the research findings relating to identity development, belonging, and programme suggestions. This experience of ‘embodied reflexivity’ troubled my assumptions about alienation and belonging, and revealed that my view of nature, informed largely by my training in conservation and ecology, contributed to a dualistic and exclusive view of nature as native.

Erikson’s (1968) model proved to be a useful framework to help me reflect on the value of nature to youth identity development. Nature provided opportunities for adolescents to learn to trust, to become more independent, and to be creative. It was also conducive to enabling youth to reflect on their lives and make their own decisions regarding their future roles. It was a place where they could overcome isolation and experience the development of intimacy, generativity and integrity.

Very few youth surveyed were already involved in caring for nature. But realising how valuable embodied experiences of nature are to the development of caring dispositions, I believe that the conservation and environmental education communities need to help more young people to both experience nature and get involved in caring for nature. To make these activities attractive to youth, they should be fun, social and meaningful, and youth should be acknowledged for their contribution.

The natural areas of Cape Town, and the people who work in them, constitute a potentially nurturing network for youth. Nature is of great value to teenagers, and it is therefore imperative to make these areas safe and accessible to as many young people as possible. Breaking the cycle of inaccessibility to and unawareness of nature is a first step in ensuring that not only the current generation of teenagers, but their children too, are able to enjoy the many benefits of nature in Cape Town.

In the next and final Chapter, I revise my original conceptual model of identity development, and suggest implications of this research for the practice of nature-based environmental education in Cape Town.

# Chapter 7

## Conclusion



*I feel like nature is a part of who I am and what I am about  
and that it has to be kept sacred and should not be messed with.  
(R-GQ5.44)*

# Chapter 7

## Conclusion

### 7.1 Introduction

The main research questions were thoroughly addressed in Chapter Six and will not be reiterated in detail here. Suffice to say that this study has shown that, although there are relatively few nature-based programmes for teenagers in Cape Town, those that do exist are diverse and of great value in terms of enabling youth to experience and understand nature and their place within it (Section 6.3). The study has also confirmed that nature is a formative place (Soudien 2007a) where youth can develop various aspects of their identities, from proving their physical capabilities, to learning to trust and cooperate with others, to investigating nature-related careers, and clarifying and responding to concerns about the eco-social community (Section 6.4).

Section 7.2 briefly summarises the essential findings from Chapters Four and Five that relate to the research sub-questions (Section 1.2.2).

In Section 7.3, in response to the empirical findings and the phenomenological literature, I revise the original conceptual models (Figures 2.3 & 2.4) that described the process of youth identity development. This section represents the contribution of this research project to the theory of identity development.

Section 7.4 is a contribution to nature-based education and youth development practice, offering seven programme recommendations that are informed by the theoretical, empirical and experiential aspects of the research.

Finally, in Section 7.5 I present a summary of the essential findings and comment on the personal impact of the research experience.

## **7.2 Summary of findings: research sub-questions**

This section provides a brief summary of the essential findings relating to the research sub-questions (Section 1.2.2):

### **7.2.1 Nature-based programmes for teenagers**

In Cape Town nature-based programmes are offered by schools, environmental agencies, and environmental education- and youth development organisations (Appendix B). The programme matrix (Figure 4.2) revealed that these included short curriculum-based field trips and interpretative nature hikes; and longer camps that focused on youth development, environmental education, and/or the development of an inter-subjective appreciation of nature. One organisation and two schools arranged lengthy hikes and wilderness trails that supported youth identity development and/or rites of passage.

I did not manage to interview coordinators of environmental clubs so none of the programmes investigated focused primarily on involving youth in nature-based service projects. A cluster of programmes that might have been described as ‘Nature Care’ is therefore missing from the matrix. However, during the course of the research I met youth who were members of environmental clubs; they were involved in a number of activities including gardening, restoring wetlands, monitoring plants and animals, leading hikes for other learners, and conducting environmental audits of homes and schools.

### **7.2.2 Nature ontologies of programme presenters**

All programme presenters held realist views of nature, with three dominant perspectives being noted: Organic Nature, Ecological Nature and Capitalist Nature (see definitions in Table 4.1). These views influenced the ways in which nature and the human-nature relationship were represented in the various programmes. The perspectives were not mutually exclusive, however, as individuals often held different views in different situations. However, environmental education programmes tended to present an Ecological view of nature, teaching about concepts and processes. One of the conservation agencies reflected a managerialist view (an aspect of the Capitalist Nature definition), seeing nature as a resource that humans needed to manage. Finally, most youth development programmes considered nature primarily from cultural, therapeutic and occasionally spiritual or ritual perspectives, reflecting an Organic Nature view.

### **7.2.3 Prior ideas and experiences of nature**

Unexpectedly, when asked how they personally felt about nature, 90% of youth surveyed responded positively and 25% indicated a strong affinity. Most described nature as a place to relax and enjoy a sense of physical, mental, emotional, or spiritual well-being (Section 5.3.3-5.3.5). Demographic factors like race, class and gender did not appear to influence their responses. Hiking, camping, encounters with animals, and general nature experiences like views accounted for most of the memorable experiences youth recalled.

### **7.2.4 Alienation from nature**

Most youth who appeared alienated from nature sounded ambivalent or indifferent, rather than overtly negative about it (Sections 5.3.2, 6.2.2 & 6.3). A lack of appreciation for nature appeared to relate to a lack of exposure, which was often due to poverty, or to a lack of individual or family interest. A lack of familiarity with nature caused one girl to assume that it had nothing to offer her as a teenager, while others stated that they had other interests, such as technology, or that they found nature uncomfortable. Some resented being ‘told’ about nature, preferring to experience it first hand, and a few echoed Louv’s (2006) notion of *ecophobia*, indicating that their relationship with nature was being threatened by its deterioration.

### **7.2.5 Encouraging a sense of belonging to the natural order**

Many programme presenters (Sections 4.4.3, 6.2.1 & 6.3) aimed to help youth to develop a sense of ‘belonging’ to the natural order simply by allowing them time to appreciate their surroundings in quiet, sensory ways. Natural phenomena like mountains, oceans, waterfalls, sunsets, night skies and wild animals often elicited a sense of wonder and a feeling of intimacy with nature. O’Loughlin (2006) maintains that developing a sense of belonging is a corporeal, multi-sensory process, and encourages educators to overcome the distancing tendency of our predominantly visual culture by providing learners with a sense of embodied ‘implacement’ in nature. Programmes provided these opportunities by being located in natural settings. Short listening activities and longer solo experiences were often effective at helping youth to experience nature in sensory ways. Some programme presenters encouraged a sense of inter-subjectivity (Merleau-Ponty 1968) by treating youth with respect, and encouraging them to interact with one another and with nature in a similar manner. Most programmes (except some in Cluster B) helped youth to understand their inter-relationship with nature cognitively through ecological narratives.

### **7.2.6 Supporting youth identity development**

Nature-based programmes supported youth identity development in diverse ways, and were relevant to the natural, social and practical orders of young people's lives (Sections 4.4.3 & 6.4). Some programmes focused specifically on youth development, and helped teenagers to communicate more effectively, and grow in independence, trust, and confidence. Others focused more directly on teaching youth about nature and their responsibilities towards it. Some youth found their interests, concerns, and even career aspirations stimulated by spending time in natural areas, learning about nature, and meeting people involved in conservation. These programmes were of particular value to youth who lacked inspiring adult role models.

### **7.2.7 Supporting reflexivity**

Many nature-based programmes encouraged youth to reflect on their lives and decisions through *embodied* processes of reflexivity (Archer 2000, 2002 & 2003; Sections 4.4.3 & 6.4). Hiking, camping and learning together in experiential ways created many opportunities for youth to reflect on and review their actions and assumptions. Most young respondents in Cluster B found intensive youth development programmes particularly effective as they could reflect on actual experiences and relate these to their lives. These programmes were supported by skilled and caring coordinators, and after some courses youth continued to be supported by mentors or teachers who helped them to integrate their insights and commitments into their daily lives.

### **7.2.8 Relevance and appropriateness of programmes**

Section 5.4 reports on how youth rated nature-based programmes as opportunities to learn about, relate to, and think more deeply about nature, as well as to develop as individuals. These programmes were integrated opportunities to learn and develop in natural, social and practical ways (Archer 2002 & 2003).

#### **(a) Natural Order:**

Many youth enjoyed being in nature and having novel experiences, and some were amazed to discover how diverse nature actually was. Nature provided opportunities to be physically active, which many valued. Adolescents generally felt stressed and some appreciated the peacefulness of nature, which enabled them to feel relaxed, calm and happy, to reflect on their lives, and which gave them space to make their own decisions.

Experiencing nature helped some youth to develop a sense of reciprocity with the environment. Some who undertook caring actions expressed satisfaction about making a positive difference. Others observed that the programmes prepared them to live responsibly as future adults.

**(b) Social Order:**

Having social time with their peers during programmes was very important to many adolescents. They appreciated youth development programmes that helped them to grow personally and develop interpersonal skills. Being treated like adults was tremendously important; wilderness hikes in particular provided opportunities for youth to prove their independence and take responsibility for themselves and others. Some youth expressed relief at meeting adults who cared about nature, realising that they were not alone in their concerns but part of a wider caring community. Time in nature provided others with an escape from the social vices plaguing their communities.

**(c) Practical Order:**

Youth generally enjoyed learning about nature *in* nature, where they could experience specific examples of concepts they had learnt at school. They enjoyed experiencing their unique heritage and becoming aware of particular challenges facing them. They were stimulated by challenging learning activities, and found it easier to remember and understand what they experienced first-hand. Teenagers appreciated having fun while learning, which included being with their friends. It was very important to them to know *why* they were learning certain things, and how what they learnt related to their lives.

**(d) Criticisms of programmes:**

Youth were critical of programmes that they felt were unprofessionally presented or a waste of their time. They complained about poor logistical arrangements, inadequately informed presenters, activities that appeared meaningless, and activities that were poorly pitched intellectually, physically, or in relation to their interests as teenagers. They were particularly sensitive about being treated ‘like children’: they did not appreciate excessive adult control, being told things they already knew, doing activities they considered childish or ‘schoolish’, or being ‘preached at’ about the environment. Youth resented too much ‘teacher talk’, preferring to learn actively, explore, and have time to appreciate their surroundings.

### **7.2.9 Working with adolescents in nature**

Considering the discerning and critical reflections of adolescents (above), and their tendency to be outspoken, it is not surprising that some programme presenters interviewed preferred to work with primary schools rather than high schools (Section 4.2.2). Most natural areas in Cape Town employ young nature conservators rather than experienced educators to run their education programmes, and most prefer to work with primary school children as they find both teenagers and the high school curriculum relatively challenging.

This study has shown, however, that it is essential to encourage adolescents to spend more time in nature. Section 7.4 therefore suggests a variety of alternatives to activities based on the senior science curriculum that may enable staff and volunteers associated with natural areas in Cape Town to imagine ways of engaging with teenagers in nature.

## **7.3 Identity development: Implications for theory**

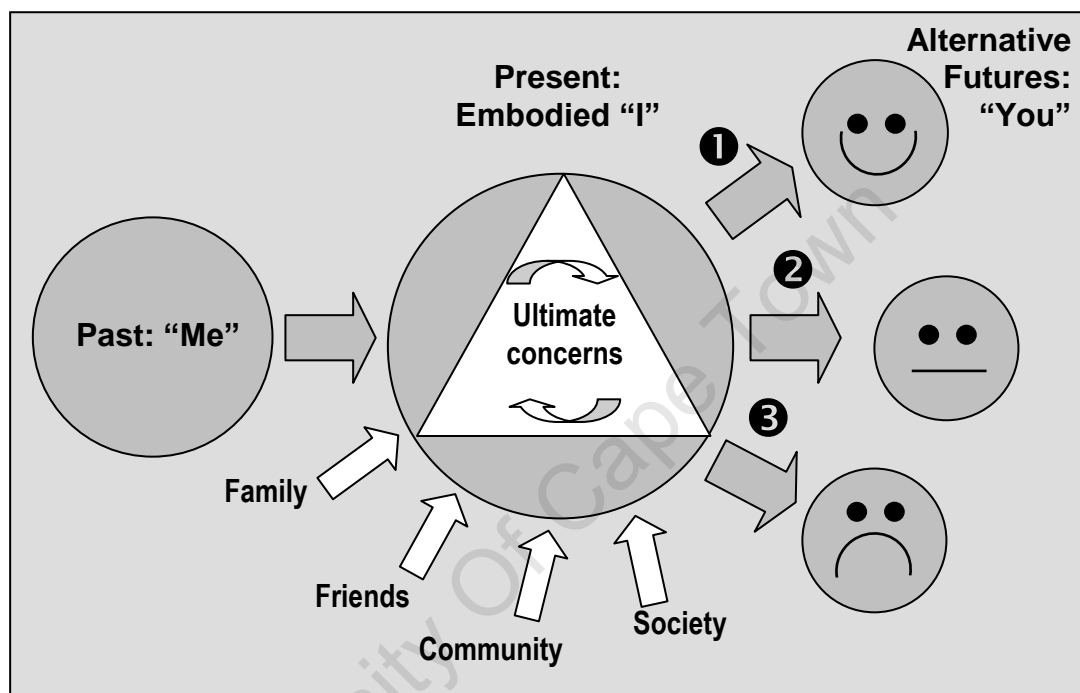
This study sought to investigate how people involved in nature-based education and youth development in Cape Town might engage more effectively with teenagers. In trying to understand the process of youth identity formation, I developed conceptual models (Figures 2.3 & 2.4) that drew on identity development literature, in particular that of Erikson (1968) and Archer (2002 & 2003). Based on the research, I now summarise findings relating to adolescent identity development, and revise the original models to take account of more recently accessed phenomenological literature, and to emphasise the importance of embodied encounters in nature to the process of identity development.

### **7.3.1 Identity development and community support**

Children, as they reach adolescence, start to test the boundaries of the family and make early sorties into society. This study has clarified for me that at this stage, the *local community* needs to ‘hold the space’ for youth. Celebrities, ideologues and the media present youth with particular values and aspirations; family and peers provide ready reference groups within which to feel at home; but local community groups – schools, sports clubs, religious institutions, organisations, and interest groups – have a vital role to play in helping teenagers to make a positive transition from childhood to adulthood.

The first elaboration of the model (Figure 7.1) highlights the importance of adolescence as a turning point in life, and the potential role of community groups in supporting youth to make choices relating to their futures. Depending to a large extent on the support (or lack thereof) provided by family, friends, community and society, youth may have relatively fertile or restricted opportunities to identify and pursue ways of living that resonate with their concerns:

In this country it's kind of challenging to connect with or find opportunities to learn about my career. (I2-EQ 3.22)



**Figure 7.1:** This elaboration of the original conceptual model (Figure 2.3) illustrates that, while the adolescent as a reflexive agent may process experiences and make choices regarding alternative futures (fulfilled ☺ / resigned ☹ / frustrated ☹), the family, friends, community members and society all share responsibility for supporting or undermining this process.

Interpreting Figure 7.1, I suggest that:

- ☺ Exposing youth to a variety of opportunities within a supportive social context, and encouraging them to engage reflexively with these alternatives, can help young people to develop a *modus vivendi* that enables them to be true to themselves and express their ultimate concerns (Archer 2000, 2002 & 2003).
- ☹ Limited opportunities during adolescence may result in a sense of resignation to the inevitability of a future that simply perpetuates the past.
- ☹ Role confusion and a sense of desperation may result from a lack of guidance or opportunities, or from pressure to live up to the expectations of significant

others, who may not honour the actual concerns or aspirations of youth (Erikson 1968). Youth under these circumstances may find it difficult to develop a *modus vivendi* that allows them to express their ultimate concerns.

To illustrate the contention that adolescence can be an important turning point in life, one of the programme presenters described how an opportunity afforded him as a teenager enabled him to envisage an alternative future, and literally saved his life:

I was involved with the wrong crowd at one stage. I then got taken by the scruff of my neck by my dad and I got sent on [an outdoor adventure course] ... I was 16 years old and it completely changed my life ... And that's where my passion and my love [came from]... I want to make a difference ... Of the seven guys I used to hang out with, six of them are dead. One of them's just got out of prison, served 20 years. I could have been one of those. (Int-p)

Nature-based programmes can support teenagers in diverse ways during their moratoria.

In Chapter Four, we saw instances in which programmes:

- **Natural order:**
  - > enabled youth to explore natural areas for the first time, enhancing their awareness of and identification with the local environment (b, g, k, o & u);
  - > challenged youth physically, helping them to overcome fears and grow in confidence regarding their bodily capabilities (p, r, s1 & s3);
  - > inspired youth from poorly serviced areas to want to beautify their surroundings (o).
- **Practical order:**
  - > introduced youth to different occupations, occasionally resulting in youth developing new interests and changing career plans (b, g, l & o);
  - > helped youth to apply an understanding of nature to their own lives, and to live more sustainably (b, g, l & u).
- **Social order:**
  - > gave youth time to reflect on issues in their lives and hopes for the future (l, o, p, t, u & s1-5);
  - > provided an intimate space in which youth could learn to trust one another and speak about important issues (l, o, p, t, u & s1-3);
  - > challenged youth to face and work through psycho-social issues that had not been resolved at earlier stages of development (o, p & s1-3);
  - > provided opportunities to develop leadership, teamwork and other interpersonal skills (h, l, o, p, r, t, u & s1-7).

Through these nature-based programmes, the environmental education and youth development communities created what one respondent (Int-p) described as “safe containers” for youth identity development: intimate spaces in which youth experienced respect and trust. These programmes *inspired* youth by exposing them to more of their

environment, broadening their options in terms of possible occupations and recreational activities, and helping them to overcome social challenges and physical fears so that they could grow in confidence and engage more effectively with others. Importantly, many of these programmes also provided youth with *acknowledgement* and *recognition*, ranging from personal words of encouragement and discussion times where youth were listened to, to rituals and ceremonies celebrating their achievements and homecomings. All these experiences contributed invaluable to overcoming a sense of invisibility that characterises adolescent alienation.

An important aspect of holding the space for teens was providing *ongoing* support and not just isolated experiences. This was most effectively done by schools (s2-4), which organised youth development activities for all grades and integrated these into the broad school programme, assigning members of staff to develop and manage these initiatives, and ensuring that the necessary resources were available to sustain activities. Two other organisations (o, p) managed to sustain the impact of their programmes by working closely with partner organisations that supported youth who came on their courses in the longer term. However programmes that dealt with numerous groups on a very short-term basis (day hikes and field trips) were unable to sustain their involvement and had to rely on teachers or group leaders to provide follow-up support.

### 7.3.2 Nature as setting for identity development processes

Reviewing the case studies (Chapter 4), it is clear that nature provided a profoundly valuable space in which caring adults could support aspects of youth identity development. Adults and youth described the qualities of nature thus:

- **An inspiring space:** The peace, beauty and grandeur of nature were inspirational and uplifting, generating awe, wonder and reverence, and helping youth to feel positive and hopeful.
- **An accepting space:** Youth spoke of nature as an accepting, non-judgemental place where they could be themselves and experience a sense of belonging. Being in remote settings enhanced the sense of intimacy in the group, helping youth to trust others, share concerns and work through contentious issues.
- **A reflective space:** Youth found quiet natural places to be conducive to meditation and contemplation. Some said that listening to nature helped them to clear their heads so they could reflect on their lives. Some adults mentioned finding meaning and insight in nature-based metaphors.

- **A maturing space:** Being in nature encouraged youth to be curious, challenge themselves physically and emotionally, and overcome fear. Many youth who experienced long wilderness hikes valued being independent of their parents, organising themselves, and proving to themselves and others that they could survive in unfamiliar environments.
- **A social space:** Youth enjoyed spending time with their peers in nature, where they could relax, communicate, have fun and work together. Hiking and camping were natural opportunities to develop teamwork and leadership.
- **A space to act:** Some youth expressed satisfaction at being able to act on their concerns by helping to clean beaches or clear alien vegetation. They were able to make a positive contribution and be recognised for their efforts.

### 7.3.3 Enabling reflexivity in practice

Archer (2002 & 2003) views identity development as a reflexive process. Programme presenters used various tools and activities to encourage youth to reflect on and review their actions, relationships, emotions, aspirations and assumptions.

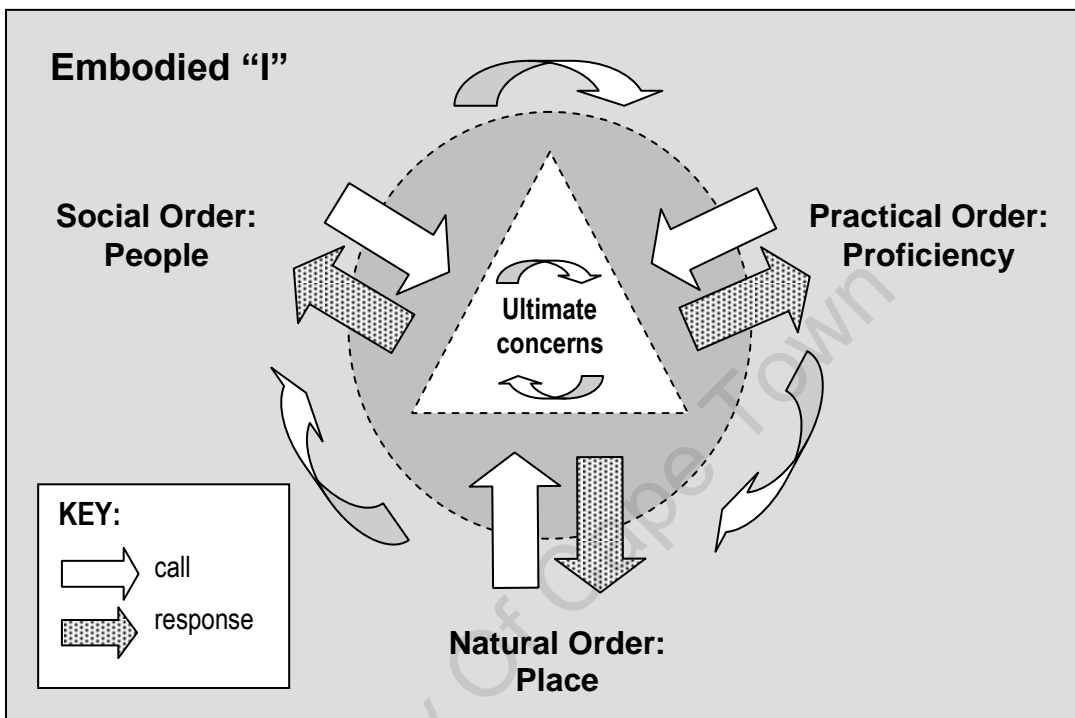
Solos in nature gave youth quiet time to be alone and to reflect. Some solos were relatively short guided activities that might be repeated a few times during an outing (u & s4), others were lone vigils of more than 24 hours in length (p, s1&3). During extended solos, youth were sometimes encouraged to write letters, to work on personal journals, or to make a gift for a friend. Some teachers developed workbooks that included journal activities, and collected these to review; other teachers respected the privacy of these writings and did not collect them.

Youth appreciated debriefings that clarified the purpose of activities, as this helped them to draw meaning from their experiences, and allowed them to express their opinions and concerns. These were valuable feedback sessions for the programme organisers, as they helped them monitor how the group was getting on, and identify potential problems. Some group leaders drew on ideas from television shows (e.g. Survivor) and held ‘tribal councils’ in the evenings to review the day’s activities (s1b). Formal evaluations at the end of programmes were not only essential ways of continuously improving the programmes, but also additional ways of getting youth to reflect on the value of programmes and the implications for their lives.

### 7.3.4 Identity and responding to the call of the world

The second adjustment to the model (Figure 7.2) relates to the notions of embodiment and the call of the world. To reiterate a quotation from Chapter Two:

The very nature of embodiment is to find oneself compelled, and the form the compulsion takes is to find oneself *called upon to respond to the situation* in a specific way: the form in which the other exists for the body is as a *call to action*. (Russon 1994: 299).



**Figure 7.2:** The original conceptual model (Figure 2.3) is further modified to emphasise the close, inter-corporeal relationship between individual and world, illustrated by a boundary that is open and permeable. The arrows indicating the exchange between individual and world are more prominent, representing the call of the world and the responsiveness of the body-subject. The diagram suggests that the process of identity development comprises a dual conversation: a pre-reflective communing with a meaningful world, and a reflexive internal conversation.

Archer (2002 & 2003) describes the reflexive process of identity development as arising from our embodied interactions with the world. Although she emphasises in this process the primacy of embodied practice, I do not find in her description of this process a sense, as Merleau-Ponty would have it (Section 2.9.4), that the world is inherently meaningful. For Archer, identity development appears to be primarily a process of *making* rather than *finding* meaning and value in the world. Surrounded as urban dwellers are by a world of human constructions, both physical and cultural, it is easy to see how this has become our dominant view.

During my reflective hikes (Chapter 6), I realised that certain of my conceptual constructions prevented me from engaging with nature in a pre-reflective manner. However, as I continued to ‘presence together’ with nature (Adams 2007), I experienced a shift in my ability to perceive nature (both native and alien) in its ‘suchness’ as a meaningful other; I became more open to the ‘call of the world’.

Some of the respondents in this study indicated that they experienced nature as inherently meaningful, and related to it in an inter-subjective manner (Sections 4.5.1 & 5.3.5). The programmes that most clearly acknowledged the ‘call of the world’ were those in Cluster A. Int-o1 prepared youth for their hike by telling them to ask the mountain for permission to climb it, and to walk in silence for a time so that they could “get in tune with mother nature.” Similarly, Int-t explained that in the bush he was able to listen to both his own thoughts and to what nature was saying to him.

Some presenters ‘heard’ nature’s call through their appreciation for metaphor. Int-p said that his organisation often used nature-based metaphors in their programmes, such as comparing the strangeness of wilderness to those parts of our lives that we do not often confront or understand. For others, the notion of a call was implicit in their statements, as when they gave nature credit for inspiring them to act or providing guidance:

Having gone to the bush [initiation rite] for quite a long time ... I discovered the power of just sitting and watching nature, looking to animals ... What is the purpose of a person? ... Nature provides those answers, you know. (Int-t)

Merleau-Ponty maintains that humans are ‘co-natural’ with the world (Mallin 1979). Through our senses we *experience* our co-existence with the world as meaningful, before we *reflect* upon our situation. With this in mind, I further revised Figure 2.3 to include not just the reflexive internal conversation, but also a pre-reflective receptiveness to the call of the world.

In Figure 7.2 the arrows indicating the interaction between the embodied individual and the world are more prominent than in the previous version. They now represent not simply everyday interactions with the environment, as I had previously understood our engagement with the world, but also the possibility of a ‘call of the world’ that requires a response. In line with Archer (2002), this call may emanate from:

- The natural order – the call of place;
- The social order – the call of people;
- The practical order – the call of proficiency (occupation, profession).

The notion of a calling or vocation is common in everyday discourse; what Merleau-Ponty does is to take this idea, which could be perceived in idealist terms, and ground it in the corporeal. Although presenters of environmental education programmes did not speak about encouraging youth to find their callings, a couple spoke about their own careers in those terms, for example:

It was a calling – it became clear what I wanted to do. (Int-o1)

It was like I found my calling. ... I've come to discover in the last 20 years that I'm an educator in my heart. (Roff, J. 2009, pers. comm.)

Most programme presenters attested to having chosen their careers because of a feeling of resonance with the work rather than because it represented a secure or financially rewarding occupation; for example:

[referring to a phone call to a friend] ... my job is advertised in the paper and it's got my name written all over it – and it's everything I ever wanted to do! (Int-g2)

I've always loved teaching ... why I chose this is I saw my passion for nature. Number one my passion, and number two I saw it as something that there's a need for it and I can fill that need. (Int-h)

The other change to this part of the model is that the border between the embodied individual and the environment is indicated as a dotted line, like a permeable membrane. This emphasises the closeness of the pre-reflective relationship between person and world (Section 2.9.4), as in O'Loughlin's (2006) notion of 'implacement'. It reflects Merleau-Ponty's contention that the perceiver is not a pure thinker with a mind encased in a machine-like body, but a body-subject participating in a world of meaning.

A number of programmes encouraged youth to spend time quietly, sometimes alone, in natural settings. As in Payne and Wattchow's (2008 & 2009) notion of *slow pedagogy*, they had time to dwell, to sense, to reflect, and to allow insights to emerge (or not). Although youth did not refer to their experiences as a 'call' *per se*, many appreciated being able to experience nature, reflect on their lives, and decide on changes:

A 24 hour solo in nature: it made me reflect on life and what I should change and care about. (L-EQ5.7)

When we all had a silent moment and just listened to what was going on around us. I liked it because it made me find a part of myself that I never thought existed. (R-EQ5.21)

In the wilderness the main reason for it to be special is that I came to know more about nature and to connect with nature, to have a good relationship with it. It made a difference to my life 'cause I didn't know that when you are surrounded by nature you can come to know your self, what you're capable of. (N-EQ5.5)

These open-ended experiences are obviously valuable for youth, but one girl complained that these sorts of programmes were mainly available for youth at risk but not ordinary scholars. Some privileged schools that recognise the developmental benefits of unstructured time in nature also provide youth with these opportunities; unfortunately the majority of young people in Cape Town have very limited opportunities to spend quiet, reflective time in nature during this key stage of identity development.

### 7.3.5 Immanence and transcendence

Nature is that which Humanity finds itself within, and to which in some sense it belongs, but also that from which it ... seems excluded in the very moment in which it reflects upon either its otherness or its belongingness. To insist on our naturalness, it seems, is to pay too little heed to those exceptional powers and capacities through which we have exercised an ecologically destructive dominion over Nature, but without which there can also be no question of overcoming this alienation. To insist, on the other hand, on our 'super-naturalness' or essential separation from Nature is to sever us too radically from the material context of existence, to conceptualise human nature in idealist terms ... and to open the way to a purely conceptual and subjectivist – and hence ecologically irrelevant – resolution of the problem of alienation. (Soper 1995: 49)

In this extended quotation, Kate Soper describes a paradox that characterises the human relationship with nature: that of humanity's simultaneous immanence and transcendence. Merleau-Ponty (1962) similarly recognises that "everything is simultaneously natural and cultural. Nothing is absolutely independent of 'purely biological being' yet everything transcends it" (Langer 1989: 62). In addressing this paradox, I make the next adjustment to the original conceptual model of identity development (Figure 7.3).

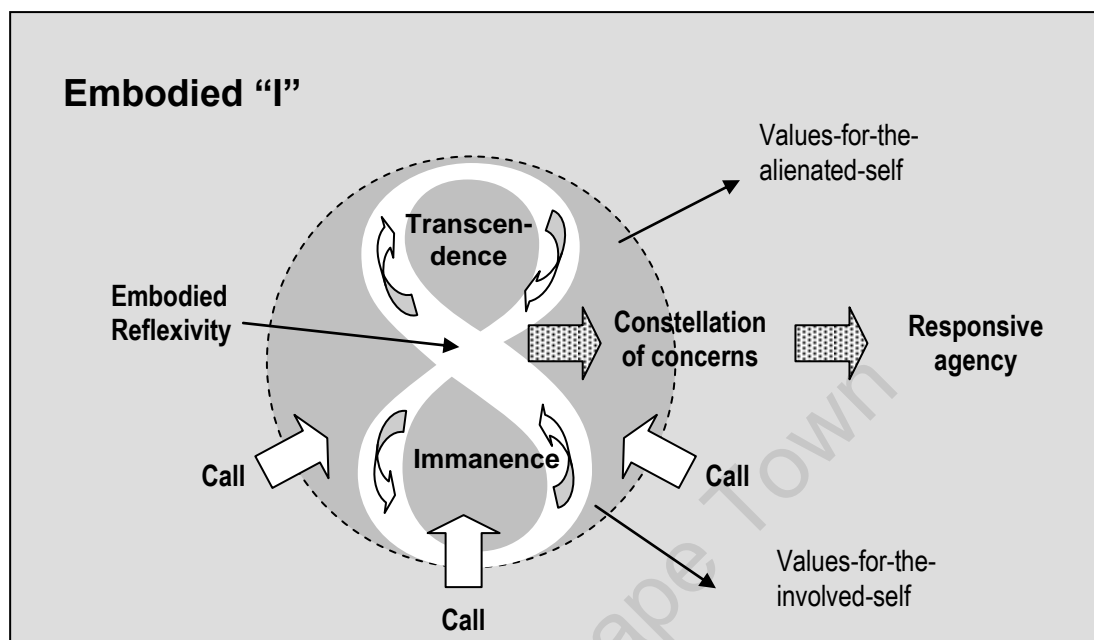
The embodied nature of the agent has already been established in the model of identity development, as well as the importance of an inter-corporeal relationship between subject and world (Figure 7.2). The model now incorporates Merleau-Ponty's (1970: 90 & 91) advice to "wholly embrace" the existence of being, and to conceptualise our being-in-the-world as relational and dynamic, in other words a *dialectical* ontology.

In Figure 7.3, the figure-eight represents *embodied reflexivity*, a constant flow of reception and reflection circulating between complementary poles of the embodied and the intellectual. Like an oceanic gyre<sup>38</sup>, the dialectic flows endlessly from the immanence

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<sup>38</sup> An oceanic gyre is an enormous circular current system. Coincidentally, the poet W B Yeats used the term gyre to describe a vision of two cone-shaped spirals that represented for him contrary motions within history, as well as the psychological phases of an individual's development. From: [http://en.wikipedia.org/wiki/The\\_Second\\_Coming\\_\(poem\)#cite\\_note-gyres-5](http://en.wikipedia.org/wiki/The_Second_Coming_(poem)#cite_note-gyres-5), retrieved 4 December 2009.

of embodied experience to the transcendence of reflective thought, and back again. Out of this swirling integration of experience and cognition arises a unique constellation of concerns and actions, through which the agent responds to the call of the world and fashions an identity.



**Figure 7.3:** During the process of identity development, the embodied individual listens and responds to both the 'call of the world' (white arrows) and the internal conversation (reflexivity, figure-eight). Reflexivity integrates the immanence of embodied experience and the transcendence of cognitive reflection. This integrated process of reflexivity generates the individual's particular constellation of concerns (disposition), which in turn motivates the individual to act.

In contrast to Figure 2.3, this model (Figure 7.3) portrays identity development as a *dual conversation*, comprising an embodied, internal conversation (reflexivity; figure-eight in diagram), and an exterior process of listening and responding to the call of the world (white and shaded arrows). The internal conversation constantly integrates the immanence of embodied experience in the world, and the transcendence of cognitive reflection, enabling the individual to relate to nature as simultaneously self (immanence) and other (transcendence).

The white and shaded arrows illustrate the aspect of identity development that is constituted by an inter-subjective relationship between the embodied subject and the world. In addition to the interior conversation, the process of clarifying one's identity may also entail being alert to the world of meaning within which the individual is implicated (Mallin 1979; O'Loughlin 2006). Furthermore, the way in which one responds

to the call of the world (through dispositions and actions, illustrated as concerns and agency) is an essential part of one's identity as perceived (and responded to) by others.

This model thus proposes that identity development, and in particular developing an identity of eco-social responsibility (*responsive agency* above), requires both embodied experiences of being-in-the-world, from which may arise values-for-the-involved-self (Russon 1994), as well as opportunities to reflect on these experiences and possible responses. Without embodied involvement, the immanence loop in the model shrinks, and reflexivity becomes predominantly rational, self-referential and abstract. The values that then arise, according to Russon, are values-for-the-alienated-self, which are characterised by a certain level of detachment:

Reason at its ethical best agrees magnanimously to be tolerant of the Other. Love would not stoop to mere tolerance; it wants solidarity instead. (Bauman 2001: 168)

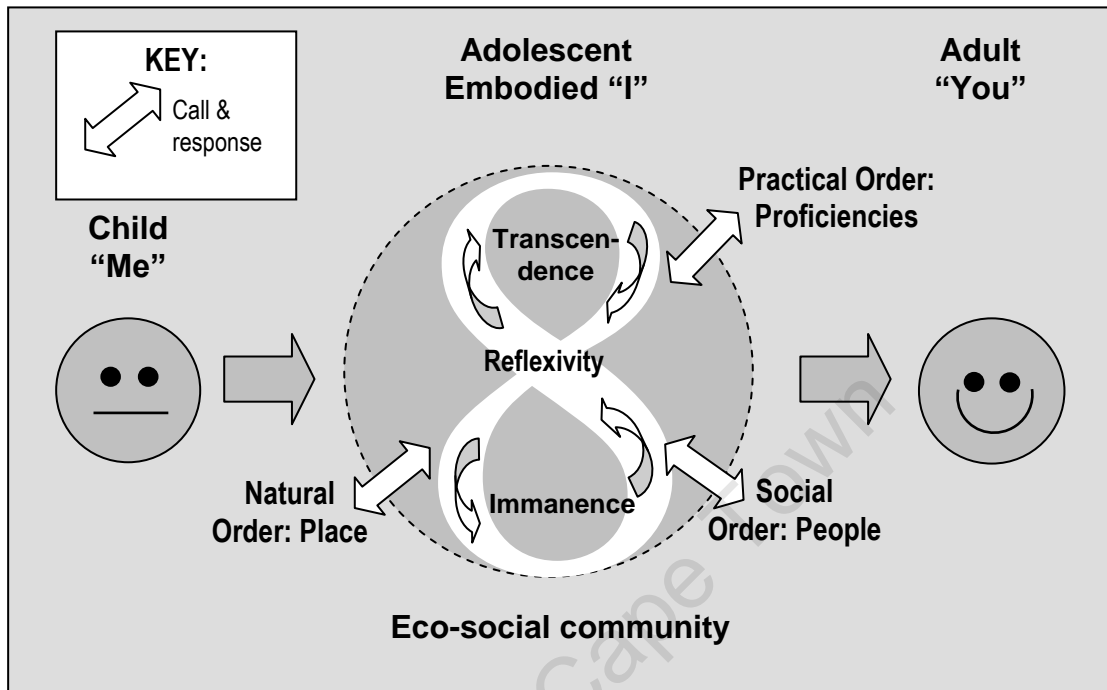
In this model I propose that, for youth and adults to clarify their concerns and respond to situations in their eco-social world (shaded arrows), immanent experiences in and of the world are essential. Without embodied experiences (natural, social and practical) the world is unable to beckon to us, to inspire or to inform. Our views of the world risk becoming increasingly abstract and our responses less appropriate. Far from representing a *retreat* from the issues that confront people and nature (O'Donoghue & Janse van Rensburg 1995), making time to be silent and to listen to nature creates spaces in which to access the wisdom of our world of meaning.

Finally, as has been clear in the comments of respondents in this study, embodied experiences with people, places and the world of work inspire and energise us, encouraging us to respond. Embodied experiences can be thought of as the 'fuel' that keeps the dynamo of reflexivity running; if we stop being receptive to the call of the world, we may lose our inspiration (as described in Section 1.1) and 'run out of steam'. Our actions may continue under their own momentum for a time, but they will become less responsive, vital and relevant.

In the next section, elements from Figures 7.1-7.3 are combined into the final revised model of adolescent identity development.

### 7.3.6 The revised identity development model

To conclude this section, various elements of the revised model discussed above are combined into an overall revised model of adolescent identity development (Figure 7.4):



**Figure 7.4:** The revised model of identity development combines elements of Figures 7.1-7.3. The individual interacts in corporeal ways with the natural, social and practical orders of the world, and through this close interaction may experience a call and decide to respond. By means of an ongoing reflexive process, comprising both the immanence of corporeal experience and the transcendence of cognitive reflection, the agent clarifies his/her concerns and responds accordingly. Identity development is a lifelong process, with adolescence being a particularly significant stage. Society generally allows adolescents a moratorium within which to explore possible roles. The community can provide youth with valuable support at this stage, helping them to develop positive identities.

Figure 7.4 shows that, during adolescence, youth need embodied opportunities to hear the call of the world (natural, social and practical aspects), and to engage reflexively with these experiences, so that they may clarify their particular constellation of concerns and decide on the roles they will play as adults.

In general, adolescents need to be exposed to a wide range of experiences, to meet inspiring and caring adult role models, and to be allowed to experiment with alternative roles, so that in time they may choose adult roles that resonate both internally (true to themselves) and relationally (respected by others). Restricted opportunities, or significant others who exert pressure on youth to conform to concerns that are not their own, may

detract from their ability to hear and respond to the call that resonates most strongly with their developing identities (Erikson 1968).

Embodied experiences in nature provide youth with opportunities to hear and respond to nature's call. While most youth in this study appreciated being in nature, it is clear that only a minority will consider nature to be their 'ultimate concern' (Archer 2000 & 2002). For these youth, nature-based programmes and recreational time in nature will help them to identify hobbies, activities and possible careers, and to start becoming part of a future community of practice.

But even for youth who will have very little to do with nature in terms of future occupations or interests, it is clear that nature has a valuable role to play in the process of identity development. Many youth in this study described nature as a quiet and 'accepting' place where they could reflect on their lives and make their own decisions about current situations and future choices, whether these related to the natural, social or practical order of reality.

Finally, the model illustrates that identity development is more than a strategic, cognitive process, or an embodied, social process: it is a responsive *eco-social* process. We construct our identities in conversation with the human and more-than-human world. We need to spend time in nature in order to remember that we are, as Merleau-Ponty says, *connatural* with the world (Mallin 1979). Most of the youth in this study identified positively with nature; they did not appear to be as alienated from nature as anticipated. However, there were many youth who found it very difficult to access safe natural areas where they could engage with nature in whatever way they chose to.

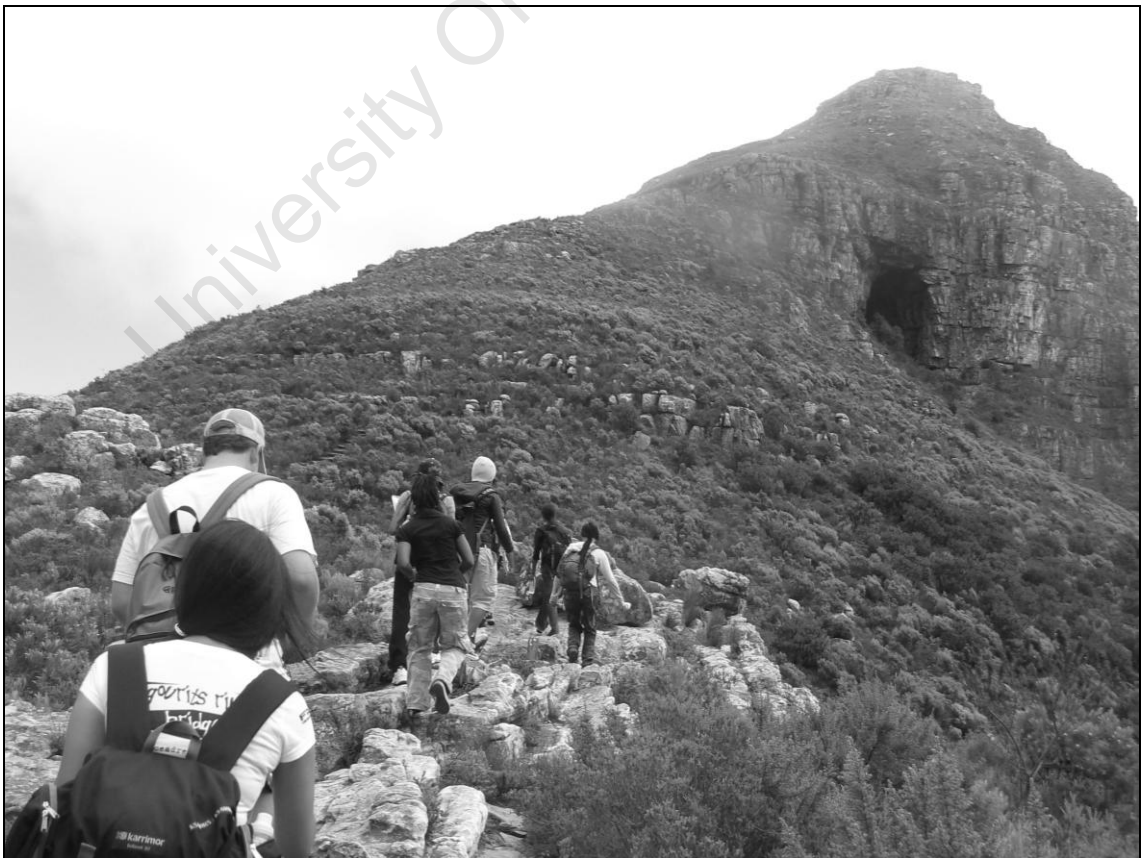
The need for youth to experience nature presents the conservation and environmental education communities with a challenge. As adults we need to find ways in which to absent the conditions (to use a critical realist notion) under which youth might grow up alienated from nature and from one another by enhancing access and opportunities for youth to engage reflexively and responsively with the human and more-than-human world.

## 7.4 Implications for practice

Most teenagers surveyed in this study stated that they felt positive about nature. The study also revealed various aspects of nature that youth particularly valued. So, in response to the final research sub-question (Section 1.2.2), what are the implications of this study for nature-based education and youth development programmes for adolescents? Are there ways in which education officers, who feel ill equipped to present curriculum-based programmes for high school youth, could engage more effectively with this age group?

This section presents insights that emerged from reflecting on the literature and research findings, mainly during seven reflective hikes along a local river. Experiences in and of place helped me to ground my reflections in the local, the particular and the corporeal (Abram 1996). Diverse places (illustrated in the photographs below) stimulated different programme ideas, as if particular situations called for their own responses.

### 7.4.1 Finding perspective – an historical view



Mountain: Heading up to Prinseskasteel Cave (Elephant's Eye) in the Table Mountain National Park

The first reflective hike on the mountain raised two issues relating to nature-based programmes:

- The need for an historical perspective on environmental and social change that will allow youth to appreciate the inevitability of change, and imagine positive futures;
- A caution regarding the way in which the issue of invasive alien species is introduced to youth.

The mountain provided a view that was temporal as well as spatial. One could imagine what the Khoi princess would have seen from her cave in the fifteenth century, and trace the history of development in the artefacts of different eras: from pastoral, agricultural, industrial and Apartheid, to the present. Payne and Wattachow (2008: 35) call this *slow pedagogy*: “a multi-layered experience of time(s) ‘presented’ in a certain socio-environmental location.”

Respondent Int-r observed that teenagers have a limited perspective on environmental change because of their relatively short life experiences; they therefore tend to take for granted the situation in which they find themselves (c.f. Section 6.3.6: girls’ comments, Schools A & J). Encouraging older members of the community to share stories of the changes they have personally witnessed during their lifetimes may enable youth to appreciate both the inevitability of change and the possibility of shaping the future, for better or for worse.

Viewing the environment through an historical lens reminds us that human beings have always been on the move, that we are all migrants and settlers. Some of the plants and animals we have taken with us around the globe have had unexpectedly negative impacts on nature in our adopted countries, leading to the conservation management imperative to eradicate invasive alien species. Problematically, alien eradication seems to have become a metaphor for the ‘management’ of human beings, with very similar arguments having been used recently in South Africa to justify the killing of foreign nationals.

As environmental educators, we need to examine our glib rhetoric about alien eradication. Especially when working with older learners who have the capacity to understand complex issues, we can encourage a more compassionate, historicised view of the causes of environmental and social problems in general. We can also encourage restraint and responsible decision making, encouraging *problem-avoidance* and not just

problem-solving. In this regard the critical realist notion of absencing the preconditions that prevent wholeness in society (Price 2007)<sup>39</sup> is particularly pertinent.

#### 7.4.2 Cultured natures – creative spaces



Tokai Arboretum: A place of imagination and play

Other than h, r, s3 & s4, very few nature-based programmes mentioned creative activities. This is unfortunate, considering the popularity of actors, poets, musicians, artists and designers in youth culture<sup>40</sup>. Many youth recognised nature as a source of beauty and inspiration, and some mentioned that they enjoyed attending music concerts, theatre and dances in nature. The possibility of youth finding and expressing meaning at the intersection of nature and culture is a relatively untapped opportunity in Cape Town.

Have more functions like the Kirstenbosch Sunday concerts. That will get teenagers who won't naturally opt to spend their free time in nature! Not necessarily in Kirstenbosch and not necessarily concerts but things that teenagers will be keen to do ... (I-GQ 9.21)

Eco-friendly music festivals are a great way to attract teenagers and at the same time make them aware of the environment. (I-GQ 9.42)

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<sup>39</sup> See also Section 7.4.5

<sup>40</sup> Confirming this assertion, one programme that was not observed as part of this research was a recently established youth environmental drama festival. This has proven to be one of the most popular environmental programmes for youth in the city.

Most of the programmes investigated in this study were held in, or focused on the conservation of, native ecosystems. However, my visit to the Arboretum caused me to question whether a strict definition of *nature as native* might limit opportunities for youth to identify with nature as part of their culture. Cultivated spaces like parks, gardens and arboreta may in fact provide youth who feel uncomfortable in wild nature (e.g. Section 5.3.2b, *Ambivalence*) with more accessible experiences, which are relatively tame, colourful, designed, and possibly representative, in a multi-cultural city, of their own foreign ancestral heritages.

With reference to the intersection of nature and culture, Bonnett (2002) reminds us that in order to promote sustainability as a ‘frame of mind’, we need to be open to diverse ways in which nature is significant to people. In addition to a scientific study of nature, he calls for a retrieval of poetic ways of engaging with nature. This may in fact allow a more inter-subjective appreciation of the human-nature relationship, compared to the resource management perspective generally promoted by science-based fieldwork.

#### **7.4.3 Living more sustainably – Life Orientation**



Farmland: There are relatively few nature-based programmes on offer for teenagers in Cape Town. This fallow field needs to be cultivated in order to help youth to imagine sustainable ways of living as adults.

This study revealed that many youth were aware of the environmental challenges threatening their futures, and they believed that ‘something’ needed to be done to address the situation. Some youth (s1 & s6) were involved in sustainability initiatives at school, and others mentioned that they were trying to live more sustainably at home. Parents and teachers seemed to have the greatest influence, with few youth having contact with conservation groups (Section 6.3.6), or knowing how to get involved in conservation activities in the community.

Nature and environmental organisations have a role to play in supporting adolescents during their moratoria; however, this is currently a fallow field of poorly explored possibilities. One potentially fertile curriculum opportunity is provided by Life Orientation, the subject concerned with personal well-being, citizenship, physical activity and career awareness. The curriculum requires high school learners to complete both community service and work experience projects, creating opportunities for youth to participate in nature-based activities and projects in their communities. In one case, a Life Orientation teacher at School C gave senior learners the option of taking a leadership role in the school hiking club; they earned community service hours by taking other learners on a certain number of hikes during weekends.

Job-shadow opportunities can provide youth with worthwhile insights into possible careers:

I have a cousin who's in nature conservation. I job-shadowed her and it was really, really fun because she told me all about the different animals that were there. She mostly worked with amphibians and reptiles ... They were so adorable. (Girl, School A)

Kroger (2007) observes that during early to mid-adolescence youth start to think about vocations that relate to their interests, abilities and what they value. They value exposure to part-time jobs, apprenticeship programmes and opportunities to volunteer that are related to eventual vocational choices. However, she cautions against organisations giving youth boring, repetitive tasks that are unrelated to their interests, as this may contribute towards a sense of cynicism towards the work environment. She calls for diverse, high quality, meaningful and contextualised work experiences for teens.

#### 7.4.4 Restorative action – responsive agency



Industrial area: At the end of a *cul de sac*, someone had planted a small garden ...

A popular approach to environmental education developed in the early 1990s was *Action Research and Community Problem Solving* (ARCPS) (Stapp *et al* 1996). Based on the action research cycle, it encouraged groups to plan, implement and evaluate interventions to address environmental problems in local communities. The revised model of identity development (Figure 7.4) allows for a deepening of this approach. Instead of seeing environmental education only as a rational process of analysing and addressing problems, the model encourages *responsive agency* that emerges from emplacement. It calls for ‘slow pedagogy’ (Payne & Wattchow 2008 & 2009), for time to dwell, to listen, and to engage with situations in ways that are both sensory and cerebral.

Furthermore, instead of responding to environmental concerns with undiluted action, I suggest that responsive agency may include the counter-intuitive possibility of inaction, of ‘not doing’ highlighted by Price (2007) in her critical realist investigation into environmental education in business and industry:

Instead of seeing poor [environmental] practice as being ‘caused by’ certain characteristics of industry, I now saw poor practice and industry as co-constitutive ... these ‘objects’ were always in-process and thus always had a history. The identification of preconditions allowed me to move

towards an imperative, expressed initially as a 'not doing' (not reproducing the preconditions) ... (Price 2007: 99).

Not reproducing the preconditions for the degradation of nature may sometimes entail stepping back and allowing the alchemy of nature's elements and processes to do the work of restoration. For example, if the general public understood the life cycles of native spring annuals and endangered leopard toads, 'untidy' road verges might be appreciated as conservation areas, allowing flowers to re-seed and toadlets to grow to maturity without being cut down by road maintenance teams (simultaneously saving the City Council considerable amounts of money through less frequent mowing).

#### **7.4.5 Facing the issues – deep transformation**



Wetland: Pollution kills. Can embodied experiences help us to imagine ways of absencing the preconditions that prevent wholeness in the eco-social community?

The socially critical and post-structuralist turns in environmental education taught educators valuable skills of critical thinking and deconstruction, enabling us to understand in great depth the issues and risks facing humanity and the planet. Ironically, however, this critical, calculating rationality perpetuates the dualisms that isolate self from other. A critical approach may clarify causes and simplify environmental management decisions, but it also tends to fuel anger, judgement and dismay. After becoming disillusioned by his work as a radical academic, Liston (2008: 387) initially experienced a sense of despair, but later recognised that:

... emotion, contemplation, and struggle needed to be revived as a part of these intellectual and educational endeavours.

Corporeal, reflexive<sup>41</sup> engagement within the eco-social community, rather than abstract analyses of environmental issues, allows us to experience more fully not only our impacement, but also our complicity in situations. The African darter hanging dead in a tree at Zandvlei (Section 6.3.5; photograph above) speaks to the heart, transmuting a general conceptual understanding of the problem of pollution into a concern for the particular.

But how do we respond to such a situation? Price (2007) finds in Bhaskar's critical realism the possibility of deep social transformation. Bhaskar argues that transformation requires the absenting of preconditions that prevent wholeness in society:

Without the discourse preconditions that globalisation needs to be constantly reproduced it will no longer be viable in its current form. Bhaskar (2002:355) calls these preconditions the 'supply lines'. Rather than an outright attack on a problem, this social activism involves cutting the supply lines, and those supply lines are indeed our own activity. Hence, this is similar to Ghandi's non-violent non conformance. (Price 2007: 124)

Using the example of pollution at Zandvlei, a traditional environmental education response might entail involving youth, year after year, in picking up litter that enters the wetland from canals and picnic sites, contributing to youth feeling disillusioned because their efforts do not make a difference in the long term<sup>42</sup>. A more transformational response might be to explore ways of absenting the preconditions that result in the litter problem. This is an example of a challenging conversation that youth could be encouraged to participate in as part of a wetland experience. Inasmuch as today's youth seem less constrained by dualistic modes of thinking than previous generations, they may well surprise us with fresh perspectives on ways of being in the world.

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<sup>41</sup> reflectively responsive

<sup>42</sup> See comments from focus group interviews, Section 6.3.6

#### 7.4.6 Experiencing reciprocity – the eco-social community



Estuary: When we spend time with nature we get some time to think of things that we care of. (G-GQ 5.86)

Environmental organisations generally develop programmes for schools that reflect most directly their own strategic objectives and professional approaches. The fact that most nature-based education programmes are science-based has been mentioned (Section 7.4.2). However, this tends to exclude youth with other subject choices from excursions to natural areas, and the organisations miss opportunities to explore nature in aesthetic ways. Furthermore, as discussed in Sections 2.7.2 and 4.2.2b, some education officers are unable to support the high school science curriculum, contributing to the lack of programmes available for this age group.

Beyond the formal curriculum, however, there are many ways in which the conservation community could support adolescents during their moratoria, and enable them to engage with their eco-social community. The suggestions below were made by youth during focus group discussions. They are integrated and imaginative, demonstrating an understanding of the need to motivate involvement through activities that appeal widely to youth, rather than focusing too narrowly on conservation actions, and therefore attracting only young people who are already interested in nature.

One boy from School A belonged to a mountain bike club. This was an example of a supportive group with whom he could enjoy a hobby that was healthy, kept him busy,

and allowed him to experience peace and “escape from the rest of the world.” He described the group as “a whole big community – they’re all big on saving the environment.” Demonstrating a relationship of reciprocity with nature, every time they went cycling, the group would do something to help the environment, from removing invasive alien plants to fixing mountain paths.

Inspired by this example, another boy suggested that they could incorporate nature-based activities into training programmes for regular sports at school. These respondents understood the need for youth to enjoy being in nature, believing that this would in time encourage a reciprocal response:

... just before rugby season starts you say go on a jog with your rugby team up the mountain, and the coach says, for strength training you’re going to pull out alien plants. And so you can incorporate that while doing something cool. And by the end of it you’re going to be doing the environmental stuff, and people are going to enjoy it ...

One of the girls observed that this would also have team-building advantages as youth could continue working together during the sport’s off-season. The emphasis on physical activities in the learners’ ideas suggests that conservationists could consider working with sport and recreation bodies to increase the exposure of youth to natural areas in the city.

The need for recognition and rewards was reflected in this suggestion:

If you were to go work near a vlei [wetland], and you work two hours and then go for a row ... you work and get a reward that’s enjoyable. (Boy, School A)

Involvement in environmental projects through clubs or school camps built self-esteem and camaraderie, and helped to keep youth safe after school. These programmes naturally integrated opportunities for youth to develop in natural, social and practical ways:

[At camp] we had to pull out alien plants, and we all had fun because we were talking, and making nonsense, and it was fun and we still got the job done. (Boy, School A)

I never thought I would be up Table Mountain. I get to see more people and I learn so much from them. (Boy, Programme t)

These suggestions from youth resonate with my experience at the estuary (Section 6.3.6; photograph above), a place where nature and culture merged, where the pleasures of fishing, birding, paddling, soccer-playing, cycling, dog-walking, and just sitting and thinking, generated a strong sense of identification with and belonging in place. The quality of the space that the community needs to hold for youth should similarly integrate in natural ways elements that we sometimes consider opposite: people and nature, young and old, work and play, relaxation and service.

#### 7.4.7 Answering the call to belong – nature clubbing



Beach: By the time I reached the sea on my reflective hikes, I had experienced a profound shift in my attitude and understanding.

My reflective hikes along the river clarified for me that to belong is to *understand cognitively* one's place-in-relation, it is also an *emotional experience* of being in place, and it is a choice – a *decision* that needs to be actualised through *engagement*. Most youth appeared to have experienced emotionally a sense of belonging in nature; many also understood that as human beings they were dependent upon nature for their survival. However, relatively few were involved in conservation-related activities in their homes, schools or communities.

Most of the educational programmes reviewed in this study (Clusters C-E) helped youth to *understand* their ecological relationship to the world, while youth development (Clusters B-D) and nature experiences (Cluster A) encouraged a sense of physical, emotional or spiritual *belonging* in place, as well as the development of positive social relationships.

Some schools had environmental clubs that regularly involved youth in hiking, alien plant removal, litter clean-ups and sustainability audits, helping them to become familiar

with nature and to care for it practically. Members of clubs consulted during the focus group discussions (s3 & programme t) indicated that these groups gave them something to belong to, enabling them to explore opportunities, and start identifying and responding to concerns that were constitutive of their developing identities:

In our township there are many youth concentrating on alcohol, doing drugs, because of the influence – they see it on TV. We mustn't put our minds on those things. In our spare time [we must] do right things, do straight things. We don't just destroy ourselves by smoking, doing drugs. We're trying our best. (Boy, Programme t)

I think that we did something together that's worthwhile and that in a small way made a difference. (Girl, School J)

Belonging to clubs overcame all the factors youth identified as contributing to a sense of alienation from nature: it enhanced access, developed familiarity, stimulated interest, and enabled youth to respond with care in the company of others who shared their concerns. Simultaneously their sense of belonging to their community was enhanced as they made positive contributions and were recognised for this.

Nature conservation organisations that feel unable to respond to the complexities of high school curricula could consider starting nature or environmental clubs for youth from local high schools, and getting adolescents from their communities involved in various ways in supporting conservation projects. In return youth would benefit from opportunities to find out about nature-based recreational, study, career and community participation opportunities in their areas.

## **7.5 Concluding reflections**

This final section of this dissertation summarises very briefly the essential findings of the study, and presents a personal reflection.

### **7.5.1 Essential findings**

Firstly, it was encouraging to discover that the vast majority of teenagers consulted in this study valued nature, overturning assumptions based on conventional demographic boxes and Maslow's hierarchy of needs. Youth particularly appreciated the sense of well-being they experienced in nature, and also mentioned that it was a place to enjoy friends and family, to escape social pressures, and to explore interests and occupations. Furthermore, it was a valuable setting for many aspects of adolescent identity development. These

observations justified my concern that more needs to be done to provide youth in Cape Town with meaningful opportunities to access and experience nature.

The responses of youth also showed that teenagers are not fundamentally disinterested or uncaring about their eco-social world, and that as educators we would do well to assume that most youth are environmentally concerned, rather than to set out to convince them about things they already know:

... when teaching is viewed as a way to help others take part in the challenges and pleasures of understanding our political, cultural, and natural worlds and become more capable in transforming these worlds, then we frequently need to affirm and understand (as much as we can) our students' goodness. (Liston 2008: 389)

Secondly, I found identity and belonging to be mutually constitutive: "I belong, therefore I am" (Ogbonnaya 1994: 77). We are beings-in-relation, and therefore identity development must entail an ongoing dual conversation, which is simultaneously interior *and* responsive to the call of the world:

A mutually enhancing relationship between two people depends upon frequent experiential engagement coupled with an evolving renegotiation of the relationship based upon such encounters. The same holds true in our relationship with the rest of the natural world. (Adams 2007: 57)

Humans are neither ontologically separate from, nor superior to, the rest of nature. Perhaps our best hope for a mutually sustaining future lies in the humility of an inter-subjective relationship, in which people and nature are simultaneously cared-for and ones-caring (Postma 2006), reciprocating in an ongoing cycle of coexistence.

Finally, the notion of *embodied reflexivity*, which initially attracted me as a concept, also proved valuable methodologically. As a concept it provided further justification for youth spending time in nature, confirming the need to ground the transcendence of reflective thought in the immanence of embodied experience. Methodologically, in addition to engaging with human respondents during this study, the decision to spend reflective time in natural areas proved significant as a source of insight and inspiration, and as a means of grounding recommendations for practice in place.

### 7.5.2 A personal reflection

Critical pedagogy entails work which is physically, intellectually, emotionally, and spiritually painful. (Liston 2008: 387)

This quote precisely describes my experience of having pursued a critical approach to environmental education for many years. The sense of disillusionment that resulted (Section 1.1.1) motivated me to embark on this study. Liston's alternative is to explore "what exists on the other side of despair and heartache" (*ibid*: 388), namely *attentive love*. One feature of attentive love that he identifies is the recognition of the good that exists in the other. The glorious irony of this study was that my greatest inspiration came from engaging with two often misunderstood groups: adolescents and alien species!

Embodied encounters with people and nature, and the writings of the great thinkers upon whose works I have drawn, have granted me not only a deeper understanding of the value of nature to youth, but what I truly sought: this study has rekindled my inspiration, and restored my hope in the wisdom of our interconnected world.

In the end, this study confirmed what one young respondent put far more concisely: "Nature is good for children." (G-GQ 8.29) It has also been good for me.

# References



*We must protect nature with our hearts.  
(E-GQ 5.5)*

# References

- Abram, D. 1997. *The spell of the sensuous*. Vintage Books, New York.
- Adams, W. 2007. The primacy of interrelating: practicing ecological psychology with Buber, Levinas, and Merleau-Ponty. *Journal of Phenomenological Psychology*. 38: 24–61.
- American Institutes for Research. 2005. *Effects of outdoor education: programs for children in California*. Report compiled for the California Department of Education, 31 January 2005.
- Ames, R. 1989. Putting the Te back into Taoism. In Baird-Callicott, J. & Ames, R. (Eds.) *Nature in Asian traditions of thought*. State University of New York Press, New York. Pages 113-144.
- Archer, M. 2000. *Being human: the problem of agency*. Cambridge University Press, Cambridge.
- Archer, M. 2002. Realism and the problem of agency. *Journal of Critical Realism (Alethia)*. 5 (1): 11-20.
- Archer, M. 2003. *Structure, agency and the internal conversation*. Cambridge University Press, Cambridge.
- Archer, R. 1928. *Rousseau on education*. Edward Arnold, London.
- Arza, C. 2003. Is There a Place for Children in the City? *Journal of Urban Design*. 8 (2): 99-111.
- Ashwell, A., Sandwith, T., Barnett, M., Parker, A. & Wisani, F. 2006. Fynbos fynmense: people making biodiversity work. *SANBI Biodiversity Series* 4. South African National Biodiversity Institute, Pretoria.
- Baird-Callicott, J. 1989. The metaphysical implications of ecology. In Baird-Callicott, J. & Ames, R. (Eds.) 1989. *Nature in Asian traditions of thought*. State University of New York Press, New York. Pages 51-64.
- Baird-Callicott, J. & Ames, R. (Eds.) 1989. *Nature in Asian traditions of thought*. State University of New York Press, New York
- Banerjee, S. 2003. Who sustains whose development? Sustainable development and the reinvention of nature. *Organization Studies*. 24 (1): 143-180
- Bauman, Z. 1998. On glocalization: or globalization for some, localization for some others. *Thesis Eleven*. 54 (1): 37-49.
- Bauman, Z. 2000. *Liquid modernity*. Polity, Cambridge.
- Bauman, Z. 2001. *The individualized society*. Polity, Malden.
- Beck, U. 1992. *Risk society: towards a new modernity*. SAGE, London.
- Beck, U. 1994. The reinvention of politics: towards a theory of reflexive modernization. In Beck, U., Giddens, A. & Lash, S. (Eds.) *Reflexive modernization: politics, tradition and aesthetics in the modern social order*. Polity, Cambridge.

- Bell, A. & Dymont, J. 2006. Grounds for action: promoting physical activity through school ground greening in Canada. Evergreen, Toronto. Retrieved from: [www.evergreen.ca](http://www.evergreen.ca), 14 April 2007.
- Benn, H. 2008. *Fighting climate change fatigue: how to keep stakeholders engaged*. Speech by Rt Hon Hilary Benn, MP: Department for Environment, Food & Rural Affairs (DEFRA, UK) at the Guardian Climate Change Summit, 16 July 2008. Retrieved from: <http://www.defra.gov.uk/corporate/about/who/ministers/speeches/hilary-benn/hb080716.htm>, 5 October 2009.
- Bergman, M. 2008. *Advances in mixed methods research: theories and applications*. SAGE, Los Angeles & London.
- Bhaskar, R. 2002. *From science to emancipation: alienation and the actuality of the enlightenment*. SAGE, New Delhi.
- Bloch, G. 2009. *The toxic mix: what's wrong with South Africa's schools and how to fix it*. Tafelberg, Cape Town.
- Blundell, G. 2006. *Origins: the story of the emergence of humans and humanity in Africa*. Double Storey, Cape Town.
- Bonnett, M. 2002. Education for Sustainability as a frame of mind. *Environmental Education Research*. 8 (1): 9-20.
- Bonnett, M. 2003. Education for sustainable development: sustainability as a frame of mind. Special issue: Retrieving nature: education for a post-humanist age. *Journal of Philosophy of Education*. 37 (4): 675–690.
- Bonnett, M. 2004a. *Retrieving Nature: Education for a post-Humanist age*. Blackwell, Oxford.
- Bonnett, M. 2004b. Lost in Space? Education and the concept of nature. *Studies in Philosophy and Education*. 23 (2-3): 117-130.
- Bonnett, M. 2007. Environmental education and the issue of nature. *Journal of Curriculum Studies*. 39 (6): 707-721.
- Bonnett, M. 2008. Education, sustainability and the metaphysics of nature. In McKenzie, M., Bai, H., Hart, P. & Jickling, B. (Eds.) *Fields of green: re-storying education*. Hampton Press, Cresskill, NJ.
- Bonnett, M. 2009. Systemic wisdom, the 'selving' of nature, and knowledge transformation: education for the 'greater whole.' *Studies in the Philosophy of Education*. 28: 39–49.
- Brady, I. 2005. Poetics for a planet: discourses on some problems of being-in-place. *The SAGE handbook of qualitative research*. Third edition. SAGE, Thousand Oaks, London, New Delhi. Chapter 39. Pages 979-1026.
- Burdette, H. & Whitaker, R. 2005. Resurrecting free play in young children: looking beyond fitness and fatness to attention, affiliation and affect. *Archives of Pediatric and Adolescent Medicine*. 159: 46-50.
- Capra, F. 1982. *The turning point*. Simon & Schuster, New York.
- Casale, D. & Desmond, C. 2007. The economic well-being of the family: households' access to resources in South Africa, 1995-2003. In Amoateng, A. & Heaton, T. (Eds.) *Families and*

- households in post-apartheid South Africa: socio-demographic perspectives*. HSRC Press, Cape Town. Pages 61-88.
- Center for Disease Control & Prevention. 2006. Kids Walk-to-school: then and now. Barriers and solutions. Retrieved from: [http://www.cdc.gov/nccdphp/dnpa/kidswalk/then\\_and\\_now.htm](http://www.cdc.gov/nccdphp/dnpa/kidswalk/then_and_now.htm), 14 April 2007.
- Chambliss, D. & Schutt, R. 2010. *Making sense of the social world: methods of investigation*. Third edition. Pine Forge Press, Los Angeles, London, New Delhi, Singapore, Washington DC.
- Chawla, L. 1998. Significant Life Experiences revisited: a review of research on sources of environmental sensitivity. *Environmental Education Research*. 4 (4): 369-382.
- Chawla, L. 2006. Learning to love the natural world enough to protect it. *Barn*. 2: 57-58.
- Clements, R. 2004. An investigation of the state of outdoor play. *Contemporary Issues in Early Childhood*. 5 (1): 68-80, 2004.
- Cohen, L, Manion, L & Morrison, K. 2007. *Research methods in education*. Sixth edition. Routledge, London & New York.
- Cole, E. 1990. An experience in Froebel's garden. *Childhood Education*. 67 (1): 18-21.
- Davis, G. 2005. Biodiversity conservation as a social bridge in the urban context: Cape Town's sense of 'The Urban Imperative' to protect its biodiversity and empower its people. In Trzyna, T. (Ed.) *The urban imperative*. California Institute of Public Affairs, Sacramento, CA.
- Dahlin, B. 2001. The primacy of cognition – or of perception? A phenomenological critique of the theoretical bases of science education. *Science and Education*. 10: 453-475.
- Della Porta, D. 2008. Comparative analysis. In Della Porta, D. & Keating, M. (Eds.) *Approaches and methodologies in the social sciences: a pluralist perspective*. Cambridge University Press, Cambridge. Chapter 11, pages 198-222.
- Della Porta, D. & Keating, M. (Eds.) 2008. *Approaches and methodologies in the social sciences: a pluralist perspective*. Cambridge University Press, Cambridge.
- Denzin, N. & Lincoln, Y. (Eds.) 2005. *The SAGE handbook of qualitative research*. Third edition. SAGE, Thousand Oaks, London, New Delhi.
- Dewey, J. 1930. *Democracy and education*. MacMillan, New York.
- Dewey, J. 1997. *Experience and nature*. Second edition. Open Court, Chicago & La Salle.
- Diamond, J. 2006. *Collapse: how societies choose to fail or survive*. Penguin, London.
- Discovery Vitality & Sports Science Institute of SA. 2007. *Healthy active kids South Africa: report card on the physical activity, nutrition and tobacco use for South African children and youth 2007*. Retrieved from: <http://www.mrc.ac.za/chronic/healthykids.pdf>, 31 December 2007.
- Elliott, A. & Lemert, C. 2006. *The new individualism: the emotional costs of globalization*. Routledge, London & New York.

- Epstein, J. 1998. Introduction: Generation X, youth culture and identity. In Epstein, J. (Ed.) *Youth culture: identity in a postmodern world*. Blackwell, Massachusetts & Oxford. Pages 1-23.
- Erikson, E. 1968. *Identity, youth and crisis*. Faber & Faber, London.
- Escobar, A. 1998. The 'Problem of Nature' revisited: history and anthropology (Book review). *Current Anthropology*. 39 (3): 385-388.
- Escobar, A. 1999. After Nature: steps to an antiessentialist political ecology. *Current Anthropology*. 40 (1): 1-30.
- Evergreen. 2000. Nature Nurtures: investigating the potential of school grounds. © Evergreen. Retrieved from: [www.evergreen.ca](http://www.evergreen.ca), 14 April 2007.
- Faber Taylor, A., Kuo, F. & Sullivan, W. 2001. Coping with ADD: the surprising connection to green play settings. *Environment and Behavior*. 33 (1): 54-77.
- Faber Taylor, A., Kuo, F. & Sullivan, W. 2002. Views of nature and self-discipline: evidence from inner city children. *Journal of Environmental Psychology*. 22: 49-63.
- Faber Taylor, A. & Kuo, F. 2006. Is contact with nature important for healthy child development? State of the evidence. In Spencer, C. & Blades, M. (Eds.) *Children and their environments: Learning, using and designing spaces*. Cambridge University Press, Cambridge.
- Fairclough, N. Jessop, B. & Sayer, A. 2002. Critical realism and semiosis. *Journal of Critical Realism*. 5 (1): 2-11.
- Farmer, C. 2005. *Home Office Citizenship Survey: top level findings from the Children and Young People's Survey*. Home Office and Department for Education & Skills, United Kingdom.
- Farrington, K. 2006. *Engaging sense of place in an environment of change: youth, identity and place-based learning activities in environmental education*. Unpublished M.Ed. (Environmental Education) Thesis. Rhodes University, Grahamstown.
- Fien, J. 1993. *Education for the environment: critical curriculum theorising and environmental education*. Deakin University Press, Victoria.
- Forde, D. 1998. *African worlds: studies in the cosmological ideas and social values of African people*. James Currey, Oxford.
- Froebel, F. 1911. *The education of man*. Translated by W. Hailmann. D. Appleton & Company, New York & London.
- Frosh, S. 1991. *Identity crisis: modernity, psychoanalysis and the self*. Macmillan, Houndmills & London.
- Frumkin, H. 2003. Healthy places: exploring the evidence. *American Journal of Public Health*. 93 (9): 1451-1456.
- Fuller, R., Irvine, K., Devine-Wright, P., Warren, P. & Gaston, K. 2007. Psychological benefits of greenspace increase with biodiversity. *Biology Letters*. 15 May 2007.

- Gelderblom, C., Van Wilgen, B., Nel, J., Sandwith, T., Botha, M., & Hauck, M. 2003. Turning strategy into action: implementing an action plan in the Cape Floristic Region. *Biological Conservation*. 112: 291-297.
- Giddens, A. 1991. *Modernity and self-identity: self and society in the late modern age*. Stanford University Press, Stanford, CA.
- Giddens, A. 2002. *Runaway World: how globalisation is reshaping our lives*. Profile Books, London.
- Giroux, H. 1998. Teenage sexuality, body politics, and the pedagogy of display. In Epstein, J. (Ed.) *Youth culture: identity in a postmodern world*. Blackwell, Massachusetts & Oxford. Pages 24-55.
- Gutek, G. 1968. *Pestalozzi and education*. Random House, New York.
- Green, L. 2007. Changing nature: working lives on Table Mountain, 1980-2000. In Field, S., Meyer, R. & Swanson, F. (Eds.) *Imagining the city: memories and cultures in Cape Town*. HSRC Press, Cape Town. Chapter 9, pages 173-190.
- Haraway, D. 1997. *Modest\_Witness@Second\_Millennium.FemaleMan\_Meets\_OncoMouse: Feminism and Technoscience*. Routledge, New York.
- Hattingh, J. 2002. On the imperative of sustainable development: a philosophical and ethical appraisal. In Hattingh, H., Lotz-Sisitka, H. & O'Donoghue, R. (Eds.) *Environmental education, ethics and action in supporting participation in the United Nations Decade on Education for Sustainable Development southern Africa*. EEASA Monograph. Human Sciences Research Council/EEASA, Pretoria.
- Heath, G. 2008. Exploring the imagination to establish frameworks for learning. *Studies in the Philosophy of Education*. 27: 115-123.
- Hillman, M., & Adams, J. 1992. Children's freedom and safety. *Children's Environments*. 9(2): 12-33.
- Hofferth, S. & Curtin, S. 2006. *Changes in children's time, 1997-2002/3: an update*. Retrieved from: [http://www.popcenter.umd.edu/people/hofferth\\_sandra/papers/kidstimefeb06.pdf](http://www.popcenter.umd.edu/people/hofferth_sandra/papers/kidstimefeb06.pdf), 20 April 2007.
- Hofferth, S. & Sandberg, J. 2001. Changes in American children's time, 1981-1997. In Hofferth, S. & Owens, T. (Eds.) *Children at the millennium: where have we come from, where are we going?* Pages 1-7. JAI. New York.
- Hoffman, G. 1994. What can Europeans learn from African philosophy? In Oruka, H. (Ed.) *Philosophy, humanity and ecology: philosophy of nature and environmental ethics*. ACTS Press, Nairobi. Pages 190-197.
- Hook, D., Watts, J. & Cockcroft, K. 2002. *Developmental psychology*. University of Cape Town Press, Lansdowne.
- Hubbard, P., Kitchin, R., & Valentine, G. (Eds.) 2004. *Key thinkers on space and place*. SAGE, London.
- Husserl, E. 1970. *The crisis of the European sciences and transcendental phenomenology*. Northwestern University Press, Evanston.

- Irwin, P. 1990. The concept of environmental education and the development of environmental education in South Africa. *Southern African Journal of Environmental Education*. 11: 3-7.
- Irwin, P. 2007. *EEASA in a changing world: an historical review at 25 years*. EEASA, Howick.
- Irwin, P. 2008. *Environmental education research in southern and eastern Africa: a directory. Third edition*. Rhodes University, Grahamstown.
- IUCN/UNEP/WWF. 1980. *World Conservation Strategy*. IUCN, UNEP, WWF, Gland, Switzerland.
- Jacobs, D. 2008. *The authentic dissertation: alternative ways of knowing, research, and representation*. Routledge, London & New York.
- James, W. 2007. A global perspective on obesity in children. International conference on physical activity and obesity in children. 24-27 June 2007. Retrieved from: [http://www.phe.queensu.ca/epi/obesity/finaldocs/presentations/Sunday\\_Philip-James-rev2.pdf](http://www.phe.queensu.ca/epi/obesity/finaldocs/presentations/Sunday_Philip-James-rev2.pdf), 31 December 2007.
- Janse van Rensburg, E. 1994. Research priorities for environmental education in southern Africa: preliminary report. *South African Journal of Environmental Education*. 14: 3-9.
- Karsten, L. 2005. It all used to be better? Different generations on continuity and change in urban children's daily use of space. *Children's Geographies*. 3 (3): 275-290.
- Katzschner, T., Oelofse, G., Wiseman, K., Jackson, J. & Ferreira, D. 2005. The City of Cape Town's Biodiversity Strategy. In Trzyna, T. (Ed.) *The urban imperative*. California Institute of Public Affairs, Sacramento, CA.
- Kellert, S. 2005. Nature and childhood development. In *Building for life: designing and understanding the human-nature connection*. Island Press, Washington DC.
- Kellert, S. & Derr, V. 1998. A national study of outdoor wilderness experience. Yale University, New Haven.
- Kellert, S. & Wilson, W. 1993. *The biophilia hypothesis*. Shearwater Books & Island Press, Washington DC.
- Kuo, F. & Sullivan, W. 2001. Environment and crime in the inner city: does vegetation reduce crime? *Environment and Behavior*. 33: 343-367.
- Khan, F. 1989. The role of history in understanding current South African attitudes to conservation. *Southern African Journal of Environmental Education*. 10: 3-5.
- Kirk, R. 1999. *Relativism and reality: a contemporary introduction*. Routledge, London.
- Krikorian, Y. (Ed.) 1944. *Naturalism and the human spirit*. Columbia University Press, New York.
- Kroger, J. 2007. *Identity: adolescence through adulthood*. SAGE, Thousand Oaks, London & New Delhi.
- Kuo, F. & Faber Taylor, A. 2004. A potential natural treatment for attention-deficit/hyperactivity disorder: evidence from a national study. *American Journal of Public Health*, 94 (9): 1580-1586.

- Kwant, R. 1966. *From phenomenology to metaphysics: an inquiry into the last period of Merleau-Ponty's philosophical life*. Duquesne University Press, Pittsburgh.
- Langer, M. 1989. *Merleau-Ponty's phenomenology of perception: a guide and commentary*. MacMillan, London.
- Lawrence, E. (Ed.) 1952. *Friedrich Froebel and English education*. Routledge & Kegan Paul, London.
- Le Maitre, D., Gelderblom, C., Maphasa, L., Yssl, S, Van den Belt, M. & Manuel, T. 1997. Communicating the value of fynbos: results of a survey of stakeholders. *Ecological Economics*. 22: 105-121.
- Leopold, A. 1949. *A Sand County almanac*. Oxford, New York.
- Lieberman, G. & Hoody, L. 1998. *Closing the achievement gap: using the environment as an integrating context for learning*. State Education & Environment Roundtable (SEER), Poway, CA. Retrieved from: [www.seer.org](http://www.seer.org), 20 April 2007.
- Lippe-Biesterfeld, I. Van. 2005. *Science, soul and the spirit of nature*. Bear & Company, Vermont.
- Liston, D. 2008. Critical pedagogy and attentive love. *Studies in the Philosophy of Education*. 27: 387-392.
- Lotz-Sisitka, H., Olvitt, L., Gumede, M. & Pesanayi, T. 2006a. *Education for Sustainable Development practice in southern Africa: supporting participation in the United Nations Decade of Education for Sustainable Development*. SADC REEP, Howick.
- Lotz-Sisitka, H., Olvitt, L., Gumede, M. & Pesanayi, T. 2006b. *Policy support for Education for Sustainable Development in southern Africa: Supporting participation in the United Nations Decade of Education for Sustainable Development*. SADC REEP, Howick.
- Lotz-Sisika, H. & Raven, G. 2004. Learning through cases: adopting a nested approach to case-study work in the Gold Fields participatory course initiative. *Environmental Education Research*. 10(1): 67-87.
- Lotz-Sisika, H. & Schudel, I. 2007. Exploring the practical adequacy of the human rights, social justice, inclusivity and healthy environment policy discourse in South Africa's National Curriculum Statement. *Environmental Education Research*. 13(2): 245-264.
- Louv, R. 2006. *Last child in the woods: saving our children from nature-deficit disorder*. Algonquin Books, Chapel Hill.
- Mair, P. 2008. Concepts and concept formation. In Della Porta, D. & Keating, M. (Eds.) *Approaches and methodologies in the social sciences: a pluralist perspective*. Cambridge University Press, Cambridge. Chapter 10. Pages 177-197.
- Maller, C., Townsend, M., Brown, P. & St Leger, L. 2002. *Healthy parks, healthy people: the health benefits of contact with nature in a park context*. A review of current literature. November 2002. Deakin University & Parks Victoria. Retrieved from: <http://www.parkweb.vic.gov.au/resources/mhphp/pv1.pdf>, 30 August 2007.
- Mallin, S. 1979. *Merleau-Ponty's philosophy*. Yale University Press, New Haven & London.

- Malone, K. 2007. The bubble-wrap generation: children growing up in walled gardens. *Environmental Education Research*. 13(4): 513–527.
- Manuel, T. 2006. *Responses of different community user groups to biodiversity conservation of protected areas in lowland fynbos: the case of the Wolfgat Nature Reserve*. Unpublished Ph.D. Thesis. University of Cape Town, Cape Town.
- Marsden, W. 1997. Environmental education: historical roots, comparative perspectives, and current issues in Britain and the United States. *Journal of Curriculum and Supervision*. 13 (1): 6-29.
- Mathoho, M. & Ranchod, K. 2006. Identity crisis? Youth, social and political identity in South Africa. *Policy: issues and actors*. 19 (4). Centre for Policy Studies, Johannesburg. March 2006.
- Maze, K., Katzschner, T. & Myrdal, B. 2002. Conserving an embattled flora: mainstreaming biodiversity issues in urban Cape Town. In Pierce, S., Cowling, R., Sandwith, T. & MacKinnon, K. (Eds.) *Mainstreaming biodiversity in development: case studies from South Africa*. The World Bank, Washington.
- Mbiti, J. 1990. *African religions and philosophy. Second edition*. Heinemann, Oxford.
- McDonald, K. 1999. *Struggles for subjectivity: identity, action and youth experience*. Cambridge University Press, Cambridge.
- McKibben, B. 1990. *The end of nature*. Viking, London.
- Melville, H. 2007. *Enabling environmental education in an environmental education centre: a narrative account of opportunities and constraints*. Unpublished M.Ed. (Environmental Education) Thesis. University of Stellenbosch, Stellenbosch.
- Merchant, C. 1980. *The death of nature: women, ecology and the scientific revolution*. Harper & Row, New York.
- Merleau-Ponty, M. 1962. *Phenomenology of perception*. Translated by C. Smith. Routledge & Kegan Paul, London.
- Merleau-Ponty, M. 1964. *The primacy of perception*. Translated by J. Edie. Northwestern University Press, Evanston.
- Merleau-Ponty, M. 1968. *The visible and the invisible. Followed by working notes*. Translated by A. Lingis. Northwestern University Press, Evanston.
- Merleau-Ponty, M. 1970. *Themes from the lectures at the College de France 1952-1960*. Translated by J. O'Neill. Northwestern University Press, Evanston.
- Miles, M. & Huberman, A. 1994 *Qualitative data analysis. Second edition. An expanded sourcebook*. SAGE, Thousand Oaks, London & New Delhi.
- Moll, I. 2004. Psychology, biology and social relations. *Journal of Critical Realism*. 3:1. 49-76.
- Morgan, D. 1988. *Focus groups as qualitative research*. Qualitative Research Methods Series, Volume 16. SAGE, Newbury Park, London & New Delhi.
- Morrow, S., Panday, S. & Richter, L. 2005. *Where we're at and where we're going: young people in South Africa in 2005*. Umsobomvu Youth Fund, Johannesburg.

- Mruk, C. 2006. *Self-esteem research, theory and practice*. Springer, New York.
- Msimango, G. 1988. *An investigation into nature conservation attitudes of secondary school pupils in KwaZulu*. Unpublished M.A. Thesis. University of Cape Town, Cape Town.
- Mutch, A. 2004. Constraints on the internal conversation: Margaret Archer and the structural shaping of thought. *Journal for the Theory of Social Behaviour*. 34 (4): 429-445
- Mutwa, V. 1996. *Song of the stars: The lore of a Zulu shaman*. Barrytown Ltd, Station Hill.
- Mutwa, V. 1998. *Indaba, my children: African tribal history, legends, customs and religious beliefs*. Payback Press, Edinburgh.
- NEEP-GET. 2005. *A critical dialogues monograph. Building capacity for environmental learning in South Africa's education system: openings for the United Nations Decade on Education for Sustainable Development*. National Environmental Education Project for General Education & Training / Share-Net, Howick.
- Odhiambo, T. 1972. Understanding of science: the impact of the African view of nature. In Gilbert, P & Lovegrove, M. *Science education in Africa*. Heinemann, London. P 39-46.
- O'Donoghue, R. 1993a. Clarifying environmental education: a search for CLEAR Action in southern Africa. *South African Journal of Environmental Education*. 13: 28-38.
- O'Donoghue, R. 1993b. *The environment, development and environmental education*. Environmental Education Policy Initiative / Share-Net, Howick.
- O'Donoghue, R. 1994. A grand plan for Earth Love Education in southern Africa. The dream becomes a nightmare. So what went wrong? *Southern African Journal of Environmental Education*. 14: 35-45.
- O'Donoghue, R. 2007. Environment and sustainability education in a changing South Africa: A critical historical analysis of outline schemes for defining and guiding learning interactions. *Southern African Journal of Environmental Education*. 24: 141-157.
- O'Donoghue, R. & Janse van Rensburg, E. 1995. *Environments and methods*. Share-Net, Howick.
- O'Donoghue, R. & Russo, V. 2004. Emerging patterns of abstraction in environmental education: a review of materials, methods and professional development perspectives. *Environmental Education Research*. 10 (3): 331-351.
- Ogbonnaya, O. 1994. Person as community: an African understanding of the person as an intrapsychic community. *Journal of Black Psychology*. 20 (1): 75-87.
- O'Leary, Z. 2004. *The essential guide to doing research*. SAGE, London, Thousand Oaks & New Delhi.
- O'Loughlin, M. 1995. Intelligent bodies and ecological subjectivities: Merleau-Ponty's corrective to postmodernism's 'subjects' of education. *Philosophy of Education*. On-line version retrieved from: [http://www.ed.uiuc.edu/EPS/PES-Yearbook/95\\_docs/o'loughlin.html](http://www.ed.uiuc.edu/EPS/PES-Yearbook/95_docs/o'loughlin.html), 8 August 2009.
- O'Loughlin, M. 2006. *Embodiment and education: exploring creaturely existence*. Springer, Dordrecht.

- Opie, F. 1992. *Rousing the sleeper: awakening earth love in the young and young at heart*. Maskew Miller Longman, Cape Town.
- Parkes, G. 1989. Human/nature in Nietzsche and Taoism. In Baird-Callicott, J. & Ames, R. (Eds.) 1989. *Nature in Asian traditions of thought*. State University of New York Press, New York. Pages 79-97.
- Payne, P. 2003. Post-phenomenological enquiry and living the environmental condition. *Canadian Journal of Environmental Education*. 8: 173-194.
- Payne, P. In press. Untimely eco-phenomenological framings of environmental education research. *International Handbook on Research in Environmental Education (IHREE)*. American Educational Research Association (AERA).
- Payne, P. & Wattchow, B. 2008. Slow pedagogy and placing education in post-traditional outdoor education. *Australian Journal of Environmental Education*. 12(1): 25-38.
- Payne, P. & Wattchow, B. 2009. Phenomenological deconstruction, slow pedagogy, and the corporeal turn in wild environmental/outdoor education. *Canadian Journal of Environmental Education*. 14: 15-32.
- Pellizzoni, L. 1999. Reflexive modernization and beyond: knowledge and value in the politics of environment and technology. *Theory, Culture and Society*. 16 (4): 99-125.
- Pergams, O. & Zaradic, P. 2006. Is love of nature in the US becoming love of electronic media? 16-year downtrend in national park visits explained by watching movies, playing video games, internet use, and oil prices. *Journal of Environmental Management*. 80 (4): 387-393.
- Pestalozzi, H. 1951. *The education of man: Aphorisms*. Translated by H. Norden & R. Norden. Philosophical Library, New York.
- Pietarinen, J. 1994. The principal attitudes of humanity towards nature. In Oruka, H. (Ed.) *Philosophy, humanity and ecology: philosophy of nature and environmental ethics*. ACTS Press, Nairobi. Pages 290-294.
- Pinnock, D. 1997. *Gangs, rituals and rites of passage*. African Sun Press & Institute of Criminology, University of Cape Town, Cape Town.
- Pinnock, D. 2007. Who listens to our children's stories? *Sunday Independent*. 11 November 2007. Page 9.
- Plant, M. 2001. *A common sense philosophy for environmental education?* Paper prepared for the annual conference of the Association for Teacher Education in Europe, Stockholm, 2001. Retrieved from: [http://www.lhs.se/atee/papers/RDC\\_17.doc](http://www.lhs.se/atee/papers/RDC_17.doc), 14 June 2007.
- Playday. 2005. *Fit for play? Survey report*. British Market Research Bureau for the Children's Play Council & The Children's Society. 3 August 2005. Retrieved from: <http://www.playscotland.org/pdfs/Playdayresearchreport1.pdf>, 20 August 2007.
- Postma, D. 2006. *Why care for nature? In search of an ethical framework for environmental responsibility and education*. The International Library of Environmental, Agricultural & Food Ethics, Volume 9. Springer, Dordrecht.
- Price, L. 2007. *A transdisciplinary explanatory critique of environmental education. Volume 1: Business and Industry*. Unpublished Ph.D. Thesis. Rhodes University, Grahamstown.

- Raven, G. 2006. Methodological reflexivity: towards evolving methodological frameworks through critical and reflexive deliberations. *Environmental Education Research*.12 (3-4): 559-569.
- Redclift, M. 2006. Sustainable development 1987-2005: an oxymoron comes of age. *Horizontes Antropológicos, Porto Alegre*. 12 (25): 65-84.
- Remer, A. 2006. *The Nature Conservancy of New York Summer Program evaluation 2006*. Unpublished evaluation report. Obtained from Brigitte Griswold, The Nature Conservancy, e-mail: bgriswold@tnc.org
- Rhodes / Gold Fields Environmental Education Course. 2002. *The Rhodes University / Gold Fields participatory course in environmental education. Resource file*. July 2002. Gold Fields Environmental Education Service Centre, Rhodes University, Grahamstown.
- Rideout, V. & Hamel, E. 2006. *The media family: electronic media in the lives of infants, toddlers, preschoolers, and their parents*. Kaiser Family Foundation.
- Rivkin, M. 1997. The schoolyard habitat movement: What it is and why children need it. *Early Childhood Education Journal*. 25 (1). Unpaginated web version retrieved from: <http://www.nwf.org/schoolyard/movement.cfm>, 20 April 2007.
- Roberts, D., Foehr, U. & Rideout, V. 2005. *Generation M: media in the lives of 8 to 18 year olds*. Kaiser Family Foundation.
- Robottom, I. 1996. Permanently peripheral? Opportunities and constraints in Australian environmental education. *Southern African Journal of Environmental Education*. 16: 44-57.
- Robottom, I. 2007. Re-badged environmental education: is ESD more than just a slogan. *Southern African Journal of Environmental Education*. 24: 90-96.
- Romanyshyn, R. 2007. *The wounded researcher: research with soul in mind*. Spring Journal Books, New Orleans.
- Romanovsky, P. & Gie, J. 2006. *The spatial distribution of socio-economic status, services levels and levels of living in the City of Cape Town 2001 – to highlight suburbs in need*. Information & Knowledge Management Department, Strategic Information Branch, City of Cape Town. March 2006.
- Rosenberg, E. 2004a. Environmental education. Everywhere and nowhere? *Environmental Education Bulletin*. 26. July 2004. (pages)
- Rosenberg, E. 2004b. On the personal, social and environmental ... A response to Alistair Chadwick's viewpoint 'Responding to destructive interpersonal interactions: A way forward for school-based environmental educators. *Southern African Journal of Environmental Education*. 21: 147-156.
- Rosenberg, E. No date. *Evaluation of the Eco-Schools South Africa programme 2007-2008*. Unpublished report for WWF-SA, WESSA & C.A.P.E. Retrieved from: [http://www.wessa.org.za/documents/EcoSchools\\_Evaluation\\_Report08.pdf](http://www.wessa.org.za/documents/EcoSchools_Evaluation_Report08.pdf), 20 October 2009.
- Rousseau, J. 1911. *Emile*. Translated by B. Foxley. J.M. Dent & Sons, London & Toronto.

- Russon, J. 1994. Embodiment and responsibility: Merleau-Ponty and the ontology of nature. *Man and World*. 27: 291-308
- Schatzki, T. 2007. *Emotions and the dominion of teleology*. Unpublished paper presented to the Department of Philosophy, University of Cape Town. 29 June 2007.
- SEER. 2000. *California Student Assessment Project*. Retrieved from: [www.seer.org](http://www.seer.org), 20 April 2007.
- SEER. 2005. *California Student Assessment Project, phase two: the effects of environment-based education on student achievement*. SEER: Poway, CA, 2005. Retrieved from: [www.seer.org](http://www.seer.org), 20 April 2007.
- Senior, J. & Townsend, M. 2005. 'Healthy Parks, Healthy People' and other social capital initiatives of Parks Victoria, Australia. In Trzyna, T. (Ed.) *The urban imperative: urban outreach strategies for protected area agencies*. Institute of Public Affairs, Sacramento CA. Retrieved from: <http://www.interenvironment.org/pa/senior.htm>, 20 April 2007.
- Sherer, P. 2006. *The benefits of parks: why America needs more city parks and open space*. The Trust for Public Land (TPL), San Francisco.
- Soper, K. 1995. *What is nature? Culture, politics and the non-human*. Blackwell, Oxford UK & Cambridge USA.
- Soudien, C. 2007a. *Youth identity in contemporary South Africa: race, culture and schooling*. New Africa Education, Cape Town.
- Soudien, C. 2007b. *Research-led work in education: the challenges, constraints and opportunities*. Unpublished manuscript. University of Cape Town, November 2007.
- South African National Youth Survey. 2000. *Hot prospects, cold facts: portrait of young South Africa*. LoveLife, Parklands, South Africa.
- Stapp, W., Wals, A. & Stankorb, S. 1996. *Environmental education for empowerment: action research and community problem solving*. Kendall/Hunt, Dubuque, IW.
- Strife, S. 2008. Growing up in an environmental justice context: Children's environmental concerns. *Environmental Justice*. 1 (4): 217-224.
- Tandy, C. 1999. Children's diminishing play space: a study of intergenerational change in children's use of their neighbourhoods. *Australian Geographical Studies*. 37 (2): 154-164.
- Taylor, J., O'Donoghue, R. & Clacherty, A. 1993. A critique of the proposed Council for the Environment National Core Syllabus for Environmental Education in South Africa. *Southern African Journal of Environmental Education*. 13: 39-44.
- Timperio, A., Crawford, D., Telford, A. & Salmon, J. 2004. Perceptions about the local neighbourhood and walking and cycling among children. *Preventive Medicine*. 38 (1): 39-47.
- Townsend, M. & Ebdon, M. 2006. *Feel blue, touch green*. Final report of a project undertaken by Deakin University, Barwon Health, Parks Victoria, Alcoa Anglesea & Surf Coast Shire. Deakin University, December 2006. Retrieved from: <http://www.interenvironment.org/cipa/Feel%20Blue,%20Touch%20Green.pdf>, 31 December 2007.

- Trosper, R. 2005. Emergence unites ecology and society. *Ecology and Society*. 10 (1): 14.
- Ulrich, R. 1984. View through a window may influence recovery from surgery. *Science*. 224: 420-421.
- UNESCO-UNEP. 1978. The Tbilisi Declaration. *Connect*. 3 (1): 1-8.
- Valentine, G. & Mc Kendrick, J. 1997. Children's outdoor play: exploring parental concerns about children's safety and the changing nature of childhood. *Geoforum*. 28 (2): 205-220.
- Veitch, J., Bagley, S., Ball, K., & Salmon, J. 2006. Where do children usually play? A qualitative study of parents' perceptions of influences on children's active free play. *Health and Place*. 12 (4): 383-393.
- WCED (World Commission on Environment & Development). 1987. *Our common future*. Oxford University Press, Oxford.
- Wei-Ming, T. 1989. The continuity of being: Chinese visions of nature. In Baird-Callicott, J & Ames, R. (Eds.) *Nature in Eastern traditions of thought*. State University of New York Press, New York. Pages 67-78.
- Wells, N. & Evans, G. 2003. Nearby nature: A buffer of life stress among rural children. *Environment and Behavior*. 35 (3): 311-330.
- Wells, N. 2000. At home with nature: effects of 'greenness' on children's cognitive functioning. *Environment and Behavior*. 32 (6): 775-795.
- White, L. 1967. The historical roots of our ecological crisis. *Science*. 155: 1203-1207.
- Wilson, E. 1984. *Biophilia*. Harvard University Press, Cambridge MA.
- Winter, C. 2007. Education for sustainable development and the secondary curriculum in English schools: rhetoric or reality? *Cambridge Journal of Education*. 37 (3): 337-354.
- Wridt, P. 2004. An historical analysis of young people's use of public space, parks and playgrounds in New York City. *Children, Youth and Environments*. 14 (1): 86-106.
- Yin, R. 2009. *Case study research: design and methods*. Fourth edition. Applied Social Research Methods Series, Volume 5. SAGE, Los Angeles, London, New Delhi, Singapore & Washington DC.

### **Personal Communications:**

- Lotz-Sisitka, H. Murray & Roberts Chair of Environmental Education, Rhodes University, Grahamstown, Eastern Cape. July 2009.
- Roff, J. Environmental Educationist, Hilton College, Hilton, Kwa-Zulu Natal. May 2006, August 2008 & April 2009.

# Appendices, Tables, Figures & Acronyms



*I feel very, very loving because the more I learn about nature the more I want to know.  
(S-GQ5.2)*

# Appendix A:

## Groups participating in programmes

**Table 1:** Types of schools that participated in the programmes investigated. Their locations and socio-economic contexts are indicated.

Group Code	Type of School	Area of Cape Town	EMDC Area (Circuit)	Socio-economic Category
A	Ex-Model C <sup>43</sup>	Wynberg	South (1)	Middle
B	Private	Cape Town	[Central (1)]	High
C	Ex-HoR <sup>44</sup>	Wynberg	South (4)	Low
D	Ex-HoR	Goodwood	North (6)	Low
E	Ex-HoR	Goodwood	North (6)	Low
F	Ex-DET <sup>45</sup>	Nyanga	South (6)	Very low
G	Ex-HoR	Cape Town	South (1)	Very low
H	Ex-Model C	Cape Town	Central (2)	Middle
I	Ex-Model C	Cape Town	Central (1)	Middle
J	Private	Somerset West	[East (8)]	High
K	Private	Wynberg	[South (6)]	High
L	Private	Cape Town	[Central (6)]	High
M	Ex-Model C	The Strand	East (7)	Middle
N	Private college	Cape Town	[Central (2)]	Very low
O	Ex-DET	Khayelitsha	East (4)	Very low
P	Ex-HoR	Various areas	Various districts	Low-middle
Q	Ex-DET	Various areas	Various districts	Very low
R	All	Various areas	Various districts	Low-high
S	Ex-DET	Various areas	Various districts	Very low

<sup>43</sup> Ex-Model C refers to state schools that were reserved for white children during Apartheid. In the late 1980s these schools were given permission to admit a limited number of black children.

<sup>44</sup> Schools previously managed by the House of Representatives, the parliamentary house responsible for 'Coloured' affairs under Apartheid.

<sup>45</sup> Schools previously managed by the Department of Education & Training, the national department responsible for education of black African children under Apartheid.

**Table 2:** Types of programmes presented and research methods used to investigate programmes and conduct surveys

Group Code	Programme Type	Grade	Programme Presenter <sup>46</sup>	Research methods <sup>47</sup>			
				Int	Obs	Gen Q	Eval Q
A	Conservation camp	10&11	s5	✓	-	38	40
B1	Curriculum-based Ecology project	10	s1a	✓	-	-	13
B2	Adventure hike	11	s1b	✓	-	52	34
C	One-day hike	11&12	b	✓	✓	12	-
D	One-day hike	12	b	✓	✓	30	26
E	One-day hike	8-11	b	✓	✓	24	42
F	School field trip	9	g1	✓	✓	24	28
G1	School field trip	11	j	-	✓	77	3
G2	Outdoor club	9-12	s7	✓	-	14	-
H	Youth dev camp	11&12	s2	✓	-	24	30
I1	School field trip	10	g2	✓	✓	64	69
I2	School field trip	11	g3	✓	✓	27+3 Gd12	29
J	Adventure hike	10&11	s3	✓	-	28	28
K	Environmental club	9-12	s6	✓	-	15	-
L	Ecology & adventure camp	10	s4	✓	-	10	10
M	School field trip	10	f	-	✓	24	-
N	Leadership / rite of passage camp	HET1	p	✓	-	5	5
O	One-day mountain hike	10&11	u2	✓	✓	8	17
P	[friends of Group C]	8-12	-	-	-	21	-
Q	Volunteer hike leaders	10-11	u1	✓	✓	11	-
R	Intensive biology course & camp	10	l	✓	✓	60	56
S	Overnight hike	9-11	k	✓	✓	16	-

<sup>46</sup> s = school, e.g. s1a, s2; other letters refer to service providers; refer to Appendix 2.9

<sup>47</sup> numbers of general or evaluation questionnaires received and analysed are given

**Table 3:** Questionnaire administration and relationship to nature-based experiences

Group code	Group type	Socio-econ. Category	No.	Questionnaire administration <sup>48</sup>	Related nature programmes <sup>49</sup>
<b>A</b>	Ex-Model C co-ed	Middle	38	Teacher. Sep 2008. Researcher had no contact with these classes. Completed both questionnaires.	Camps took place in March 2007 (current Gd 11) & 2008 (Gd 10).
<b>B</b>	Private boys	High	52	Teacher. Sep 2008. Researcher had no contact with these classes. Completed both questionnaires.	Wilderness hike took place the previous year (Nov 2008).
<b>C</b>	Ex-HoR co-ed	Low	12	Researcher. Aug 2008. Briefly introduced hiking club members to my research. Completed the General Questionnaire only.	Some group members had helped with the hike in which groups D & E participated two weeks before.
<b>D</b>	Ex-HoR co-ed	Low	30	Researcher. Aug 2008. Briefly introduced the study before learners completed the survey. Then showed photos of their hike. Learners who had <b>not</b> participated in the hike did the General Questionnaire; those who had participated did the Evaluation.	Some learners from each school had participated in a day hike two weeks before.
<b>E</b>	Ex-HoR co-ed	Low	24		
<b>F</b>	Ex-DET co-ed	Very low	24	Researcher. Aug 2008. In the first class, I introduced the study and showed photos of their field trip before learners completed questionnaires. In the second class I briefly introduced the study, then they completed the survey and then I showed photos of their field trip <sup>50</sup> . One half of each class completed the General Questionnaire, the other half did the Evaluation.	Two classes of learners participated in a field trip the week before the survey.
<b>G1</b>	Ex-HoR co-ed	Very low	77	Researcher. Sep 2008. Briefly introduced the study before learners completed questionnaires. Then did a GIS presentation and showed photos of their field trip. Learners completed the General Questionnaire. Three club members (see G2) who had already done so completed an Evaluation Questionnaire.	Visited these two classes because of another project I was involved in. Learners completed a separate project evaluation during their field trip but this was not used in this study.
<b>G2</b>	Ex-HoR co-ed	Very low	14	Teacher (Outdoor Club coordinator). Aug 2008. Club members completed the General Questionnaire only.	Researcher had no contact with this outdoor club; attempts to meet were unsuccessful.
<b>H</b>	Ex-Model C co-ed	Middle	14	Teacher. Oct 2008. Researcher had no contact with learners. Learners completed both questionnaires.	Youth development camps took place at different times in 2007 (current Gd 12) & 2008 (Gd 11).
<b>I</b>	Ex-Model C girls	Middle	88	Teacher. Sep 2008. Researcher observed field trip and briefly introduced the research project at the end of the excursion. Had no further contact with these learners. They completed both questionnaires electronically.	Gd 10 & 11 field trips took place in Aug 2008.
<b>J</b>	Private co-ed	High	28	Teacher. Sep 2008. Researcher had no contact with these classes. Both grades completed a combined General / Evaluation Questionnaire.	The 28 day hike takes place in November of Gd 9 (i.e. Gd 12: 2006 & Gd 11: 2007).

<sup>48</sup> Who administered the survey and when, which questionnaires were completed, and was a presentation done.

<sup>49</sup> Nature-based programmes attended or evaluated by survey respondents, and when these programmes took place.

<sup>50</sup> During the first classroom visit I realised that showing photographs of the field trip *before* administering the survey might unduly influence the learners' responses. I therefore changed the order of presentation in the second classroom session, and during all future survey sessions.

**Table 3 (Continued):**

<b>Group code</b>	<b>Group type</b>	<b>Socio-econ. Category</b>	<b>No.</b>	<b>Questionnaire administration</b>	<b>Related nature-based programmes</b>
<b>K</b>	Private girls	High	15	Teacher. Aug 2008. I gave a presentation to the enviro club on my research on the day I collected the completed survey forms. Learners completed the General Questionnaire only.	Club activities were not nature-focused and therefore not evaluated.
<b>L</b>	Private girls	High	10	Teacher. Oct 2008. Researcher had no contact with learners. They completed both questionnaires.	Gd 10 camp was in the first term of 2008.
<b>M</b>	Ex-Model C co-ed	Middle	24	Researcher. Jul 2008. Learners first completed the questionnaire. I then gave a presentation on my research. They completed the General Questionnaire only.	The class participated in another project I was involved in. They completed a separate project evaluation during the field trip but this was not used in this study.
<b>N</b>	Pvt college co-ed	Very low	5	Researcher. Jul 2008. Briefly introduced my research before students completed the survey. Half the students completed the General Questionnaire, and half the Evaluation.	They had attended a wilderness programme in April 2008.
<b>O</b>	Ex-DET co-ed	Very low	8	Researcher. Sep 2008. Briefly introduced they survey before learners completed the questionnaires. Afterwards I gave a presentation on my research and showed photos of the hike. Those who had attended the hike completed the Evaluation; the others did the General Questionnaire.	Some of the youth club members had attended a hike ten days previously.
<b>P</b>	Ex-HoR co-ed	Low-middle	21	Learners from Group C surveyed friends from various schools. Sep 2008. Researcher had no contact with these learners. Completed the General Questionnaire only.	Respondents were from different schools. I do not know if they had recently participated in nature-based programmes.
<b>Q</b>	Ex-DET co-ed	Very low	11	Hiking Programme Coordinator. Aug 2008. Researcher observed a hike but had no further contact with the young hike leaders. They completed a special version of the General Questionnaire.	The youth leaders did not complete programme evaluations.
<b>R</b>	All co-ed	Low-high	60	Researcher. Sep/Oct 2008. Briefly introduced my research on the first day of the course, then learners completed the General Questionnaire. Completed the Evaluation on the last day of the course.	Learners from various schools participated in a holiday course, during which they completed both questionnaires.
<b>S</b>	Ex-DET co-ed	Very low	16	Researcher. Oct 2008. Briefly introduced my research before learners completed the General Questionnaire only.	Learners from various schools completed the questionnaire on the second day of a two-day hike.

## Appendix B:

### Nature-based programmes investigated

**Table 1:** Nature-based programmes presented by **service providers** and investigated during the fieldwork period (2008). Institutional contexts and the focus of programmes are indicated.

Code	Provider type <sup>51</sup>	Organisational context	Focus / approach	Activities
<b>b</b>	EEC & EEP	Government / Non-governmental Organisation (NGO) partnership	Nature conservation & Social development	FET youth: hikes, action projects; others mainly primary school lessons
<b>f</b>	EEC	Volunteer group / Local authority partnership	Conservation education Nature conservation	School field trips, exhibitions, camps, Eco-Schools; mainly primary schools; some high schools & adult groups
<b>g</b>	EEC	Parastatal	Biodiversity conservation	School field trips, exhibitions, action projects, Eco-Schools; primary & high schools
<b>h</b>	EEC	Private	Conservation education Adventure	Guided school field trips & camps; primary & high schools
<b>j</b>	EEC	Local authority	Nature conservation Conservation education	School field trips; mainly primary schools & few high schools
<b>k</b>	EEC & EEP	Parastatal	Nature conservation Conservation education	Self-guided field trips, camps, overnight hikes; all ages
<b>l</b>	EEC	Private company	Marine conservation Conservation education	Centre-based lessons for schools, holiday programmes; primary & high schools
<b>o</b>	YDP	Non-profit Organisation	Youth Development	Guided overnight hikes; mainly primary schools
<b>p</b>	YDP	NGO	Youth Development	Wilderness programmes: leadership, therapeutic; mainly post-school youth & adults
<b>q</b>	Individual	Individual	Conservation education	Consultant; high school environmental conference; eco-club
<b>r</b>	EEC	Trust	Conservation education	Guided & self-guided school / adventure camps; mainly primary schools
<b>t</b>	YDP	Individual	Youth development Recreation	Positive activities for high school and post-school youth
<b>u</b>	YDP	NGO	Youth development Conservation education	Day hikes for youth; primary and high schools

<sup>51</sup> EEC = environmental education centre; EEP = environmental education programme; YDP = youth development programme

**Table 2:** Nature-based programmes presented by **schools** and investigated during the fieldwork period (2008). Institutional contexts and the focus of programmes are indicated.

Code	Organisational context	Focus / approach	Activities
s1	Private school	Education	Curriculum project & outdoor adventure programme
s2	State school	Education	Youth development camps
s3	Private school	Education	Curriculum projects, camps & month-long hike
s4	Private school	Education	Whole-school environmental education & outdoor adventure programme
s5	State school	Education	Week-long conservation camp
s6	Private school	Environmental action	Environmental club focusing on mitigating climate change
s7	State school	Recreation	Outdoor club

**Table 3:** Nature-based programmes presented by **service providers** but *not* investigated during the fieldwork period (2008). Programmes are listed because they were part of a survey conducted in 2007, which is referred to in Section 4.2).

Code	Provider type <sup>52</sup>	Organisational context	Focus / approach	Activities
a	EEC	Provincial Government	Conservation education	Centre-based school lessons, field trips, exhibitions; mainly primary schools
c	EEC	Trust	Species conservation Conservation education	Field trips, visits to schools; mainly primary schools
d	EEC	University department	Conservation education	School field trips, school gardens; primary to tertiary groups
e	EEP	NGO	Waste management Conservation education	Programme closed down; mainly primary schools
i	EEC	Local govt	Nature conservation Conservation education	School field trips; mainly primary schools
m	EEC	Local authority	Nature conservation Conservation education	Self-guided field trips; all ages; high school environmental quiz
n	EEC	Local authority	Nature conservation Conservation education	School field trips; mainly primary schools

<sup>52</sup> EEC = environmental education centre; EEP = environmental education programme

University Of Cape Town

# Appendix D:

## Planning the research methods

### Research Questions

What is the value of nature-based education and awareness programmes to urban adolescents, particularly in relation to:

1. their understanding of and sense of belonging to the natural order, and
2. the process of identity formation?

**Table 1:** Respondents and research methods used to investigate each of the research sub-questions

Research Questions	Ed Officers	Teachers	Youth
1. What nature-based education programmes are available for adolescents in Cape Town?	TMF Survey 2007 Telephone Survey 2008 – additional projects (Base on TMF survey)	Telephone survey of school-based programmes (Base on TMF survey)	
2. What are the goals and features of the programmes investigated?	TMF Survey Document analysis: <i>website, strat plan, prospectus, LSMs</i> Interview Observation	Doc analysis: <i>website, lesson plan, letters to parents, school mag, LSMs, club constitution</i> Interview Observation	
3. What ontological assumptions do these programmes make about nature and the human-nature relationship?	Document analysis Interview Observation	Document analysis Interview Observation	
4. How do these assumptions inform the ways in which programmes are presented and nature is represented?	Document analysis Observation	Document analysis Observation	
5. What factors contribute towards a sense of alienation from nature amongst these urban adolescents?	Interview	Interview	Questionnaire Interview Workshop
6. What ideas and experiences of nature do young people from diverse backgrounds in the City of Cape Town bring to these nature-based programmes?	Interview	Interview	Questionnaire Interview Workshop
7. To what extent are Escobar's (1999) notions of "hybrid natures" reflected in, and generative of, ways of understanding and relating to nature in these programmes?	Observation Document analysis	Observation Document analysis	
8. To what extent, and how, do nature-based education and awareness programmes provide opportunities for adolescents from diverse backgrounds in Cape Town to: <ul style="list-style-type: none"> <li>○ Understand / develop a sense of belonging in relation to the natural order?</li> <li>○ Engage with processes of identity formation</li> </ul>	Document analysis Interview Observation	Document analysis Interview Observation	Questionnaire Interview Observation Workshop

<b>Research Questions</b>	<b>Ed Officers</b>	<b>Teachers</b>	<b>Youth</b>
9. Do these nature-based education programmes encourage learners to be reflexive?	Document analysis Observation Interview	Interview Document analysis (projects, worksheets) Observation	Document analysis (worksheets / projects) Interview Observation
10. If so, how is reflexivity understood and experienced? <ul style="list-style-type: none"> <li>o primarily a <i>cognitive</i> process</li> <li>o part of a broader <i>embodied</i> process of identity formation that involves the formulation of ultimate concerns?</li> </ul>	Document analysis Observation Interview	Interview Document analysis (projects, worksheets) Observation	Document analysis (worksheets / projects) Interview Observation
11. How do adolescents respond to these nature-based education programmes wrt: <ul style="list-style-type: none"> <li>o The contribution of these programmes to identity development?</li> <li>o The knowledge and understanding they develop of nature and the human-nature relationship?</li> <li>o The place of nature / environment in their habituses (embodied dispositions)?</li> <li>o The appropriateness of programme content and approaches to adolescents?</li> </ul>	Interview	Interview	Observation Questionnaire Interview Workshop Document analysis
12. What factors deter organisations involved in nature-based education from working with adolescents?	Questionnaire / Phone survey Interview Workshop		

<b>Research Questions</b>	<b>Ed Officers</b>	<b>Teachers</b>	<b>Youth</b>	<b>Others</b>
13. What can be done to make natural areas and educational opportunities more accessible to this age group?	Interview Workshop	Interview	Questionnaire Interview Workshop	Interviews / workshop with reserve managers
14. What are the implications of this research for nature conservation and nature-based education in the City of Cape Town and elsewhere?	Interview Workshop			Interviews / workshop with heads of nature conservation agencies

# Appendix E:

## Aspects to be probed using each research method (example)

### Method: Survey / Questionnaire

Education Officers	Teachers	Youth
<p>What nature-based education programmes are available for adolescents in Cape Town?</p> <p>What are the goals and features of these programmes?</p> <p>What factors deter organisations involved in nature-based education from working with adolescents? (phone)</p>	<p>What nature-based education programmes are available for adolescents in Cape Town?</p> <p>What are the goals and features of these programmes?</p>	<p>What factors contribute towards a sense of alienation from nature amongst these urban adolescents?</p> <p>What ideas and experiences of nature do young people from diverse backgrounds in the City of Cape Town bring to these nature-based programmes?</p> <p>To what extent, and how, do nature-based education and awareness programmes provide opportunities for adolescents from diverse backgrounds in Cape Town to:</p> <ul style="list-style-type: none"> <li>○ Understand / develop a sense of belonging in relation to the natural order?</li> <li>○ Engage with processes of identity formation</li> </ul> <p>How do adolescents respond to these nature-based education programmes, especially in relation to:</p> <ul style="list-style-type: none"> <li>○ The contribution of these programmes to identity development?</li> <li>○ The knowledge and understanding they develop of nature and the human-nature relationship?</li> <li>○ The place of nature / environment in their habituses (embodied dispositions)?</li> <li>○ The appropriateness of programme content and approaches to adolescents?</li> </ul> <p>What can be done to make natural areas and educational opportunities more accessible to this age group?</p>

# Appendix F: General Questionnaire

## Youth & Nature in the City of Cape Town

We need your help to find out what teenagers think and feel about Nature. Your feedback will help people who work in parks and natural areas to provide a better service to youth.

<b>Name:</b>			<b>Age:</b>	
<b>School:</b>			<b>Grade:</b>	

### 1. Where do you spend your spare time (top 3 places)?

Put a tick (✓) in the boxes representing your *top three places*.

<b>Indoors at home</b>	<b>At friends' homes</b>	<b>In the street / yard</b>	<b>In nature</b>	<b>At a sport venue</b>	<b>At the shops</b>
------------------------	--------------------------	-----------------------------	------------------	-------------------------	---------------------

If any of your top three places are *not* listed above, please list other places here:

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### 2. What do you do in your spare time?

Tick (✓) the boxes representing activities you participate in *at least once a week*.

<b>Hang out with friends</b>	<b>Watch TV / computers</b>	<b>SMS / chat on the phone</b>	<b>Play sport / exercise</b>	<b>Help around the home</b>	<b>Help the community</b>
------------------------------	-----------------------------	--------------------------------	------------------------------	-----------------------------	---------------------------

Please list any other activities you participate in at least once a week:

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### 3. Do you spend time in Nature?

Tick (✓) the correct box:

<b>Never</b>	<b>less than once a year</b>	<b>once or twice a year</b>	<b>about once a term</b>	<b>about once a month</b>	<b>once a week or more</b>
--------------	------------------------------	-----------------------------	--------------------------	---------------------------	----------------------------

### 4. If you do spend time in Nature:

#### 4.1 What types of places do you visit?

Tick (✓) any boxes representing places you visit:

<b>Beach / Sea</b>	<b>River / Vlei</b>	<b>Bush</b>	<b>Mountain</b>	<b>Garden</b>	<b>Nature reserve</b>
--------------------	---------------------	-------------	-----------------	---------------	-----------------------

Please list other places you visit:

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#### 4.2 What do you do there?

Tick (✓) any boxes representing things you do in nature:

<b>Relax with family / friends (picnic, camp)</b>	<b>Exercise (e.g. hike, run, climb, surf)</b>	<b>Enjoy a hobby (e.g. gardening, fishing, birding)</b>	<b>Help the community (e.g. hacking)</b>	<b>Solo time (e.g. reflecting, ritual practices)</b>
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Please list other activities:

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**5. How do you personally feel about Nature?**

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**6. Would you like to spend more time in Nature?**

<b>YES</b>		<b>NO</b>		Put a tick (✓) next to the box of your choice
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If you answered **YES**, what you would like to do there?

If you answered **NO**, please explain why not.

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**7. Have you had any memorable experiences in Nature?**

<b>YES</b>		<b>NO</b>		Put a tick (✓) next to the box of your choice
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If you answered **YES**, please describe an experience in Nature that was special to you:  
*What happened, where and when? Were you alone or with someone? How did you feel?*

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**8. Do you think Nature is relevant to teenagers in general?**

<b>YES</b>		<b>NO</b>		Put a tick (✓) next to the box of your choice
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Please explain your answer:

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**9. How could Nature become more relevant to teenagers?**

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**10. Please write any other comments here:**

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Thank you very much for your participation

# Appendix G: Evaluation Questionnaire

## Evaluating a Nature-based Programme

We need your help to find out what teenagers think about Nature-based programmes being offered in the City of Cape Town. Your feedback will help us to provide a better service.

**Name:** \_\_\_\_\_ **Age:** \_\_\_\_\_  
**School:** \_\_\_\_\_ **Grade:** \_\_\_\_\_  
**Organisation:** \_\_\_\_\_ **Date:** \_\_\_\_\_  
**Programme type / focus:** \_\_\_\_\_

### 1. Did this programme help you to:

Please tick (✓) the correct block:

	Definitely	Yes	Sort of	Not really	Not at all
> Know more about nature?					
> Feel like you are part of nature?					
> Understand yourself better?					
> Feel better about yourself?					
<b>Think more deeply about:</b>					
> Nature and the environment?					
> Important issues in your life?					

### 2. Was this programme relevant to you?

> Which parts of this programme meant the most to you? Please explain.

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

> Which parts of this programme were least relevant or meaningful to you? Why?

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### 3. Was this programme appropriate for teenagers?

Was this programme presented in a way that is appealing to teenagers?

**YES**  **NO**  Put a tick (✓) next to the box of your choice

> If you answered YES, what aspects of the programme appealed to you?

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> If you answered NO, what aspects of the programme did not appeal to you?

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> How could the presenters IMPROVE this programme for teenagers?

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### 4. Making a difference to your life

> Do you think you will do anything differently as a result of this programme?

**YES**  **NO**  Put a tick (✓) next to the box of your choice

Please explain your answer:

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### 5. Your best experience

> If you have participated in a nature-based programme that really made a difference to you, please tell us about it here. When and where was it, & why was it special?

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Thank you very much for your participation!

# Appendix H:

## Interview Schedule (Education officers)

### Step 1: Introduce the research / interview

- > Introduce the research
  - > Confirm confidentiality – will check interpretations with respondent
  - > Ask permission to record interview – explain why
  - > Confirm timing of interview – ensure we won't be interrupted
- 

### Step 2: Personal background

- > Involvement in nature-based education / awareness: *How long / where / why*

### Step 3: Nature & the human-nature relationship

- > The concept of “nature” – is it still relevant?
- > Understanding of nature
- > Understanding of human-nature relationship

### Step 4: Programme goals & features

- > General programme goals / imperatives
- > Programme features: *Focus on adolescents*

### Step 5: Adolescent responses & changes

- > How adolescents respond to programmes
- > Do different groups respond in different ways?
- > Have responses / programmes have changed
- > Why work with adolescents
- > Why are there few programmes for adolescents

### Step 6: Observing groups & follow-up

- > Which groups are visiting and when to observe
- > Date & focus of next interview

<b>Centre</b>		<b>Date</b>	
<b>Respondent</b>		<b>Ref.</b>	

## 1.2 Personal background in this field:

- > How did you get involved in nature-based education / awareness?
- > How long have you been involved?
- > Why did you choose to work in this field?

<b>How</b>	
<b>When / How long</b>	
<b>Why</b>	

## 1.3 Nature & the human-nature relationship

- > The relevance of the concept of nature in environmental education
- > Personal understanding of nature
- > Personal understanding of human-nature relationship

<b>Is the concept of nature relevant in environmental education?</b>	
<b>What is nature?</b>	
<b>How do you view the relationship between humans &amp; nature?</b>	

<b>Centre</b>		<b>Date</b>	
<b>Respondent</b>		<b>Ref.</b>	

### 1.4a Programme Goals & Imperatives - General

- > What are the **general goals** of your education / awareness programme?
- > What **imperatives** guide programme development?
- > Are your programmes **accessible** to adolescents from diverse backgrounds in Cape Town?
- > What **communities** do most of the groups you work with represent?

<b>Goals</b>			
<b>Imperatives</b>			
<b>Accessibility</b>	<b>Communities</b>		
<b>YES</b>	<b>NO</b>		

### 1.4b Programme Features - Adolescents

- > What **types of programmes** do you coordinate for adolescents?
- > What do your programmes for adolescents **aim** to achieve?
  - knowledge and understanding of nature?
  - a sense of belonging in relation to nature?
  - adolescent identity formation?
- > What general **approaches** do you use?  
(*in/about/for; nature / environment / sustainable development; body/mind/emotions/spirit*)
- > **Where** do these programmes take place?

<b>Programme Types</b>	fieldwork, hiking, camps, action projects, etc.	Length
<b>Aims</b> understand nature belonging to nature Identity development		
<b>Approaches</b>	awareness, concept (knowledge), show-&-tell, technical skills, experiential, life skills, spirit, OBE curriculum, action, fun & adventure, personal development	
<b>Where?</b>	classroom, urban, wilderness, garden, ecosystems	

<b>Centre</b>		<b>Date</b>	
<b>Respondent</b>		<b>Ref.</b>	

### 1.5a Responses of Adolescents & Changes to Programmes

- > How do adolescents **respond** / relate to **nature**? *Evidence of ID formation; alienation / belonging? Why?*
- > Do different **groups** respond / relate in different ways?
- > What approaches have you found particularly **effective** / **ineffective**?
- > Have you noticed **changes in their responses** over the years? Explain.
- > Have your **approaches changed** over the years to accommodate these changes? If so, how?

	<b>Responses / relationships</b>	<b>Different groups' responses?</b>
<b>How adolescents respond / relate to / value:</b> > <b>Nature</b> > <b>Nature-based programmes</b>  ID formation; alienation		
	<b>Effective</b>	<b>Ineffective</b>
<b>Which approaches are particularly effective / ineffective?</b>		
	<b>Past</b>	<b>Present</b>
<b>Changes in responses of adolescents</b>		
<b>Programme changes</b>		

<b>Centre</b>		<b>Date</b>	
<b>Respondent</b>		<b>Ref.</b>	

### 1.5b EE Centres & Adolescents

- > Should nature organisations work with adolescents? Why / not?
- > Why are there relatively few nature-based education programmes for adolescents?

<b>Should nature-based organisations work with adolescents?</b>	
<b>Why do few centres work with adolescents?</b>	

### 1.6 Nature-based Programmes for Adolescents: 2008

- > Which high schools are you working with this year (June-September 2008)? Name & Grade
- > What will you be doing with them? Where?
- > When are they coming?
- > Which may I observe?

High School	Grade	Programme Type	Venue	Date / Time	Observe?

- > **May I have access to your 2007/8 booking records?**

# Appendix I:

## Observation Schedule

### Introduce the research / observation session

- > Introduce the research
  - > Confirm confidentiality – will check interpretations with respondent
  - > Ask permission to record session – explain why (photos / audio)
- 

### Nature & the Human-Nature Relationship:

- What ideas and experiences of nature do young people from diverse backgrounds in the City of Cape Town bring to these nature-based programmes?
- To what extent / how does this programme:
  - > enhance knowledge & understanding of nature?
  - > develop a sense of belonging to the natural order?
- What ontological assumptions do these programmes make about nature and the human-nature relationship?
- How do these assumptions inform the ways in which programmes are presented and nature is represented?
- To what extent are Escobar's (1999) notions of "hybrid natures" reflected in, and generative of, ways of understanding and relating to nature in these programmes?

### To what extent / how does this programme contribute to identity development:

- Physically, intellectually, emotionally & morally
- Natural, practical & social orders (bodily well-being, competence, self-worth)
- Creating opportunities for developing a sense of identity, as well as to experience intimacy, generativity & development of integrity

### Reflexivity in identity development:

- Do these nature-based education programmes encourage learners to be reflexive?
- If so, how is reflexivity understood and experienced?
  - > primarily a *cognitive* process
  - > part of a broader *embodied* process of identity formation that involves the formulation of ultimate concerns?

### How do adolescents respond?

# Observation Schedule

Date: \_\_\_\_\_ Centre: \_\_\_\_\_ EO: \_\_\_\_\_  
 School: \_\_\_\_\_ Grade: \_\_\_\_\_ Teacher: \_\_\_\_\_

Reference	Time	Activity (indicate *T / EO / L)	Nature / Human- Nature Relationship (how re/presented; hybrid natures; sense of belonging)	Identity Development (natural, practical, social) (identity, intimacy, generativity, integrity)	Focus / Reflexivity				Comments (responses of learners, ultimate concerns, etc.)
					Physical	Intellectual	Emotional	Moral	
1	h								
2	h								
3	h								
4	h								
5	h								

\* T / EO / L = Teacher, Education Officer or Learner-led

**Notes:**

Ref.	Notes

University Of Cape Town

# Appendix J:

## Document Analysis Schedule

Centre				Date			Ref.	
<b>Resource Description</b>								
Title								
Type of resource	Worksheet	Information	Teachers' guide	Other:				
Medium (electronic, hard copy, etc.)								
Language(s)								
Audience								
Description								
<b>Nature-related aspects</b>								
Nature-related topic(s)								
Type of programme in which materials used								
Aim(s) of programme								
How materials used in programmes								
Nature-related terminology								
Representations of nature <i>Ontological assumptions</i>								
Representation of human-nature relationship <i>Ontological assumptions</i>								
Hybrid natures reflected?	Capitalist	Organic	Techno					
<b>Identity-related aspects</b>								
Presents appropriate roles / identities								
Provides opportunities for reflexivity								
Nature of reflexivity <i>Cognitive, embodied</i>								
Appropriate for adolescents								

## Appendix K: Section of an Analytical Matrix

5: How do you personally feel about nature?		Order / Concern				ID	Natural Order											Social Order					
							Body		Mind	Emotions			Nature as Environment										
Individual Code	Comment	Natural	Social	Practical	Concern expressed	Reflect / develop	Exercise / recreate	Human health / survival	Mental well-being	Strong affinity	Relax	Enjoyable / important	Beautiful / inspiring	Spiritual significance	Nature as ecosystem	Part of my heritage	See plants / animals	Threatened place	Need action / caring	Risky / dangerous	Time with family / friends	Escape social problems	Nature should be fun
gq5	I feel that Nature is a great place like when I am stressed about something I enjoy a peaceful silence and I just listen to nature.	1								1	1											1	
gq6	I feel very good and proud about nature because with out nature nothing will ever be the same. Another thing most of us believe in nature.	1								1				1									
gq8	It's a wonderful place and it's for school children because is teach us lot about nature and how to look after animals and plants	1		1								1					1		1				

**Table 1:** Extract from one of the Excel spreadsheets used to analyse responses to Question 5 of the General Questionnaire. Note the use of codes to maintain the anonymity of respondents. Comments relating to the Natural and Social Orders are shown (Practical Order omitted due to space constraints). Themes within each of the three orders emerged from the data.

# Appendix L: Consent form



University of Cape Town  
Faculty of Humanities

## PhD Research Project Consent Form

### **Title of PhD research project:**

Identity & belonging – Urban nature and adolescent development in the City of Cape Town

### **Name of researcher:**

Ally Ashwell (UCT Student Number: ashali001)

### **Researcher's contact details:**

24 Michel Walk, Park Island, Marina da Gama 7945

**Phone:** 021 788 2431

**Email:** ally@enviroeds.co.za

### **Name of supervisor:**

Prof Crain Soudien, School of Education, Faculty of Humanities, UCT

### **Name of participant:**

### **Nature of the research:**

This qualitative study will investigate a number of nature-based education and awareness programmes that are available for teenagers (mainly Grade 10-12 learners) in Cape Town. The study aims to probe how urban adolescents understand and relate to nature, and their responses to different programme approaches.

#### **My concerns are that:**

- Urban youth appear to be increasingly alienated from nature.
- While many environmental education / awareness opportunities are available for younger children in Cape Town, a survey conducted in 2007 revealed that few environmental organisations are providing programmes for adolescents.

#### **My sense is that:**

Natural areas are "formative spaces" in which young people can engage with positive role models, have some "time out" during a key stage of identity development, and learn in physical, emotional, cognitive, social and personal ways. I am interested to learn from exemplary nature-based programmes in and around Cape Town about how environmental educators can support this age group more effectively.

**The research question:**

What is the value of nature-based education and awareness programmes to urban adolescents, particularly in relation to:

1. their understanding of and sense of belonging to the natural order, and
2. the process of identity formation?

**Participant's involvement:****What's involved:**

The researcher wishes to:

- interview certain staff involved in the environmental education / awareness programme, in particular the Chief Executive Officer and any staff with a particular interest in working with adolescents.
- observe one or more groups of high school learners involved in nature education / awareness programmes presented by your organisation
- involve learners from the schools observed in the research, through requesting that they complete questionnaires relating to their responses to nature, and their reflections on their experience of nature education / awareness programmes.
- have access to documents such as school booking records, learning support materials, promotional materials and relevant reports, which will be analysed as part of the research.

**Risks:**

- No risks are envisaged, as the research is not of a sensitive nature.
- All contributions from participants will be kept anonymous through use of a coding system rather than names. Only the researcher will know the identity of respondents.

**Benefits:**

- The researcher will be investigating a number of environmental / nature-based education & awareness programmes on offer for teenagers. Findings from the research will be made available to all participating organisations; this may contribute towards enhancing the quality and relevance of programmes developed for teenagers.

**Costs:**

- Costs of the research will be covered by the researcher, e.g. travel to the venue, photocopying of research instruments, etc.

**Payment:**

- The researcher is not in a position to provide any remuneration to those who agree to participate in the research.

### **Consent to Participate in the Research:**

1. I agree to participate in this research project.
2. I have read this consent form and the information it contains and had the opportunity to ask questions about them.
3. I agree to my responses being used for education and research on condition that my privacy is respected, subject to the following:
  - I understand that my personal details will be included in the research in coded form only, so that I will not be personally identifiable.
  - I understand that I am under no obligation to take part in this project.
  - I understand that I have the right to withdraw from this project at any stage.

Signature of Participant: \_\_\_\_\_

Name of Participant: \_\_\_\_\_

Signature of Researcher: \_\_\_\_\_

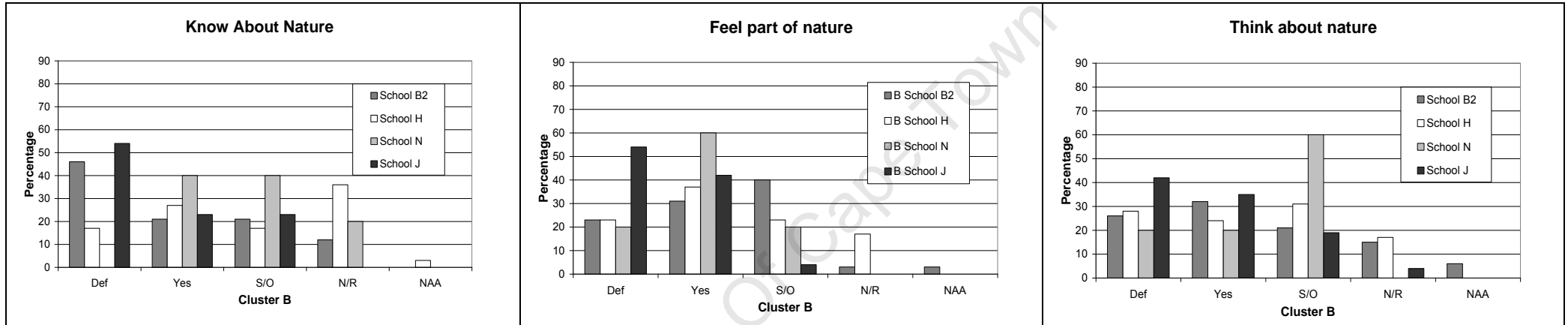
Name of Researcher: \_\_\_\_\_

Date: \_\_\_\_\_

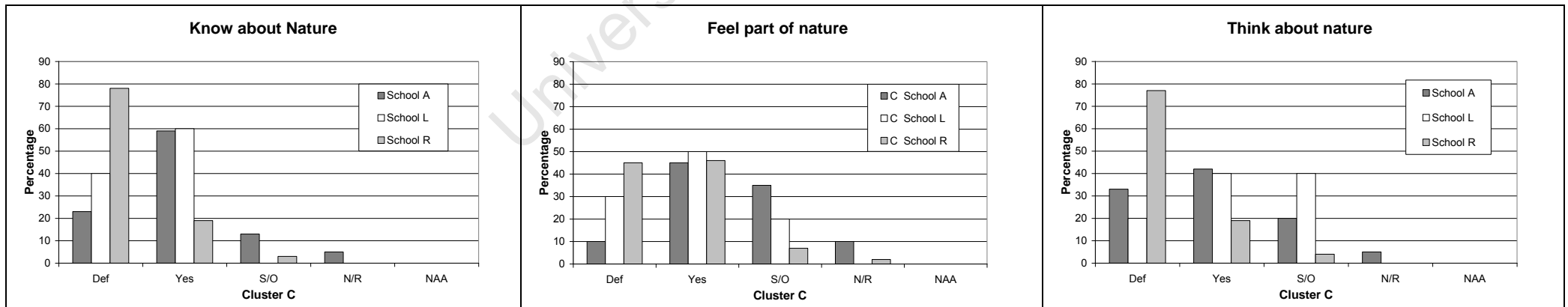
University Of Cape Town

# Appendix M: Results of Evaluation Questionnaire Q1 – Nature-related Questions

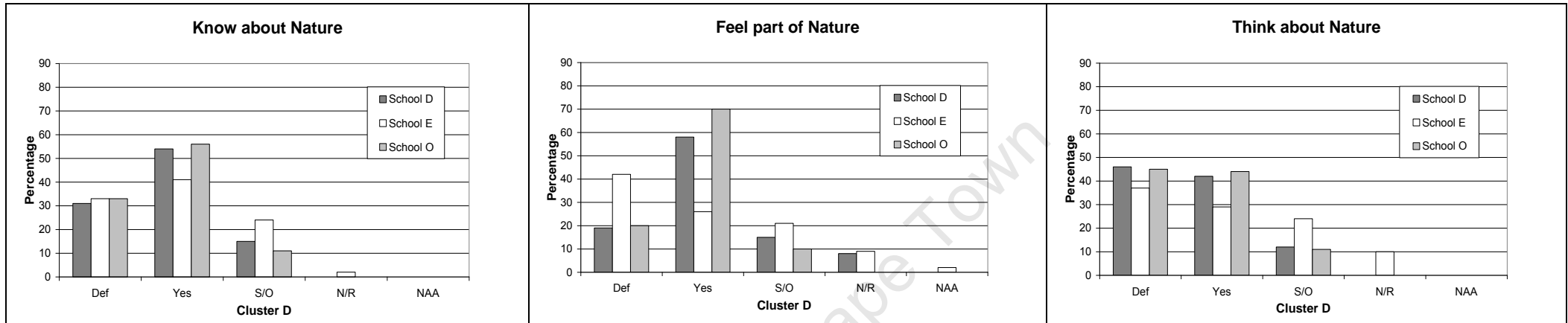
## Cluster B Schools:



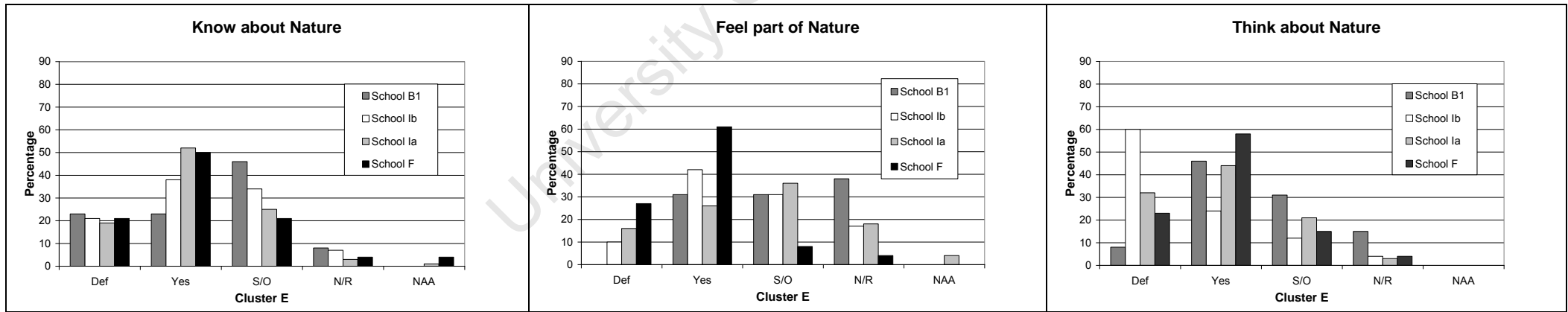
## Cluster C Schools:



### Cluster D Schools:

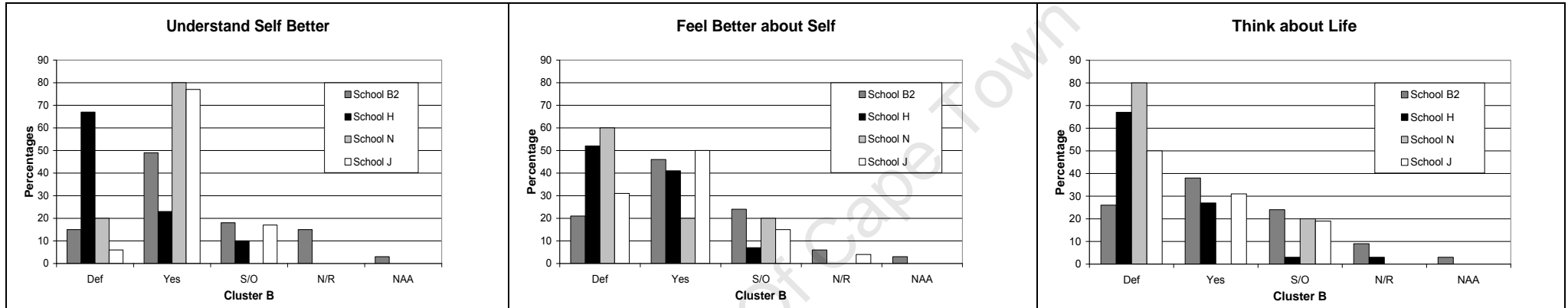


### Cluster E Schools:

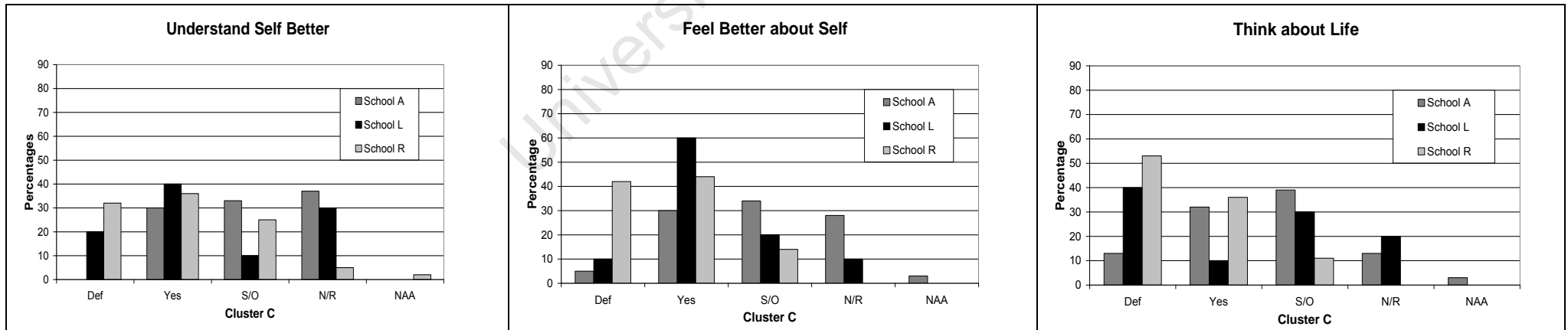


# Appendix N: Results of Evaluation Questionnaire Q1 – Identity-related Questions

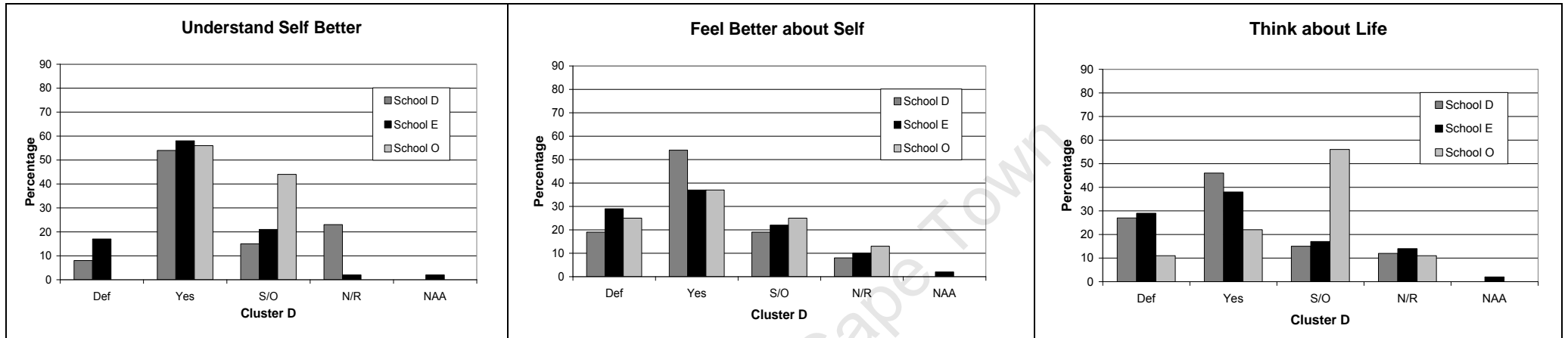
## Cluster B Schools:



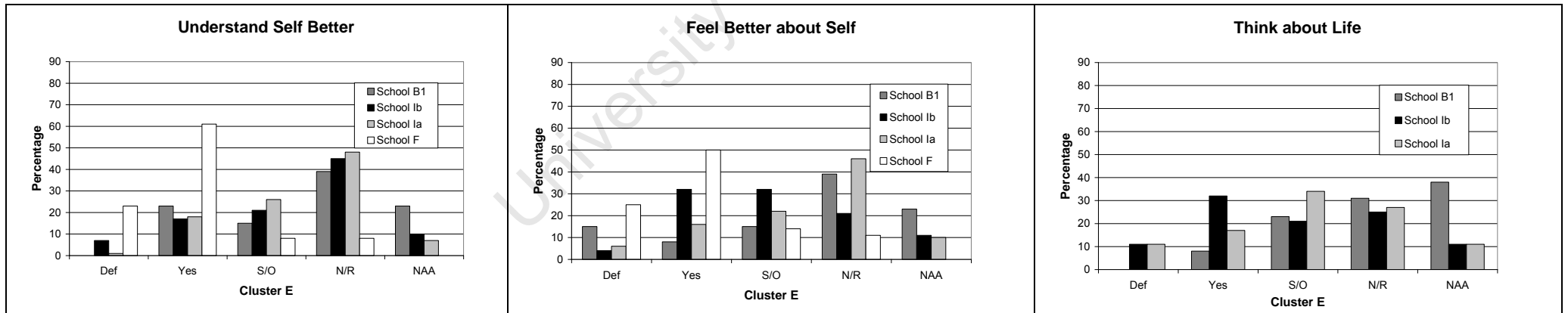
## Cluster C Schools:



### Cluster D Schools:



### Cluster E Schools:



# Appendix O: Analysis of responses to GQ5: How do you personally feel about nature?

