A TRANSDISCIPLINARY EXPLANATORY CRITIQUE OF ENVIRONMENTAL EDUCATION

(VOLUME 1)

BUSINESS AND INDUSTRY

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ABSTRACT

A Transdisciplinary Explanatory Critique of Environmental Education
Volume 1
Business and Industry

This study originates out of my experience as an environmental educator working within business and industry in Zimbabwe and South Africa. It is motivated by my observation that, despite much environmental rhetoric and training, environmental education in industry rarely leads to significant advances towards environmental protection.

I assume that the problem of the mismatch between rhetoric and action involves both semiotic and non-semiotic components and therefore, after a thorough exploration of my methodological options, I adopt a qualitative transdisciplinary textual analysis of relevant documents using Fairclough's Critical Discourse Analysis and Bhaskar's Dialectical Critical Realism, with some insights taken from Bhaskar's more recent concept of Meta-Reality.

My main conclusions from the study indicate that causally efficacious philosophical mistakes, relating to theories of structure/agency and theories of epistemology, are an important aspect of the problem being considered. Specifically, I demonstrate that these mistakes function to buttress ideology and its attendant contradictions which in turn function to provide the preconditions that maintain inequalities and poor environmental practice in business and industry. Prior and current events, such as climate change and the trend towards globalisation, the 'free market economy' and psychological characteristics of the author, relevant to the problem, are also important. In line with Bhaskar's emancipatory aim for explanatory critique, I end with tentative recommendations for a re-imagined environmental education for business and industry which require (un)action. Consistent with my methodological choices, my recommendations have a (qualified) universal application, despite my focus on texts from South Africa and Zimbabwe.

My recommendations are summarised below:

- there should be consistency between theory and practice such that performance contradictions are avoided;
- we should not act from a fear of survival based on past, no longer relevant experiences (e.g. from childhood) as this is unlikely to be an adequate base for present actions;
- we should avoid voluntarism by acting with the resources at our disposal, based on a true understanding of our strengths and weaknesses and our own specificities;
- we should avoid assuming the stance of the 'victim' by refusing to blame other agents or circumstances, without distorting or underestimating the causal efficacy of those agents or circumstances (related to avoiding voluntarism, whilst nevertheless not resorting to determinism either);
- we should direct our action towards the abolition of inequalities and master-slave relationships (related to the avoidance of performance contradictions);
- we should act from the position of epistemological humility, rather than from the position of epistemological privilege;
- we should consider action as 'shedding' based on an understanding of the Transformational Model of Social Activity (TMSA); and
- we should consider learning to be 'shedding' based on the necessity of (un)knowledge, or ignorance, as a requirement of arriving at relatively new knowledge.

This study is also a contribution to contemporary methodological discussions relevant to Critical Discourse Analysis in that it extends these discussions to include psychoanalytical (as well as the more familiar phenomenological and ideological) depth explanations of lived illusion. Furthermore, this study is an experimental attempt to apply the concept of 'meta-reflexivity' in Critical Discourse Analysis.

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PREFACE

An important part of my doctoral work has been my reading of the relevant literature. Therefore, it seems appropriate to explain my reading method. A significant difference between writing a doctoral thesis today, and writing one several years ago, is the vast increase in the amount of literature available; there is simply too much literature to even attempt to read everything that is relevant. One might even argue that: “Inevitably, it has become impossible, except by sheer luck, to find the good stuff” (Haack, 1998:197). Fortunately, I am not quite so pessimistic as Haack. I agree with her that it is difficult to “find the good stuff”, but I think that it is not just a case of luck.

Therefore, to keep luck to a minimum, although no doubt it at times had a part to play, I used an approach to finding literature that consisted of asking for suggested readings from research colleagues, browsing through libraries, and browsing through the internet, quickly leaving behind that which seemed irrelevant from a cursory look at the introductory sections and references. I initially looked for literature with a particular problem/question in mind. Later the selection process became more structured as I identified authors and orientations and particular issues of relevance. For example, I recently picked up a book promising to be an over-view of “pragmatism” but when I looked at its content, and saw there was a strong focus on the pragmatism of William James, with almost no reference to Peirce, I put it down, since I agree with Haack (1998) that Peirce is a more reliable pragmatist than James. This approach to reading is justifiable in terms of the discourse analysis assertion that even small pieces of text can tell us much about the discourse from whence it comes. Fairclough (1992:152) writes: “Just as even a single sentence has traditionally been seen to imply a whole language, so a single discourse implies a whole society” and so, I would add, “a book’s introduction implies its whole orientation”.

At the time of writing this preface, the writers I have narrowed down as being most relevant to my thesis are: methodologically, Charles Sanders Pierce, Susan Haack, Andrew Sayer, Roy Bhaskar, Bruno Latour, Donna Haraway and Norman Fairclough; in terms of education theory and research, Tom Popkewitz and Patti Lather; in terms of industry and business, and the language of business, Richard Welford, Naomi Klein and Norman Fairclough, in terms of sociology, Norbert Elias, Anthony Giddens, Zygmunt Bauman, Jurgen Habermas and Peirre Bourdieu. Whilst I find these authors invaluable, I do not necessarily agree with all of what they say. Some of them have been particularly useful not because I agree with them, but because I have slowly come to disagree with them or because they provide a foil for my position (Giddens is such a foil for my position on social theory). Furthermore, although I may critique an author, I may find other aspects of their work useful. For example, whilst I disagree with Habermas' tendency towards a covert positivism, I nevertheless find his approach to ironic discursive practices useful. I would also like to make special mention of Jacques Derrida, whose work is largely (although not entirely) compatible with that of Bhaskar's. My critique of a general tendency towards irrealism in postmodernist/poststructural educational practices does not apply to Derrida.

I also acknowledge that the authors I have made use of are often indebted to other authors, with whom I may rarely engage directly. For example, Norman Fairclough has been strongly influenced by Michel Foucault and Michael Halliday, both of whom are thus a relatively invisible, but nevertheless strong influence in this thesis. I have preferred to concentrate on Fairclough's work, rather than Foucault's or Halliday's, because he has interpreted these authors, and often moved on from them, in a manner that is compatible with my methodology.

Finally, I would like to acknowledge the formative influence on my work of the staff and students of the Environmental Education Unit, and my supervisors, Heila Sisitka and Annette Gough as well as my unofficial supervisors, Eureta van Rensburg (for early assistance) and Noel Gough.

My approach to reading and literature is consistent with my methodological assumptions of epistemic relativism yet ontological realism. The epistemic relativism means that a 'contextual' review of literature is more appropriate than the previous absolutist conception where the researcher found out all there was to know first and took for granted that they would simply add to this body of knowledge. Rather it assumes that there is never a place of 'all there is to know' because knowledge is in some ways contextual and not absolute; also, whilst knowledge has an additive component, it is not only additive, we also throw out and generally reword, too. Thus, my reading has been an on-going process, not something which I completed in a first phase of the research. The ontological realism would mean that 'not just anything goes'; I thus could not use epistemic relativism as an excuse to avoid an in-depth engagement with the literature, which is not just fiction but about ‘something’.

Another important influence on my work have been the conferences that I attended during the time I was registered as a PhD student, namely, the workshop with Ruquia Hassan, Rhodes University, South Africa (2002), the Kenton Conference in Goudini Spa, South Africa (2003), the United Nations Industrial Development Organisation (UNIDO) conference at University of California, Berkeley, USA “Bridging the Divide” (2004), and the annual American Educational Research Conference in San Diego, USA (2004). I also spent some time at the University of Santa Cruz’s “History of Consciousness” department, where Donna Haraway was based and it was here that I attended lectures on Gramsci. All of these events influenced my thinking, but in a way that it was not always easy to acknowledge directly.

Finally, the significance of the papers that I wrote during the time that I dedicated to the research process cannot be underestimated. Because of their importance and at the suggestion of a supervisor (Heila), I have included these papers as a second volume of the thesis entitled “Ironic musings”. I refer to these papers on occasion in this, the first volume of the thesis. However, there is also some repetition between the two volumes, since their development was simultaneous.

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I would like to thank my supervisors Heila Sisitka, Annette Gough, initially Eureta van Rensburg and unofficially Noel Gough for their encouragement and incredible support. I would also like to thank the business men and women who helped with some of the analysis, and my students who allowed me to use some of their assignments in the study. Thanks are also due to the members of my psychoanalytical dream group (I been a member for seven years). It was this group that introduced me to the psychoanalytical ideas used in this thesis. Invaluable opportunities for discussion, as well as much appreciated practical help (such as accommodation and lifts to the airport), were provided by fellow students at the Rhodes University

Education department, such as Jane Burt, Nikki Kohly, Ingrid Schudel, Soul Shave, Justin Lupele and M.J. Ketlhoiwe. Thanks also are due to Varonique Sias for help with flight and accommodation bookings. Funding for my research was gratefully received from the Mac Arthur Foundation for Peace and Justice. I would also like to thank the anonymous reviewers of my published papers for their thoughtful and useful comments. The companies for which I did consulting work, or who sent personnel to attend my courses, and who have allowed me to use certain of their documentation in this thesis, are especially due my thanks. However, I cannot name these companies to maintain their anonymity. One organisation, which I can thank by name, is the International Institute for Environment and Development (IIED). In writing a paper for IIED on discourse analysis (Price and Sathiagnan, 2005), IIED staff members Sonja Vermeulen and Duncan MacQueen helped me clarify certain aspects of my methodology. Finally, I would like to express my heartfelt gratitude towards my friends and family for their loyalty despite my frequent absence (and absent mindedness!) due to work and study commitments. Most especially amongst this group, I would like to thank Jane Fryer and Hilda Scullion. To the children in my life, Rowan, James, Laura, Becky, Dan, Gair, Andrew and Emma, I would like to say: this thesis is for you.

CHAPTER 1 INTRODUCTION

1.1 THE RESEARCH SETTING

Since 1998, I have been working as a tutor on the Rhodes/Speciss Environmental Education (EE) course for Business and Industry and, more recently, as an EE consultant in industry. My work colleagues are people in industry with a great deal of enthusiasm and commitment to improving their company's environmental performance through *inter alia* environmental education and training. Internationally, environmental issues have become one of the top business and industry agendas in recent years. In March 2006, the European Commissioner for the Environment, Stavros Dimas, gave a speech at the European Business Summit. He opened his speech with the following statement:

> *Ten years ago it would have been inconceivable that an international business summit dedicated an entire section to eco-innovation. This was seen as an exclusively "green" subject. A subject for niche manufacturers and not for mainstream consideration. But times have changed fundamentally. Eco-technologies are now recognised as the technologies of the future and I am very pleased to sit on this panel and to sit beside some of Europe's major industrialists.*

However, despite the best of intentions and the high profile interest, it is arguable that not enough is being done to protect the environment. For example, the United Nations Environment Programme's *10 Years after Rio* assessment claims that whilst there are environmental improvements in industry, these are often being overtaken by increasing demand for goods and services (UNEP, 2002:19). They state that:

> *Gains made in relative reductions or efficiencies, (i.e. per unit of production) are in many cases being overtaken by economic growth and may also be mitigated by difficult to measure 'rebound' effects, in which gains in one area are offset by new demands as a result of the gains."*

Furthermore, there is sometimes a question mark over the authenticity of industry's apparent commitment to environmental issues. Chigumira (1999), from Cairns Holdings *Ltd*, in an address to the Environmental Forum of Zimbabwe, had this to say:

> *The only time that I read environmental management initiatives for some corporations is in annual reports. But I must confess that most of what I read is cheap talk and glorified statements and not hard and real facts. What I read does not come from the hearts of the Chief Executives.*

Coleman (1997:167) has stated that in South Africa, environmental concerns are largely given lip service by businesses, especially if no competitive advantage is perceived. This problem of rhetoric of questionable intent and/or not enough supporting action has been noted by several commentators, such as Mies and Shiva (1993), Welford (1996), Sachs (1999), Klein (2000), Hansen (13 July 2006) and Naess (2006), who feel that a business-as-usual approach to environmental issues has not supplied enough impetus to deal with the environmental crisis in a meaningful way. Whilst this is not to denigrate those activities currently being undertaken to ameliorate the effect of human activities on the Earth's ecology, it is to say there is good reason to think that they are not enough. One consideration is the fact that, whilst production processes are frequently the target of environmental protection activities, often the main contribution to degradation is the consumption of products, and this aspect of the problem is rarely addressed (Taylor, 2005; Hertwich, 2005).

Gore (18 September 2006; 6 October 2006) places particular emphasis on the role of business and industry in environmental degradation. The degree of interest in Gore's approach to the environment is so great that some speculate he will run again for president on the basis of its appeal (15 January 2007). I explore the truth of the claim that there is a relationship between human activity and environmental degradation further in Vol.1, Chap. 2.1. However, suffice for this introduction, I state that, in line with my methodological assumptions, this research starts with a problem: *that environmental education in industry*[1] *is not leading to meaningful- enough advances towards environmental protection*.

[1] Although my research will focus on a particular industrial context in South Africa and Zimbabwe, because these countries are a part of the world, the relevance of the research will be to industry as a whole. This is consistent with a critical realist approach to research, in which an intensive researcher starts with any point (in this case my point is a particular situation in South Africa and Zimbabwe), and follows up the connections to the whole. In the words of Sayer (1999:25) "By situating actors in causal groups, intensive research provides a window onto larger entities, showing how the part is related to the whole; hence it need not be of purely parochial interest."

1.2 THE RESEARCH QUESTIONS

The development of my research questions depended on a thorough process of self-reflexivity and are based on a relativist epistemology and a relational, realist ontology (Cf. Vol.1, Chap. 3). Thus, in deciding the objects of my study I tried to be aware of the counter-intuitive idea that these 'things', or "quasi-objects" (Latour, 1993) were not the starting points but the results of relationships, and that "relationships are primary" (Bhaskar 1989, 1993; Callon, in Kendall and Wickham, 1999; Sayer, 1999; Haraway, 1991, 1997; Bourdieu, 1998). This approach avoids "denunciation" (Latour, 1993) because, rather than identifying *purely objective* 'others' whose behaviour is unmasked and denounced, it is "active and generous because it follows the countless meanderings of situations and networks" (Latour, 1993:45). I assumed that environmental education and training were part of the *collective* that produces environmentally unsound practice. I also decided to broaden my research to explore social inequalities as well as environmental poor practice, since the mechanisms were similar for both. I therefore asked:

1. What are the *educational/textual practices* (in business and industry) (quasi-object A) that form the preconditions for unsound *social/environmental practice* (quasi-object B), reflected in the activities of business and industry.

2. What is absent from unsound *environmental/social praxis* (quasi-object B) that provides the preconditions for the '*educational/textual practice' of business and industry* (quasi-object A)? (First two points adapted from Sayer, 1999:16).

3. Based on my answers to the above, what tentative suggestions might I make for environmental education in business and industry that might absent the preconditions and thus help us move beyond the problem? (Last point suggested by Bhaskar's "explanatory critique" in Fairclough, 1999 and Bhaskar, 1989, 1993).

Note the assumption of a two-way relationship between business practice and education/textual practice, which are considered to be mutually constituting, rather than the assumption of a unilinear causal relationship between education practice and business practice.

1.3 METHODOLOGY

A large section of this thesis is allocated to my exploration of its methodology. This is in keeping with the self- reflexive framework for the thesis. Therefore, I demonstrate how self-reflexivity works through my own example. In the end, I settle for a Critical Realist (CR) methodology, but one which differs from mainstream CR methodologies in that it explicitly attempts to address the semiotic aspects, as well as the non-semiotic aspects, of the emergence of the phenomenon in question (in this case, the emergence of the problem that environmental education does not lead to significant improvements in environmental performance). Another strategy I used to ensure reflexivity was to write papers on related aspects of my thesis along the way (collected in Volume 2). The peer review I obtained in this way has been invaluable. Additionally, writing as I went along has been an experimentation process: in some ways I have written in order to know what I think. Most significantly, the paper I wrote on quantum physics and methodology changed my primary metaphors for my methodology from those of networks and webs to those of holographs and vortexes in streams.

My preference for CR over other versions of realism, was because Roy Bhaskar, CR's originator outlines his philosophy more broadly and more systematically than other non naïve realist authors. Also, early on in my research, I realised that language, as well as non-language phenomena, were likely to be important in my analysis on environmental education in industry. Since linguist and Critical Discourse Analysis (CDA) originator, Norman Fairclough, was also a critical realist, his methodology seemed a good choice for my research. I therefore based my research methods on CDA as outlined by Chouliaraki and Fairclough (1999).

1.4 THE STYLE OF THE THESIS PRESENTATION

As mentioned in the preface, I have not begun this thesis with a typical literature review; rather my equivalent is a chapter which I call "Contextual Influences" (Vol.1, Chap. 2**).** I have taken the name for this chapter following the example of Janse van Rensburg (1995:19). My "Contextual Influences" chapter serves as the first stage of

Fairclough's (2002:125) critical realist Discourse Analysis, in which "…we need go outside the text, using academic and non academic sources to get a sense of its social context" (Fairclough, 2002:129). In Chapter 2, therefore, I situate the research context in terms of global and local trends, which include trends in: education, social theory and management. I also briefly explore global economic trends and local socio-economic trends in South Africa and Zimbabwe. I then move to Chapter 3 in which I consider alternative research methodologies in relation to my research question. Having chosen my research methodology, in Chapter 4, I outline the methods more carefully. In some ways, because the research process was not linear, it would perhaps make more sense to place the contextual influences (Chapter 2) after Chapter 4. It is merely due to the convention of writing a thesis that the contextualising chapter (Chapter 2) has been placed before the discussions of the methodology. Some readers may therefore prefer to initially skip Chapter 2 and read it only after they have read Chapters 3 and 4, where it fits more correctly with the methodology of this thesis. This may seem confusing here, but the logic of this will hopefully become clear after Chapter 4, in which I outline the steps of the method.

Through out the thesis I have employed self-reflexivity to evaluate my work. However, this self-reflexivity is most obvious in Chapter 3, where I describe the process by which I arrived at my final research questions, at the same time describing the process by which I decided on my research methodology. Readers unfamiliar with this approach may consider my questions to be 'loose' in that they changed over time. However, this is strictly in keeping with my early commitment to praxis based on the dialectic between practice and theory.

Although I have given quotes/references for the main assertions in the literature review and general arguments of the thesis, this is not done to absolutely justify what I am saying as *the* 'truth'. Finding others whose words do not contradict mine, or arguing against those whose words do, is rather a process of triangulation based on the assumption that the writing is itself a research endeavour: "Writing is an integral part of the research process, and should not be viewed as an 'add on' or a silent, untold part of the adventure" (Lotz-Sisitka and Burt, 2002:132). Additionally, there is always, at the back of my mind as a writer, the idea that the readers will be putting what I say through their own sense-making filters; thus, the readers themselves become part of the system of triangulation of my work. They should not accept my work at face value but bring their own critical thinking into play as they read it.

The structure of the thesis largely follows convention, but only in the coarsest sense. The thesis structure, whilst perhaps useful, was in some ways inappropriate. For example, the self-reflexivity, which attended my development of my research questions (to be found in the methodology section), should perhaps precede my research questions, presented in the introduction, but the nature of a conventional research thesis, which assumes "linear articulations of the theory/method/results nexus" (McWilliam, 1993:202), insists that the questions come first. I have tried to ameliorate this obfuscating linearity by liberal cross-referencing and foot-notes, these being the equivalent of hyperlinks in the three dimensional world-wide web, which might be a good metaphor for my thesis.

1.5 THE USE OF METAPHOR AND FICTION IN THE THESIS

Susan Haack considers metaphors to be the training wheels of inquiry and she describes how her analogy of a crossword puzzle was an indispensable aid in her progress towards her goal of finding an alternative to the traditionally rival theories: foundationalism and coherentism (Haack, 1998:85,86). Encouraged by Haack's example, and inspired by her quote from Davidson, who observes that "metaphors are the dreamwork of language" (Haack, 1998: 87), I have in this thesis used several metaphors.

I have also on occasion written interpretations of my data as fiction. My reason for doing this was not to insist on the postmodern relativism in which all writing is fiction in the ultimate sense; it did not mean that I was free to say anything. In the words of Haraway (1997:99), "To be 'made' is not to be 'made up'". Or in the words of Fairclough *et al*, (2001:6), "Not just anything can be constructed". Instead, I used fiction for the following reasons:

- it was an attempt to avoid the problems of analysing the words of real people in a way which may be unethical[2] (Wilbraham, 2001);

- it was a strategy to remind the reader of the epistemological relativity of my interpretation; my analysis carries with it the mark of all of my Member's Resources (MR), which are:

> (...) what people have in their heads and draw upon when they produce or interpret texts , including their knowledge of language, representations of the natural and social worlds they inhabit, values, beliefs, assumptions, etc. …they are cognitive in the sense they are in people's heads, but they are social in that they are socially generated.
> (Fairclough, 1989:24).

1.6 DEFINITIONS AND USE OF SIGNIFICANT WORDS

I would like to clarify the way in which I use the following terms: ideology; power; and education, environmental education and text.

1.6.1 **Ideology**

The Oxford dictionary of current English (1984, 7th Edition) defines ideology as, "Ideas at basis of an economic or political theory or system, or characteristics of some class etc." However, this is not the definition of 'ideology' that I have used in this thesis and to achieve this interpretation of ideology I have used instead the term 'political orientation'.

In this thesis, I have used the term 'ideology' in the way in which it is used by Hodge and Kress (1988) and Bhaskar (1993, 2000, 2002), in which it is defined as false consciousness or 'lived illusion'. I sometimes also refer to an ideology as an 'ideological complex' (following Hodge and Kress, 1988:3) to draw attention to its complexity, such that it includes contradictory versions of the world. Ideological

[2] I should add that I also analysed some of my own text in order to avoid the ethical problems of analysing, perhaps critically, other people's texts.

complexes may be maintained by dominant and non-dominant groups of people and they are characterised by performance contradictions.

1.6.2 **Power**

Following Bhaskar (1993), I use two definitions of the word 'power'. I therefore sometimes write about 'power$_1$' - to refer to transformative capacity or an actor's agency (power to act) - and 'power$_2$' - to refer to activities related to subjugation, or master-slave relationships. Power$_2$ can be considered to be an aspect of power$_1$, but not a necessary one. Some authors do not distinguish between power$_1$ and power$_2$. For example, Bhaskar (1993:154) criticises Giddens for failing to make this distinction. However, in explaining various positions on 'power', for example, when I explain different conceptions of it in the various approaches to strategic management, I use the word in the ways in which it was used by the authors whose positions I am describing. Therefore, the reader will sometimes have to use the context to decide how to interpret the word.

1.6.3 **Education, environmental education, text and social inequality**

I have used a very broad definition of 'education' for this research. I therefore do not limit my concept of education to those activities associated with conventional pedagogical practices (for example, those practices confined to a training room and to materials labelled 'educational'). Neither do I separate 'education' from processes of textual production and consumption. Instead, I have defined environmental education as any process involving the interface of people with texts with the aim of facilitating social transformation towards better environmental practice. It was necessary for me to insist on this broad definition of education because, in business and industry, much educational activity does not occur in formal settings and the line between management practices and educational practices is not always clear. My collection of texts for analysis therefore included *inter alia* meeting minutes, annual company reports and policy recommendations. In my experience, these are the sorts of texts with which environmental educators work when based in business and industry. As an illustration of this point, the text that I used at the beginning of the research was a set of recommendations for business and industry produced at the 8th International High-Level Seminar on Sustainable Consumption and Production, 15-16 November 2004, Monterrey, Mexico (UNEP, 2004). Although not typically educational, this text, by my broad definition, had many features of a curriculum since it suggested educational content aimed at achieving sustainable production and consumption.

I also realised that, as the ecofeminists have usefully pointed out, there are connections between the domination of peoples and the domination of nonhuman nature (Warren, 1990). Whilst initially my questions looked only at environmental issues, the people with whom I worked, in the analysis of the business meeting minutes, requested that I included social injustice as well. Given their request, and given that the mechanisms for environmental degradation are the same as for social inequality, I have therefore included reference to both social and environmental issues, although the focus of the thesis remains on the environment.

In this thesis, I followed van Rensburg (1995) in that I did not insist on a rigid distinction between education methodology and research methodology. This was a conscious choice on my part because I found education to be so closely entwined with knowledge and learning that it could only be separated from research theory in an artificial, rather unhelpful way. All educational methodologies are linked to research methodologies through their assumptions of epistemology. Furthermore, the trend towards removing the dichotomy between education and research has increased recently. This is because education, especially environmental education, has been influenced by the trend towards allowing learners to be involved in the construction of their knowledge. Here, the learners become researchers of sorts, and education becomes a process not of imposing knowledge, but of developing the skills by which learners/researchers construct their own knowledge.

1.7 SOME COMMENTS ON GRAMMAR AND REFERENCING OF INTERNET DOCUMENTS

Although I cannot claim complete consistency, I have tried to use active, rather than passive language, and I have avoided the usual academic convention of referring to myself as ‘the researcher’. Rather, I have referred to myself as ‘I’ in order to reclaim the personal responsibility for knowledge acquisition and to remain faithful to the conception of truth as having both transitive and intransitive components (Cf. Vol.1, Chap.4.2.1). To use the words of Lotz-Sisitka and Burt (2002:138), “The self is consistently present, rather than hidden”. In this way I have tried to get away from research as “Modest witnessing; the culture of no culture” (Haraway, 1997:3) and towards a view of research as “Mutated modest witnessing” (Haraway, 1997: 267), in which culture (and world experience in general) is present. In Haraway’s words, “The mutated modest witness cannot afford self-invisibility...” (Haraway, 1997: 268) (See also Vol. 2, Chap. 3 for an exploration of self-invisibility).

However, my use of the word ‘I’ should not be seen as supporting a postmodern morass of research relativism, or “Intensified commitment to virile modesty” (Haraway, 1997:35). Thus, my research endeavour will carry with it the mark of my entire worldly experience, but nevertheless it will still be about something ‘real’ and readers should, on the basis of this, be able to argue with me.

My use of the word ‘we’ also surprises some readers of my writing. Whilst this grammatical tactic can be a strategy to enrol readers on my side, this is not my intention. Rather, I use the word ‘we’ to indicate that I am not critiquing a group of ‘others’, implying that I am not part of this group. Therefore, I perceive myself to be continuous with the educators that I critique. Furthermore, and similar to my use of the pronoun ‘I’, I use the pronoun ‘we’ to insist on the responsibility of ‘us’ as a group, to effect certain changes. For example, consider these two sentences: “Nevertheless, categorising them is an important task if we are to develop conceptual understanding” and “Nevertheless, categorising them is an important task if conceptual understanding is to be developed”. The former is active and therefore insists on the allocation of responsibility, whereas the latter does not allocate responsibility (who is to develop the conceptual understanding?). The grammatical separation of ‘myself’ and ‘us’ from action reflects a philosophical assumption that I prefer to avoid.

Many of my references have been obtained on the internet because of the difficulties of accessing literature in Zimbabwe, given the current decline of the country's infrastructure. As a result, a significant number of quotes have no page numbers.

1.8 THE RELATIONSHIP BETWEEN VOLUMES 1 AND 2 OF THIS THESIS

Volume 2 ("Ironic musings") is a record of the thinking that I did which indirectly informed this thesis. For example, my initial CDA experimentation is documented in Vol.2, Chap. 2, in my analysis of a company environmental report. My thinking around the problem of finding an activism that is not another form of domination is explored in Vol.2, Chap. 3. In Vol.2, Chaps. 4 and 9, I consider the performance contradictions of 'participatory' approaches to education. Vol.2, Chaps. 5-7 record my exploration of methodological questions related to questions of poststructuralism, social epistemology and the potential of retroduction in environmental educational research. Vol.2, Chap. 8 documents my thinking on the use of categories to name marginal groups. I have on occasion made direct references to these papers in this thesis, but their influence was not always easy to record.

1.9 SUMMARY OF THE CHAPTERS OF VOLUME 1: BUSINESS AND INDUSTRY

Vol.1, Chap. 1 introduces the research questions and provides the background to the research endeavour. Vol. 1, Chap. 2 introduces the reader to the main trends likely to be influencing the research questions and is equivalent to the first step in Chouliaraki and Fairclough's (1999) process of CDA. Vol.1, Chap. 3 is a self-reflexive consideration of available research methodologies to find the most appropriate methodology for this research. It records how I moved from a critical poststructural orientation to research towards a relational-processual orientation. Vol.1, Chap. 4 outlines the key characteristics of critical realism (CR), more correctly called dialectical critical realism (DCR) and CDA. It also gives a detailed outline of what I actually did, based on the methodology chosen in Vol.1, Chap. 3.

Vol.1, Chap. 5 is a description and interpretation of my entry text, the "Recommendations: 8th International High-Level Seminar on Sustainable Consumption and Production, 15-16 November 2004, Monterrey, Mexico" (UNEP, 2004a). Vol.1, Chap. 6 provides an explanation of this document. In Vol.1, Chap. 7, I validated and deepened my findings by exploring how well my explanation was able to explain textual features in other, related texts. Vol.1, Chap. 8 concludes with tentative recommendations towards an ethical environmental education in business and industry.

CHAPTER 2 CONTEXTUAL INFLUENCES

2.1 INTRODUCTION

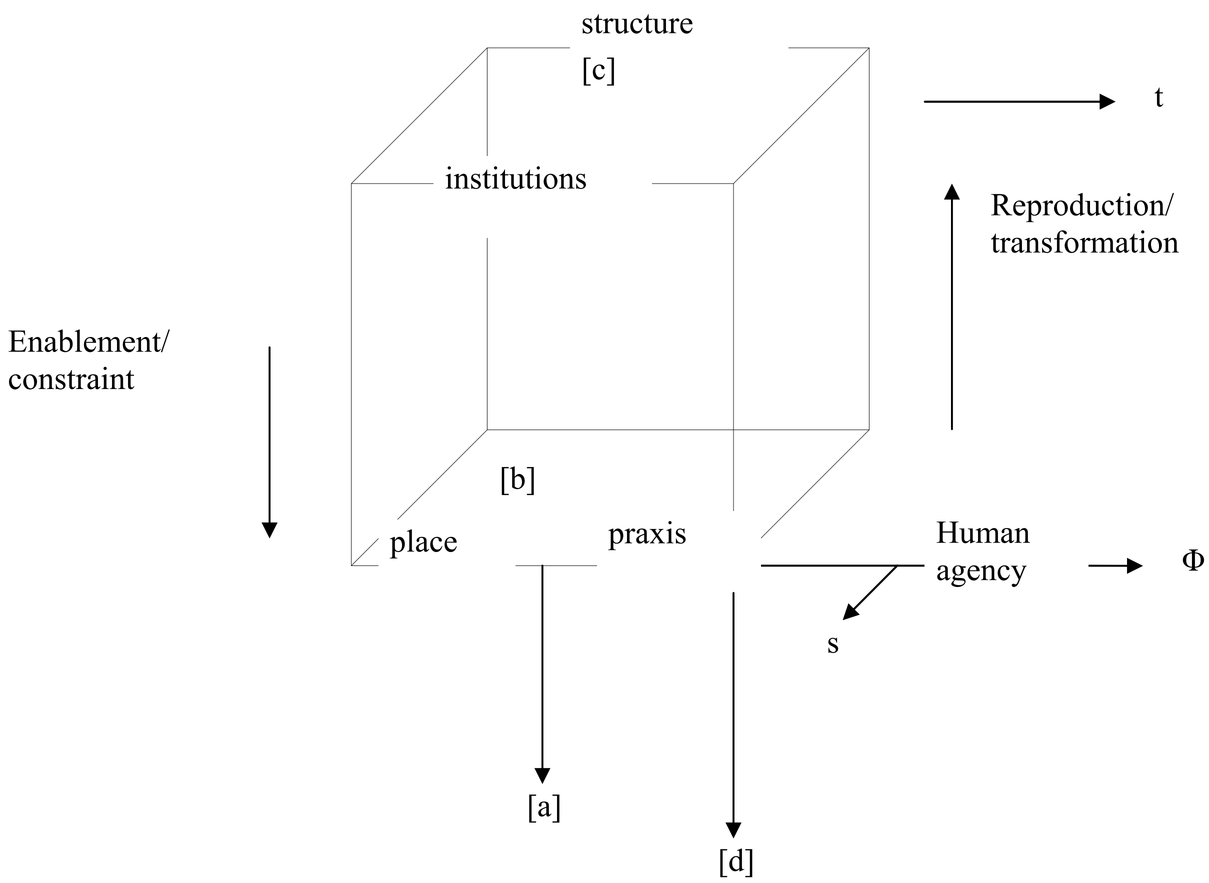
This chapter provides important background necessary for the process of my research. To some extent, it provides the 'raw materials' from which I eventually attempt to suggest explanations for the textual characteristics of my entry text. It therefore serves as the first stage in Chouliaraki and Fairclough's (1999) (Cf. Vol.1, Chap. 4.3) process of CDA.

I wrote this chapter before I carried out the discourse analysis and I therefore had to guess what background would be most relevant. According to Bhaskar (1993:160), four dialectically interdependent planes constitute social life, which together he refers to as "four-planar social being". These four planes are (a) of *material transactions with nature;* (b) of *inter-personal intra- or inter-action;* (c) of *social relations;* and (d) of *intra-subjectivity*.

I felt that these four planes (Figure 2.1) suggested a structure for ensuring that I might include information which might best provide an explanation for the text. In this chapter I therefore examine:

- the current, material, global trend of environmental degradation and the link between this and human activity (plane of material interactions with nature), and;
- the dominant global social trend, namely the trend towards the free market economy (globalisation) and other social trends particularly relevant to the topic of this thesis, namely trends in social theory, education and business management (the plane of social relations).

The other two planes of the social cube in Figure 2.1, namely the plane of personal relations and the plane of the agent's subjectivity could not be provided in this chapter because they are specific to individual texts, and therefore I addressed these planes elsewhere (Cf. Vol. 1, Chaps. 6.4 and 7.3.5).



[a] plane of material interactions with nature

[b] plane of inter(intra) subjective personal relations

[c] plane of social relations

[d] plane of subjectivity of the agent

FIGURE 2.1: Bhaskar's (1993:160) social cube, illustrating his concept of four planar social being

This chapter could perhaps be viewed as a record of the process by which I familiarised myself with the broader context of my research topic. However, I did not manage to anticipate all the information that I would need to provide the explanations of the text. I was also surprised at the degree of significance theories of agency would have in the final analysis.

In retrospect, I think I may also have provided too much information of the trends in education. However, this failing on my part is perhaps a useful indication that I did not start out this research with preconceived ideas about the outcomes. I have not attempted to neaten up this chapter post the analysis in line with my commitment to my understanding of research as rarely linear, and my commitment to keeping the research process transparent. Where I have needed further information, I have added this elsewhere in the thesis, as the need arose. However, it should also be noted that I began writing this chapter in 2002, but continued to add to the initial sections as I discovered relevant information. This also makes obvious the fact that this research cannot be presumed exhaustive. That CDA needs too much context is one of its criticisms (Myers, 2006). However, the view of this research as being part of a hologram (related to viewing the mind as part of the world) removes the seeming impossibility of including the entire context. This is because, since I am part of the world, I *cannot not* have a bodily connection to it and the problem of managing to include the entire context falls away. In other words, assuming the absence of overly determined limits, for example, as might occur if I was imprisoned, I *cannot not* have access to the all context that I need to explain the problem. I merely need to absent the constraints that limit the full realisation of my relationship to the context. Perhaps this chapter could be seen as the unfolding of particular aspects of the context that had been relatively enfolded for me, before the start of this research.

Therefore, in this chapter, I begin by giving a brief description of the current global trend towards environmental degradation and its link to human activity. I then describe the trend towards globalisation, followed by the status of environmental education and training internationally as well as regionally (focusing on Zimbabwe and South Africa). I then describe some particularly significant contextual trends. These trends are not entirely distinct, but mutually influencing, and consist of: changes in educational theory; changes in 'structure-agency' theory; and changes in management theory. For each of these trends I try to give a comment on the different ways they have been expressed internationally and regionally (again focusing on South Africa and Zimbabwe).

2.2 THE GLOBAL TREND TOWARDS ENVIRONMENTAL DEGRADATION AND ITS LINK TO HUMAN ACTIVITY

This research is based on the assumption that, currently, business and industry are not doing enough to avoid environmental degradation. Therefore, I must assume both that environmental degradation is happening, and that there is a link between industrial activity and this degradation. As I mentioned in Chapter Vol.1, Chap.1.1, there are several commentators who support me in this claim, as well as many who do not (for example, Murray, 2006). However, the greatest evidence that not enough is being done for the environment is not to be found in the language of the politicians or the environmental activists, but the testimony of the "the brute facts" (see below) of the earth and its people who are suffering the effects of poor environmental management in different ways around the world.

Some might argue that it is impossible to separate the two (the rhetoric and the brute facts) and that the facts do not exist; they are "pure sign" (Blonsky, 1985:XL). However, my position is that, whilst the "impression" of the event[3] cannot be dissociated from all the affects, interpretations, and rhetoric that have at once reflected, communicated and 'globalised' it, it is nevertheless not reducible to it and thus "we can and, I believe, must (and this duty is at once philosophical and political) distinguish between the brute fact, the 'impression' and the interpretation" (Derrida, in Borradori, 2003:88)[4].

For example, one of the 'brute facts' is that breast cancer in women has increased worldwide by 33%. One particularly suspicious correlation is between breast cancer and the use of Lindane, a known pseudo oestrogen, used widely on arable crops, particularly sugar beet. Some 70% of the UK sugar beet crop is grown in Lincolnshire and this county has the highest rate of breast cancer in Britain - 40 per cent higher than the national average (Women's Environmental Network, n.d.).

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[3] Here the 'event' would be the degradation of the Earth's ecology and the negative effects on human welfare.
[4] Please note that here we have an example of Derrida's triadic semiotics, similar to Peirce's triadicity and Bhaskar's semiotic triangle.

Another 'brute fact' is that tropical diseases are increasing in Europe and species of insects associated with warm climates are being found in regions previously considered cool (Chittenden, 2007). My methodology allows me to refer to these and my own experience of the 'brute facts'. An example of my own experience comes from what I have seen of the Mukuvisi River, which runs through the industrial areas of Harare. It is so polluted that in some places it is devoid of life. Furthermore, Lake Chivero, from which we source Harare's drinking water, is so polluted that a water expert, visiting from South Africa, commented that she would not let her dog drink it (the Mukuvisi River feeds into Lake Chivero). Additionally, working as I do with people from business and industry, I often see first hand their environmental poor practice.

Some apologists for continuing with 'business as usual' argue that theorising causal relationships between, for example, industrial activity and indicators of ecological decline, is not scientific because we cannot empirically test these theories and they are not replicable. The United States President, George Bush, has used this approach, although he has recently adjusted it slightly. He no longer claims there is no scientific evidence for global warming. Instead, he argues that whilst global warming exists, we cannot scientifically prove it is the result of human activities (Dessler, 2004). However, again in line with my chosen methodology (see particularly Vol.1, Chaps. 3 and 4; and Vol.2, Chaps. 6 and 7), I believe it is valid to retroductively theorise the existence of relationships such as the one between human activity and global warming, and check the validity of the theory through our experience of the 'brute facts'. This is based on my argument that 'explanation', as a measure of validity, can provide 'good enough', but not absolute, approximations of truth, which nevertheless allows us to act with relative, if not absolute, certainty.

2.3 GLOBALISATION

It is difficult to define globalisation because it is a strongly contested term. Proponents of globalisation, such as Antony Giddens (in Edge, 30 January 2000) tend to see it simply in terms of improvements in technology and communications, such that the world is getting smaller. They suggest that these technological advances are beneficial to the world economy and offer great opportunity. Opponents of globalisation tend to see it as a capitalist, that is, 'market-based', process that erodes the rights and well being of the less developed countries, whilst allowing the more developed countries to accumulate wealth. Opponents of globalisation frequently refer to it as the "disneyfication" of the world and equate it with increased disparities between the rich and the poor and increased social break-down as humans become alienated from themselves, each other and the environment in their struggle to make a living which leaves little time for them to care for themselves, their families and their communities. Critics also equate environmental degradation with globalisation, considering the extraction and pollution of the Earth's resources to be a consequence of capitalism's reliance on ever increasing economic growth. For example, a critic of globalisation, Bhaskar, (1993:162) states:

> *(…)when institutionalized and globalized, political power may take the form of 'The New World Order', economic power assumes the shape of the rapidly shifting structure of the global capitalist economy, moral-normative power is displaced by the sanctions of inter-national, intra-national or ethnic violence and discursive power is displayed by a homogenized ideological mediatization of 'the news' in a cultural matrix dominated by the co-existence of Disneyfication/McDonaldization, poverty and waste.*

In South Africa and Zimbabwe, there is ambivalence towards globalisation. For example, Robert Mugabe and his followers are vociferous critics of globalisation (Price, 2004a in Vol.2, Chap. 3), yet business and industry in these countries whole-heartedly embrace the capitalist (globalising) mode (Price, 2002 in Vol.2, Chap.2). The trend in both countries, mirroring that of the world, is increasing disparity between the rich and the poor. However, in Zimbabwe the disparity has recently increased dramatically due to an unprecedented decline in economic performance and social indicators. Inflation is 1000%, more than half the population lives on less than U.S. $1 a day and average life expectancy has reduced from 61 years in 1990 to 33 years in 2007 (UNICEF, 24 January 2007).

However, more nuanced discussions of globalisation are provided by Habermas and Derrida (in Borradori, 2003) and I would like to briefly describe their different positions on the matter, which also touch on the issue of the 'enlightenment'.

2.3.1 Habermas on globalisation and its relevance to his theory of communicative action

Habermas (in Borradori, 2003) is an advocate of modernity and the enlightenment project. He is therefore not automatically against globalisation, which he considers an aspect of modernity and the enlightenment. However, he agrees that globalisation as it is currently being played out in the world is beset with violence, of which perhaps the most illustrative example is the September 11 terrorist attack on the World Trade Centre by Islamic fundamentalists. Habermas suspects that the reason for the violence is that globalisation has accelerated a defensive reaction to what he defines as "the violent uprooting of traditional ways of life" such that "the West in its entirety serves as a scapegoat for the Arab world's own, very real experiences of loss" (p19). He suggests that the violence begins as distorted communication, leading to uncontrolled reciprocal mistrust and eventually a break-down in communication. The main problem is that the groups which become polarized against each other thus also become alienated from each other through systematically distorted communication. In the end they do not recognise each other as participating members of a community (p19). However, Habermas believes that this distortion would not have happened if the process of globalisation was slower and more time could be given to transparent, non manipulative communication which would have allowed the different groups to better understand each other and to reach consensus.

To illustrate his point, Habermas argues that peaceful, well-to-do societies, which nevertheless contain structural violence (e.g. discrimination), do not 'explode' with the sort of violence we are witnessing between global factions, because daily life is structured by communicative practices that allow people to understand each other and in this way they implicitly agree on the rules of the culture, society and community within which they function (p64).

Habermas suggests that the solution to the current problems of globalisation are: that the Western coalition works on its self-representation such that developing countries stop perceiving it as imperialist; and that it gives substance to this marketising strategy with a real change in its consumerist, imperialist tendencies (p64). This would then make it possible for all players to see each other as community members and they could then embark on the process of mutual perspective-taking in which they can develop an horizon of common background assumptions. This process should ideally result in intersubjectively shared interpretative consensus, as distinct from consensus due to simply adopting or converting each other's positions (the former, Habermas claims, distinguishes his idea of 'consensus' from the neopragmatism of Rorty and MacIntyre)(p37). Habermas avoids criticisms that his position would be preservative (the dominant consensus of a community must prevail, which is it could be argued would reproduce the *status quo*) by insisting that each community find its set of moral convictions for it self and for *its own time.* Communicative action thus becomes emancipatory and avoids the conservatism of traditionalism because of its historicity. Furthermore, Habermas prevents such conservatism by insisting that communicative action employ irony (Cf.Vol.2, Chap 1.1), described by Finlay, (1990:79) as a strategic discursive distortion which disrupts or breaks with present habits of discursivity.

2.3.2 **Derrida and globalisation**

Unlike Habermas, for whom globalisation simply needs to be reformed, Derrida (in Borradori, 2003:121) considers that modernity, and its globalisation process, contains an inherent flaw that he calls an autoimmune condition, implying the spontaneous suicide of the defence mechanism supposed to protect the organism from external aggression. Derrida further elaborates that globalisation is a contradictory process, for two reasons. First, it does not take place in the places and at the moment it is said to take place. Second, everywhere that it takes place without taking place, it is for better and for worse.

2.3.2.1 *Globalisation is not taking place*

By making this claim, Derrida is drawing attention to the fact that, despite pro-globalisation commentators claims that globalisation levels the playing field and equality of opportunity through teletechnologies, there has never before been such global inequality, for example in the form of poverty, malnutrition, ecological disaster and epidemics. Furthermore, technological inequality counters claims for the equalising potential of globalisation, since only 5% of the world's people have access to the internet. For Derrida, only certain countries, and in these countries, only certain classes, are benefiting from globalisation (p122). Thus globalisation is:

> *a simulacrum, a rhetorical artifice or weapon that dissimulates a growing imbalance, a new opacity, a garrulous and hypermediatized noncomunication, a tremendous accumulation of wealth, means of production, teletechnologies, and sophisticated military weapons, and the appropriation of all these powers by a small number of states or international corporations.*
> (p123).

From this point of view, globalisation is not taking place.

2.3.2.2 *Where it is believed globalisation is taking place, it is for better and for worse*

Globalisation is advantageous in that discourses, knowledge and models can be transmitted faster, therefore democratisation has more of a chance, democratic developments in Eastern Europe owe much to increased telecommunication and non governmental organisations are more numerous and better known. Furthermore, there is perhaps reason to celebrate the potential to become a world citizen, but this is a mixed advantage and associated with the disadvantages, since to be a part of a state is to be a part of its repressive tendencies as well as it protection. Derrida reminds us of the aporia of the state as at once remedy and poison (p124). I would offer an example of this in terms of international trade in developing countries: the fact of globalisation makes it possible for developing countries to participate in international trade, but at the same time, their participation is curtailed by trade restrictions which prejudice their success.

Globalisation is also disadvantageous because it allows perversions of technological advances (mastery of living beings, e-mail, internet, mobile phones) into weapons of mass destruction, and allows these perversions to be transmitted widely all the more speedily. For example, between the two war leaders 'bin Laden' and 'Bush', the process of disseminating propaganda is greatly accelerated.

Therefore, Derrida would suggest that what is useful about globalisation is also what is damaging about it (p124).

2.4 THE INTERNATIONAL STATUS OF ENVIRONMENTAL EDUCATION IN BUSINESS AND INDUSTRY

I have already mentioned that environmental issues have become one of the top business and industry agendas in recent years. This has resulted in a dramatic increase in interest in formal environmental training; for example, it is a mandatory component of Environmental Management Systems, such as ISO 14001 (1996). As a result, the numbers of environmental training courses has also significantly increased. There has also been a marked rise in production and consumption of environmentally-related texts, for example, magazine articles and environmental sections in annual reports.

2.5 STATUS OF ENVIRONMENTAL EDUCATION AND TRAINING FOR INDUSTRY IN SOUTH AFRICA AND ZIMBABWE

Although both countries have well-established environmental legislation and a variety of environmental service organisations (Hanks, 2002), it is generally agreed that environmental issues are a low priority in most companies. At least in part, this can be explained by poor enforcement of legislation (Coleman, 1997). It is also mainly those companies which have an export market, or whose parent company is from a developed country, who are likely to implement an environmental management plan, and thus training (Coleman, 1997). However, there are notable exceptions to this generalisation; for example, Surgimed, Zimbabwe who serve primarily a local market and are wholly locally owned.

2.6 CHANGES IN EDUCATION THEORY

Contemporary education theorists describe the trend in these areas as away from the naïve assumption of a simple correspondence between reality and what we say about reality (naïve realism), towards various mixtures of theory based on critical, phenomenological and poststructuralist world views where the simple correlation between reality and what we say about it is problematised (for example, Cherryholmes, 1988; Fien, 1993; Gough, 2002; Gough, 1997; Janse van Rensburg, 1995; Janse van Rensburg and O'Donoghue, 2000; Lather, 1991; Popkewitz, 1984, 1988; Popkewitz and Brennan, 1998; Usher, *et al*, 1997). These learning theories have been influenced by psychology, linguistics and social theory and have been described as "…contextually derived and inherently ambivalent sets of ideas which are used at times in contradictory ways to probe and justify educational practices and research" (Janse van Rensburg and O'Donoghue, 2000:1). Given their complexity, ambivalence, contradictions and overlap, attempting to divide them into neat categories is difficult. Nevertheless, categorising them is an important task if we are to develop our conceptual understanding. I therefore warn against reifying these categories, yet acknowledge their necessity.

I describe the different educational and educational research theories using, very loosely as a starting point, the classifications by Huckle (1993:47), Janse van Rensburg (1995:80), Kemmis *et al*, (1983:11-14) and Lather (1991:7). All of these authors base their classification system on Habermas' (1972) theory of knowledge constitutive interests. The key features that I draw on to distinguish amongst the educational theories are their ontological and epistemological assumptions. My classification, I reiterate, is a simplified summary. It is not intended to be exhaustive but merely gives a general impression of the trends in education and educational research. My main categories, expanded upon below and illustrated in Figure 2.2, include:

- Positivist theories that objectivize reality
- Theories that split reality (commonly underpin liberal humanist theories)
- Irrealist (idealist) theories that subjectivize reality (associated with postmodern learning theory)
- Those learning theories based on an illicit mixture of: irrealist, realist, objectivist, subjectivist, 'split reality' positions
- Qualified realist (or qualified idealist) theories – relational-processual theories.

2.6.1 **Positivist theories that objectivize reality**

These theories assume that a positive reality is out there to be objectively discovered and deny the existence of negative absences such as the past, or potential events. This position is thus linked to empiricism and actualism, that is, it assumes that only measurable things, or actual events, are real. This position includes:

- *Behaviourist theories,* featuring for example teaching with incentives and disincentives, and the original outcomes based education; also certain
- *Critical theories* based on Marxist empirical dialectics leading to 'the' scientific truth (that is, they deny the existence of a plurality of truth depending on context, assuming an objective scientific truth which will be achieved if one follows the Marxist dialectic).

2.6.1.1 *Behaviourist theories*

Teachers are mechanical conduits of found knowledge whose task, especially in environmental education, is to 'raise awareness' about environmental issues, with an underlying assumption that this will lead to a change in behaviour. The correct behaviours are those recommended by experts. This is based on the modernist ideal of engineering society through education (for example, Hungerford and Volk, 1990). The strategies we associate with behaviourism include: provision of incentives/disincentives (inspired by Pavlov, researcher of animal behaviour, and expanded upon by Watson, e.g. 1913 and Skinner, e.g. 1968, 1984); teaching according to preset objectives and outcomes (for example, Tyler, 1949 and Bloom, 1956), teaching according to developmental stages and experiential learning (based on cognitive work by, for example, Piaget, in Varma and Williams, 1976; Kohlberg, in Crain, 1985 and Vygotsky, 1962).

a) Learning theories when the mind is separated from the world

b) Learning theory when the mind and the world are not separated

Positivist theories that objectivize reality

Also linked to empiricism, assuming only that which is measurable is real. Includes **behaviourism**, featuring for e.g. teaching with incentives and disincentives, and the original outcomes based education. Also education based on Marxist empirical dialectics leading to 'the' scientific truth

When we put the world and the mind back together….

Mixed methodology theories, based on an illicit mixture of: irrealist, realist, objectivist, subjectivist, 'split reality' positions, e.g. **critical phenomenological theories, such as those based on Habermas' Kantian pragmatics** or **critical poststructuralist (post-modernist) theories**. Often, not necessarily, the underlying methodology of 'mixed methods' teaching

Theories that split reality into the noumenal and phenomenal worlds (phenomenology), or social/physical worlds (hermeneutics), namely, some **liberal humanist theories.**

Irrealist (idealist) theories that subjectivize reality. Knowledge is relativised and the existence of truth is denied, namely, **postmodern educational theories** and **some pragmatist liberal humanist theories,** especially those influenced by Dewey. Also some **critical theories,** especially those influenced by the early Frankfurt School.

Qualified realist (or qualified idealist) theories

Inspired by, for example, Roy Bhaskar (critical realism), Charles Sanders Peirce (ideal realism), Bruno Latour (realistic realism) and Donna Haraway (in her 'naturecultures', arguably, 'nature' is the realism and 'culture' the idealism, she also mentions agential realism). These theories are not well enough established to present as a well defined body of educational theory. Called **'relational-process' theories** in this text. Educational positions by Vygotsky , Shipway, Collier and, in South Africa, O'Donoghue, may be relevant.

Neither the world nor the mind is the ultimate authority. Truth is co-constructed by the mind and the world, where the world is made up of networks or relationships of interlinked, mutually constructing, humans and non-humans. Objectivity is possible but qualified.

FIGURE 2.2: A possible categorization of learning theory according to assumptions of ontology and epistemology .

In behaviourist approaches to learning, researchers objectively find the truth in the environment which expert teachers then disseminate. The mind is assumed to be separate from the world. Ultimately the world-out-there is the authority; it is the truth to which our knowledge immediately corresponds: approaches to knowledge which make this assumption are sometimes called correspondence theories (e.g. Bhaskar, 1993). Therefore, we *find* knowledge in the environment. This requires complete objectivity from researchers who attempt to avoid attaching their personal biases to their research endeavours, i.e. they are “modest witnesses” (Haraway, 1997:3). Empirically based science is assumed to be the only legitimate and reliable way to obtain knowledge. More recently, in the post-positivist trend, this empiricism has become Popperian: we cannot know anything positively, although we can know things in the negative sense, through falsification (Schofield Clark, 2004). Only concepts that which we can formulate into scientific, empirically testable (falsifiable) questions are contenders for legitimate scientific knowledge (Popper, 1959).

Teaching methods associated with the behaviourist approach to learning tend to over-emphasize ‘transference’ modes of teaching. The teacher tries to ‘give’ the student knowledge, which is separate from them and can be learned by rote (if it is theoretical knowledge) and through practice (if it the knowledge is a kind of skill). Therefore, we tend to see the teacher at the front of the classroom, first imparting knowledge and later providing opportunities for students to demonstrate they have absorbed what has been imparted to them, usually through tests that examine measurable outputs.

Latter day behaviourism, influenced by the cognitive theories of Piaget and Vygotsky, may include ‘hands on’ experiential learning situations and group work. The influence of these thinkers on behaviourist methods is ironic since both of these cognitive theorists were non positivist: Piaget was Kantian and Vygotsky was relational-processual. Nevertheless, when experiential learning and group work (inspired by Piaget and Vygotsky) occur in the context of ‘knowledge + attitude change = behaviour change’, they remain consistent with the positivism of behaviourism.

2.6.1.2 *Critical theories based on crude dialectical materialist Marxist founding principles*

When talking of truth, Marx and Engels spoke of 'images' and 'copies', and Lenin of 'photographs', as well as reflections (Bhaskar, 1993:217). These metaphors indicate that, for the founders of the Marx tradition, truth meant a simple correspondence with reality. Education based on Marx-Leninism has the conception that most of society lives in a falsely theorised world (false consciousness) and that the task of education is to liberate people by providing a true picture of the world. Access to this true picture is to be found through close scientific, positivistic, empirical observation of reality.

Many educational methodologies claim to be 'critical'; but these days few of them fall into this positivistic category. Apart from some examples of positivistic Marxism being integrated into mainstream education, such as in Tanzania and Zimbabwe, we rarely, today, come across pure forms of this approach to education. Largely, this is because social science, of which education is a subset, has strongly critiqued positivism. However, 'Action Research' or 'Participatory Educational Processes' often involve a mixture of positivistic and irrealist approaches to education, in which the assumption of a purely positive reality is considered a pragmatic necessity. Practitioners may claim to be anti-positivisitic, but positivism is nevertheless secreted unobtrusively into their work. An example is the latter day critical theorist Habermas (in Ewert, 1991), who claims he is not positivistic yet surreptitiously introduces positivism back into his elaboration of knowledge-constitutive interests under the category of knowledge to predict and control (Bhaskar, 2000:23,24).

In critical pedagogy, t*eachers are encouraged to reveal the structures of oppression:* they are change agents leading to empowerment of the masses. The main problems to be overcome, to ensure a healthy environment, are hegemony and social/environmental injustice. Therefore, this approach aims to over-throw social structures which perpetuate inequalities/environmental damage and to stimulate/lead people towards their empowerment. Methods associated with positivistic critical approaches to education include consciousness raising, sharing basic knowledge and galvanising others to develop their own capacity and empower themselves.

2.6.2 Theories that split reality (commonly underpin liberal humanist theories)

Reality is split into the *noumenal* (consisting of limiting conceptions derived from intuitive intelligence) and *phenomenal* worlds (the world of science, in which nature conforms to our method of conceiving it) (phenomenology), or social/physical worlds (hermeneutics). Reality is thus seen as something *interpreted*, never simply found. Hence these approaches are sometimes grouped together and called 'interpretivist' theories and are associated with liberal humanist approaches to learning.

These interpretivist traditions assume that knowledge is not found by everyone in the same way and that objectivity is impossible. There is no absolute truth, *only our individual truths*, related to an existentialist philosophy (for example, Sartre, 1965) in which one's mind is part of one's world, but separate from others' worlds (for example, Wals, 1991). Also influential is Kant's separation of reality into the noumenal world and phenomenal world, significantly interpreted for classical education by Froebel (1900). This is a difficult category to define in terms of its underlying philosophy because of its long period of dominance in Western education (arguably starting with Rousseau b.1712 – 1778) and its eclectic association with a large number of thinkers.

In these liberal humanist traditions, *teachers are facilitators:* they help students to find their own truth. Lack of self-awareness and personal responsibility are perceived as the problems that result in environmentally irresponsible behaviour. Teachers are therefore tasked to allow students to discover themselves, develop personal responsibility and grow to their fullest potential. The student is the authority; therefore, this form of education is often called 'child-centred' and is based on faith in the potential of each child. The teacher may clarify but never challenge the student's knowledge. This position is illustrated by a quote from Montessori (in Rusk, 1979:212).

> *(…) instead of facility of speech (the teacher) has to acquire the power of silence; instead of teaching she has to observe; instead of the proud dignity of one who claims to be infallible she assumes the vesture of humility.*

Thus, the teacher aims to inspire and facilitate enquiry. As with latter-day behaviourism, latter-day versions of this approach are also associated with aspects of cognitive and experiential learning, but unlike behaviourism, it does not use these concepts to socially engineer preconceived outcomes. Instead, this approach is more open-ended, non-recipe based, non-authoritarian and non-rote. Perhaps a key feature of this educational methodology is its refusal to see children as empty vessels to be filled with knowledge. Its associated methods include self-directed learning projects and discovery methods. Relevant classical educators in the liberal humanist vein include Rousseau (1762), Froebel (1905), Montessori (1916, 1949) and Lawton (1973).

2.6.3 **Irrealist (idealist) theories that subjectivize reality (associated with postmodern learning theory)**

All knowledge is relativised (meaning there is no way to tell the difference between better and worse versions of truth). Apart from some extreme versions in which there is no reality beyond words and thus no possibility of truth, reality is considered to be whatever the societal reality suggests is true (consensualism or conventionalism) or it is whatever 'truth' has practical, useful consequences (vulgar pragmatics). It may also be whatever is considered to be 'beautiful' (aesthetism) or whatever fits with current formulations of truth (coherentism). Irrealist theories include:

- Postmodern learning theories, especially those inspired by Nietzsche and Foucault;
- Pragmatic liberal humanist theories, especially those inspired by James; also some
- Critical theories, especially those influenced by the Frankfurt School.

2.6.3.1 *Postmodern learning theories*

Currently, postmodern learning theories are influential in educational circles, although because of the problems they pose with regard to relativism (we cannot choose between better or worse knowledge) and agency (our ability to act and thus reproduce or transform our world), they are rarely found in their pure form. Therefore, what follows could perhaps be described as something of a caricature of postmodern education, or an exaggeration, useful because it illustrates why postmodernism is usually mixed with other positions.

A key concept in postmodern education is an approach to social constructionism, namely that all knowledge is invented or "constructed" in the minds of people. Knowledge is not discovered as claimed by modernists (positivists). Thus, the concepts that teachers teach and that students learn do not correspond to "Reality”. People, through language, create their knowledge which is not considered ‘true’ in an objective sense. “Or, in the words of a poster I once saw in an English (language) classroom, “the universe is not made of atoms - it is made of stories” (Gough, 1992, no pagination). No version of reality can claim to have more objective authority because all versions are merely human creations.

For further information on postmodernism and education, the following authors, as suggested below by Pillow (2000), are ‘must-reads’:

- Cherryholmes (1988) and Usher and Edwards (1994) provide working examples of how postmodern theory can be applied to educational issues;
- Stronach and MacLure (1997), while noting that any introduction to a postmodern book will be "disappointing," provide the reader with an introduction to postmodernism and follow with chapters that offer working examples of applications of postmodern theory and methodologies to educational issues;
- Popkewitz and Brennan's (1998) book, “Foucault's challenge: discourse, knowledge, and power in education”, also does the work of tracing the impact of postmodern theory in education;
- St.Pierre and Pillow (2000) provide insight into the work of feminist poststructural research in education.

Many postmodern researchers forefront the necessity of continuing to do their work “even while making visible the myriad of ways such work is (un)graspable, (im)possible, (un)intelligible, (un)knowable, and provisional" (Pillow, 2000:22). Proponents perceive this commitment to irrationalism not as a failure of postmodernism but as the work of postmodernism (Pillow, 2000). A pure underpinning of postmodernism is therefore rare in environmental education because it offers little in the way of guidance towards social transformation. Usually, thinkers inspired by postmodernism must use a pragmatic mixture of ideas to allow for action. See section 4 below for a description of these mixtures.

2.6.3.2 *Pragmatic theories, especially those inspired by William James*

In the James-style 'pragmatist' tradition (James, 1906), knowledge is judged not by its correspondence to nature, but by the action and physical change that it brings about. In education, Dewey is the most well-known proponent of this position (Rusk, 1979). Although he makes the disclaimer that he disagrees with James, for whom "the deed was father to the thought" (Rusk, 1979:221), it appears that nevertheless, his writing is scarcely, if at all distinguishable from James (Rusk, 1979:222).

This pragmatism moves from the truism that there is no simple correspondence between reality and knowledge to the questionable position that we can therefore only validate truth claims by their consequences. A problem with this position is: who is to decide what are the best consequences? Cherryholmes (1988) implies this position although he attempts to avoid vulgar pragmatism by suggesting a 'critical pragmatism' instead. However, he fails to explain how such a 'critical pragmatism' avoids merely a shifting vulgar pragmatism from a dominant interpretation to a non-dominant (critical) interpretation. He thus implies that pragmatism is acceptable if it comes from a marginal view, but vulgar if it reflects the dominant view. Doll (1993; cited in Janse van Rensburg, 1995:167) is another educational theorist associated with this kind of pragmatism.

2.6.3.3 **Critical theories, especially those influenced by Gramsci and the Frankfurt School**

In early Marxist pedagogy, a commitment to emancipation was grounded in 'dialectical materialism' accounts in which knowledge acquisition is an empirical dialectical process which ultimately leads to ‘the’ scientific truth (Bhaskar, 1989: 126).

However, as irrealist philosophies began to emerge, their influence also began to be felt in Marxist circles. For example, there are some critical theory accounts in which the very idea of reality-in-itself is seen as false, and the objectivity of things is seen as the result of common and shared subjectivity of people (Gramsci, in Bhaskar, 1989:140). Similarly, Adorno from the Frankfurt School explicitly abandoned attempts to transform theory into emancipatory practice, since he could not justify such theory in terms of ‘truth’ (Levy *et al*, 2001:5).

The early Frankfurt School, originally a Marxist think-tank funded by the wealthy son of a German millionaire, helped create an innovative brand of philosophically oriented radical social science known as ‘critical theory’. The institute was founded in the early 1920s with the purpose of promoting the development of radical intellectual ideas not controlled by traditional Marxist and social democratic parties or academic disciplines (Jay, in McLaughlin, 1999). Critical theory has had an enormous influence on post–1960s intellectual life, and today is most commonly associated with Theodor Adorno, Max Horkheimer, Herbert Marcuse, Walter Benjamin and Jürgen Habermas. Erich Fromm’s central role in the early development of the Frankfurt School has largely been ignored in the literature (McLaughlin, 1999), although his writings strongly influenced Paolo Freire, whose book ‘Pedagogy of the Oppressed’ (1970) has played a central role in much critical theory education.

Examples of educators quoted in environmental education literature, who claim a connection to critical theory, include Ewert (1991), Fien (1993), Freire (1970), Giroux (1983), Gibson (1986), Robottom (1987) and Cornbleth (1990). Given the difficulty of action attached to irrealist theories, most of these theorists, like Habermas, may have (varying degrees of) a stated commitment to irrealism but must counter this with (varying degrees of) an implicit or explicit positivism. Although, for the sake of clarity, the critical theorists are described separately, most of them would in practice fall into one of the ‘mixed’ categories below.

2.6.4 **Those learning theories based on an illicit mixture positions (associated with socially critical learning theory)**

Many educational theorists, try to avoid the problems of positivism, split reality and irrealist approaches by attempting a combination of theories. Thus, in education, we find:

- Critical phenomenological theories - mix critical and phenomenological theories;
- Critical poststructuralist/postmodernist theories - mix critical and postmodern theories, and;
- 'Mixed methods' theories - suggest a pragmatic commitment to any methodology depending on the required outcome.

2.6.4.1 *Critical phenomenological theories*

Within environmental education, a key thinker associated with critical phenomenology is Arjen Wals. Wals (1993, no pagination) mixes critical and interpretative theories, as we can see in this quote where he writes:

> *In seeking answers to resolving the apparent contradictions between the rigorous application of the conventional scientific method and the whole idea of environmental education, the author has arrived at the crossroads of interpretive and critical science traditions in the form of critical phenomenology.*

For Wals (1993), critical phenomenology has elements of both:

- action research - as a methodology - for which he suggests further reading of Lewin,(1946), Kemmis, (1980) and Carr (1989), and;
- phenomenology - as a way to come to understand the everyday world of experience through language – for which he suggests further reading of Spiegelberg (1960), Husserl (1970), Giorgi (1976); Barritt *et al*, (1985) and Wittgenstein (1985).

Action research typically involves a feedback mechanism, in which the participants and their teacher investigate an environmental problem, identify solutions to the problem, democratically (in certain conceptions) choose one of those solutions, implement it, then monitor progress with regular meetings to discuss the success of the intervention and if necessary to make changes.

Carr and Kemmis (1986: 162) provide a useful definition of action research:

> *Action research is simply a form of self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own practices, their understanding of these practices, and the situations in which the practices are carried out*

Phenomenology, in critical phenomenology, would contribute the manner in which information would be gathered to feed into the action research cycle. Therefore, information would be gathered from the participants themselves using interpretative methods.

A possible critique of critical phenomenology would be that teachers could not challenge the participants' conceptions, thus, theoretically, participants could insist on a way forward that the teachers might have good evidence against, yet by the dictates of the methodology, they must set aside their own constructions of the problem and consider only the participants' constructions. Thus, there is relativism at play here, in that the absolute truth is the truth of the participants and their world, which is forever split from that of their teacher.

Another key thinker associated with the mixture of phenomenology and positivism is the latter day member of the Frankfurt School, Habermas (in Borradori, 2003; and in Ewert, 1991). Habermas's later work outlines his theory of Kantian pragmatism in which he enlists the help of the Kantian inspired life-world and associated deontological ethics, in order to avoid the relativism of a consensualist account of reality. However, although Habermas claims he is not positivistic, he surreptitiously introduces positivism back into his elaboration of knowledge-constitutive interests under the category of knowledge to predict and control (Bhaskar, 2000:23,24; Bhaskar, 2002:63). Rizvi (2006) concurs with Bhaskar and states that, "Habermas has implicitly taken on - contravening his explicit self-understanding - the ontological picture that stands at the heart of his positivistic and strongly naturalistic enemies." Therefore, although Habermas usefully criticises positivism, because he does not offer an ontological alternative, he ends up with a positivistic approach anyway.

2.6.4.2 *Critical poststructuralist (critical postmodernist) theories.*

This mix of theories is often found under the name 'socially critical': it is the place where critical pedagogy intersects post structuralism. It also includes some feminist and postmodern critical theories and critical constructivism.

In this approach, *teachers mediate between individual and human collective (popular) constructions of the world: they help students negotiate collective truths.* "…theory becomes an expression and elaboration of progressive popular feelings rather than abstract frameworks imposed by intellectuals on the messy complexity of lived experience" (Lather, 1991:62).

This position assumes that the key problems to be overcome to create a better world include: social injustice, hidden power imbalances, lack of understanding about the constructed nature of reality, belief in 'grand theories' and belief in science as the ultimate authority. However, drawing largely from the work of Michel Foucault, the possibility of emancipatory action is questioned: some proponents of this approach would claim that we have entered "postemancipatory" times (St. Pierre, 2000:477).

A characteristic of this approach is therefore an aporia, a question for which there is no solution, which is: How the very efforts of educators to liberate may perpetuate relations of dominance? (Lather, 1991:16) This aporia is the result of an engagement with poststructuralism, and its scepticism of 'grand theories' and 'emancipation', along side the intuition that, nevertheless, we need to change unfair power-relations (i.e. we need emancipation). "This 'critical appropriation of postmodernism' (…) grows out of the dilemma of those intellectuals who, while committed to emancipatory discourse and modernist strategies (e.g. consciousness raising), are yet engaged by postmodernism to try to use it in the interests of emancipation." (Lather, 1991:2).

The methods of the socially critical/reflexive practitioner are aimed at deconstructing 'reality', especially the 'reality' of social structures which perpetuate hegemony. In praxis/community-based formulations this allows reconstruction through community action and diverse, contextualised solutions to local problems. Therefore, this approach challenges received wisdom through reflexivity, including self-reflexivity, articulation of community needs, action research, democratisation, participatory research, praxis, co-learning, dialogue (Lather, 1991). Practitioners avoid possibly imposing upon or dominating the people with whom they are working, by using consensus, interaction and ends to determine action (e.g., Doll in Janse van Rensburg, 1995:167). Self-reflexivity is another important technique used to avoid falling into oppressive interpretations of data: "Self-reflexivity becomes increasingly central as I attempt to make sense of my interaction with the data and the politics of creating meaning" (Lather, 1991:79).

In the socially critical approach, a strict adherence to postmodern tenets makes action difficult: "The question of action, however, remains largely under-addressed within postmodern discourse" (Lather, 1991:12). Therefore, practitioners convinced by poststructuralism, but working in the field of environmental education where there is a need for action, must add a theory of action to their poststructural position.

This requires an epistemological sleight of hand. Truth thus tends to become co-constructed socially by communities and/or determined by ends. That is, there are often consensualist and/or James-style pragmatics implied in the epistemology. The advantage of these epistemologies is that they retain the poststructural scepticism of foundations whilst allowing for the construction of 'knowledge' that allows action: truth becomes what people agree it is (for example, Rorty, in Haack 1998:32; Chambers, 1997) or what will achieve their aims (for example, Doll in Janse van Rensburg, 1995:169). Cherryholmes (1999) argues, that to allow action, a James/Dewey-style pragmatics should take over where poststructuralism leaves off; Cherryholmes also relates truth to a pragmatic 'aesthetics'. The feminist researcher Harding, (in Haack, 1998:97), claims that oppressed groups have a better idea of the truth and therefore their knowledge is epistemically more sound than that of the oppressors. However, there are severe criticisms of these sorts of pragmatism, since who is to decide what is best for society or what is aesthetic? Haraway disagreed with

Harding on this matter. She wrote, " Subjugation is not grounds for an ontology; it might be a visual clue". Relevant thinkers with a tendency towards this questionable pragmatic position include, for example, Popewitz, (1984), Tripp, (1990), Lather (1991), Sauve (1999), Usher and Edwards (1994). There is an overlap between these thinkers and those mentioned in the section on postmodernism.

The widespread influence of extreme poststructuralism, with its relativist conception of reality, has meant that these 'socially-critical' models have become associated with 'participatory' training methods in development contexts. The relativist conception of reality is implied by, for example, participation guru Robert Chamber's (1997) book entitled "Whose reality Counts? Putting the last first". However, as the aporia mentioned above suggests, and if current criticisms are to be believed, it seems that despite the best of intentions, these participatory approaches to training and development do indeed tend to maintain oppressive relations (Cooke and Kothari, 2001; Rahnema, 1992).

2.6.4.3 *"Mixed methods' (more correctly 'mixed methodology') education which we could term the 'Nike…Just do it!' approach.*

Many postmodern-inspired educators, exhausted by the impossibility of achieving logical consistency in their theory and practice (indeed, postmodernism states that such consistency is neither attainable nor desirable) relax into a 'just do it' attitude. They suggest that the issues of lucidity become non-issues in the course of practice. Just 'doing it' will dissolve the contradictions inherent in their methodological position. They abandon attempts to present a sensible methodology for their practice and instead refer to 'praxis', as interpreted by Habermas as "practical reason" (in Ewert, 1991), to justify their approach.

What tends to happen in this misconception of praxis is that the practitioners are able to call on a variety of pragmatisms to justify their particular agendas at any given time. For example, they have access to the idea that truth is 'what the majority of people say it is', truth is 'what is best for society', 'truth is what the marginalized people say it is', 'truth is what is beautiful', or 'truth is an empirically validated reality' depending on which of the answers to these questions best suit their agenda.

Environmental educators developing curriculum based on the Nike approach will perhaps use statistics to indicate the wide spread extent of a pollution problem and identify industrialists as the cause of the pollution (positivism). They might then suggest that the way to deal with the problem is through a participatory process of community involvement (truth about the best way forward is based on what people say it is). All will be well until the community begin to suggest a way forward contrary to that preferred by the educators, in which case they might surreptitiously steer the process in the 'right' direction. If they are aware they are doing this at all, they might justify their actions in terms of 'what is best for society' and refer to Foucault whose work can be interpreted as the cynical claim that knowledge is all about power anyway, so one might as well just do one's best to get one's own agenda on the table before someone else.

There is another approach to mixed methods which does not suffer from the problems of the Nike approach. Mentioned above was the idea that the Nike approach was more correctly termed 'mixed methodology' teaching. The difference between a method and a methodology is important here. A methodology is the overall philosophy that guides the practitioner in all her educational choices, from her process of curriculum development, through to her presentation methods and her assessment. 'Behaviourist', 'liberal humanist', and 'postmodernist' are words we might use to describe our different *methodologies*. However, *methods* are techniques, such as group work, role play, lectures, field work. Some of these methods have come to be strongly associated with certain methodologies. For example, lectures have come to be associated with behaviourist 'transmission' style teaching.

It is possible to mix methods without requiring that we mix our methodologies, and in this context, mixed methods teaching is acceptable. Note how in the qualified realist approach described below, methods usually associated with phenomenology (starting with the lived experience of the participants, such as in field work activities which relate directly to the participants' experiences) and those usually associated with postmodernism (methods which refuse a monocular view of truth, such as role plays which allow different versions of truth to be shared and discussed) are possible without compromising the teacher's over-all methodological commitments.

2.6.5 Qualified realist (or qualified idealist) theories – relational-processual theories

Neither the world nor the mind is the ultimate authority. Truth is co-constructed by the mind and the world, where the world is made up of networks or relationships of interlinked, mutually constructing, humans and non-humans. Objectivity is possible but qualified and objects are seen as processes first and objects second. It includes educational approaches inspired by, for example, Bhaskar (critical realism), Peirce (ideal realism), Latour (realistic realism), Bourdieu (perspectival realism), Haraway (who mentions agential realism, and in her 'naturecultures', arguably, 'nature' is the realism and 'culture' the idealism) and Elias (who refused philosophical classifications, but nevertheless his 'process sociology', whilst at times overly determinist, is perhaps not incompatible with these positions). Elias has been interpreted within a Southern African educational context by O'Donoghue (1996) and O'Donoghue and Russo (2004). These theories are not well enough established to present as a well defined body of learning theory. They are called relational - processual theories in this text.

This approach is relatively new, although I would argue that much of the relational-processual work of Vygotsky (e.g. 1961, 1978) is relevant. Here I offer some suggestions with regard to the sorts of educational methodology that might come to be associated with it. Much of the poststructurally inspired education, which insists on an acceptance of a plurality of interpretations of reality, remains useful. "Obviously, once you accept epistemological relativism, you must accept tolerance and pluralism" (Bhaskar, 2002:32). However, this epistemic relativism is tempered by an understanding that the world is real (ontological realism)(Bhaskar, 1989, 1993, 2002), that we are all an embodied part of it (Bateson, 1979; Beck, 1992:80-1; Irwin, 2001:10; Plant, 2001; Le Grange, 2004), and that humans as well as non-humans (social and natural objects and structures) are actors in the world (Latour, 1993, 1999; Haraway, 1991, 1997, 2003, 2004).

Teachers and students together find/construct "good enough" (not absolute) truths that will inform their action. Justification for a person to believe something therefore comes in degrees; it is not an absolute either/or situation. It is more like the entries in a crossword than it is like a mathematical proof; it is based on pervasive mutual support of evidence not on a one directional conception of truth (Haack, 1993:81). However, commitment to the fallibility of knowledge means an acceptance of uncertainty; that there is no foundational knowledge (Haack, 1993; Bauman, 1991, 2000; Beck, 1992; Bhaskar, 1989, 1993; Latour, 1999; Haraway, 1991, 1997). Teachers and students recognise that reasons can be causes, although because of the open system of the social world, there is rarely a simple relationship between cause and effect (Sayer, 1999; Bhaskar, 1993; Elias, in van Krieken, 1998).

In this approach, teachers mediate between their students and collective constructions of the world where the collective includes humans and nonhumans. In this approach, the student, the teacher and the non-human aspects of the learning context internalise something of each other in their relational process that connects them. “As Marx maintains, in trying to transform the world, we transform ourselves” (Plant, 2001, no pagination).

The aspect of phenomenology, which gives validity to a person’s experience, allowing it to count towards knowledge acquisition, is valued without taking on phenomenology’s commitment to a split reality. For example, Plant (2001) describes how a student’s experience did not match the assumptions of an assignment and therefore, together, they negotiated a new assignment that better matched her experience. However, since our experience is fallible and reality is not specific to each individual (we are all part of the same world, though our interpretations of it may differ widely), other evidence should also be used in our depth explanations. Experience is nevertheless the starting point of this approach to learning and education research.

This approach to education is emancipatory and challenges the ‘given’ through reflexivity that includes self-reflexivity. Self-reflexivity is necessary because our critique is part of the very process it is interested in and is therefore subject to the same possibility of unreflected determination that it describes (Bhaskar, 1989:114).

This education is democratic and participatory in the sense that we should listen to all voices, including the voice of the non-human actors (the environment and social structures). In Haraway's words: " Nature may be speechless, in the human sense; but nature is highly articulate" (Haraway, 2004:106). Note that societal objects, not just natural objects, are similarly articulate. Despite our efforts to the contrary, because we are not separate from the world, we cannot help but communicate with and connect with each other, humans and non-humans.

A relational approach to learning searches for depth explanation of social phenomena to inform action, which means it avoids overly simplistic, critical, dichotomies of 'them (objects) and us', whilst acknowledging the limited necessity of such terminology. Instead, it uses inter-relationships and networks as the basis for action (Latour, 1999; Haraway, 1991, 1997, Elias, in van Krieken, 1998). Bhaskar's word for these networks is a nominalization of the verb 'to emerge', i.e., "emergence" (Bhaskar, 1993: 49). As a process expressed as a noun this word implies the processual nature of be-coming that the networks entail. Thus, Bhaskar also talks about things as "processes-in-product(being)-in-ongoing-processes" (Bhaskar, 1993:380) and the past as "all pervasive" (Bhaskar, 1989:144). Another important characteristic of this approach to learning is that is assumes that ontology is stratified. The three overlapping domains of reality are: the real, the actual and the empirical (Cf. Vol.1, 4.2). Perhaps this approach to education can be described as one which attempts to avoid the extremes and pitfalls of either the foundationalism of positivism, or the nihilistic (self destructive) regression of irrealism.

Contemporary thinkers, exploring a processual-relational approach to learning, include: Vygotsky (1961, 1978), followers of Vygotsky, such as Lave and Wenger (1990), Collier (1994), Plant (2001), Shipway (2002), Haraway (2003), Brown (2004) and Chapman (2004).

2.7 TRENDS IN EDUCATION IN SOUTH AFRICA AND ZIMBABWE

Both South Africa and Zimbabwe came out of a colonial period in which there was a two tiered educational system. For example, in Zimbabwe these two tiers were the A group schools for the colonialist children, and the B group schools for the indigenous majority. In South Africa, apartheid ensured there was one school curriculum for the whites and one for the non-whites. Prior to achieving majority rule the privileged white schools were using teaching methods commensurate with international trends, depending to a large extent on the leadership of different heads, but teaching in the B group schools was still based largely on behaviourist methods, again with exceptions depending on leadership. After independence, the two-tiered system was supposedly abolished.

However, ironically, despite majority rule, the two-tiered educational system nevertheless remains in both countries. There are now expensive private schools, and poorly resourced government schools. In Zimbabwe, recent attempts by the government to abolish the private schools and claim them as government schools have failed: interestingly this is one area where the Zimbabwean governments attempts to take control of property has been thwarted, perhaps an indication of value placed on education by the Zimbabwean middle classes.

2.8 TRENDS IN THEORIES OF STRUCTURE AND AGENCY

In providing the context for this study, it is important to offer my understanding of the sociological debates with regard to structure and agency. The reason is self-evident: a basic aim for environmental education, in industry as elsewhere, is to cause changes in our society towards better environmental management. Understanding the relationship between social structure and agency is therefore central to achieving this aim. In terms of my analysis reported later in this thesis, conceptions of agency and structure (often unconsciously or half-consciously assumed) influence approaches to management, environmental education and training, and thus this outline gives important background information.

2.8.1 **Early approaches to structure and agency**

Essentially, in sociology, the ‘objects’ of study are social objects (whether institutions, or teaching practices, or even individuals themselves) and thus the nature of these objects as being constructed by collectives of people is more obvious than for an object from the natural sciences such as a bacterium - although, as Latour, (1987) has shown, even a bacterium is in *some* ways - but not all - constructed by humans. Harre has this to say on the collective construction of individuals:

> *It is fairly easy to show, simply by drawing attention to uncontroversial facts available to anyone, that many properties characteristic of fully developed human beings are dependent on that person being a member of a collective. For example, I think it is (...) indisputable that there could not be a language user who was also a member of a language community.*
> (Harre, 1979:87)

Human agency, or our ability as individuals to effect societal change, is the primary casualty in the turn towards collectivist sociologies, since if we are constructs of society, then how can it be possible that we as individuals might have any influence on that society? If society makes us; then we cannot make society. "Such a theory effectively denies any autonomy or creativity to an individual. In short, the extreme collectivist thesis is essentially conservative" (Harre, 1979:86-87).

Not only is this theory unattractive because of its implication that society exhibits an absence of individual agency but it goes against a common sense intuition which is that we, as individuals, can influence change in society: "But there is an observable autonomy and creativity shown by individual human beings, so that the collectivist thesis in this form is simply wrong" (Harre, 1979:86).

The idea, which sometimes follows this common sense intuition (that we do indeed have agency), is that individuals are the ultimate creators of society and is called *methodological individualism* (Bhaskar, 1989). Such a position would, for example, posit that an army is just the plural of soldiers and all statements about armies can be reduced to statements about the individual soldiers comprising it (Jarvie, in Bhaskar, 1989:70). In other words, methodological individualists have taken the truism that "the material presence of society = persons and the (material) results of their actions" (Bhaskar, 1989:72) and misinterpreted it to mean that individuals entirely create society. This implies a form of idealism (a subjectivist ontology and epistemology) in which the individual minds of people form social structures. These 'structures' cannot be analysed as distinct from, and having effects on, the minds which created them.

One result of the persuasiveness of methodological individualism has been a trend for sociologists, seeing that their objects of study are social objects and thus apparently created by people, to distance themselves from the natural science methods and to treat their discipline as fundamentally different from the natural sciences. Thus, natural science can have *objects* of study, but for social scientists, our "objects" must always be in inverted commas. For example, Giddens' structuration theory treats the social sciences as fundamentally different from the natural sciences (in Cohen, 1989:19). Perhaps as a result, Giddens reproduces, rather than transcends, the structure/agency dichotomy (van Krieken, 1998:46; Archer in Scott, 2000:28-31; Bhaskar, 1993: 154).

Methodological individualism should not be confused with another kind of individualism, which maintains an objectivist ontology and epistemology and is found in utilitarian sociologies. Here objectively existing (in the naïve sense) individuals and social structures are acknowledged and individuals have the power to manipulate those found objective realities "out there". Bauman stresses the difference when he talks about the kinds of individualism found in the "heavy" (utilitarian) stage of modernity and the "light" (postmodern) stage of modernity. He explains how, in both forms of individualism, individualization is a fate, not a choice, and that neither form of individualism provides the freedom they apparently claim (Bauman, 2000:34-35).

Therefore, in the utilitarian form of individualism, people individualize by becoming 'who there are born to be'; as if 'who they are' is a predetermined/preordained collective phenomenon (a labourer, an intellectual in society) and success is measured by how well one becomes this given. Individualization in the postmodern sense is achieved when people cannot *but* be unique individuals and it offers no possibility of collective understanding. Individuals move from persona to persona with alacrity, never able to share common experience with anyone and never presuming or expecting to change the outside world: success is how well one achieves happiness in one's life. If happiness is not forthcoming, one only has oneself to blame, since we are entirely responsible for our world (voluntarism). The relationship between this kind of individualization (i.e. the postmodern version) and its use (or misuse?) in consumer-based economies is illustrated by these words from Margaret Thatcher:

> *There is no such thing as society", declared Margaret Thatcher, "Don't look back, or up; look inside yourself, where your own cunning, will and power – all the tools that life's improvement may require – are supposed to reside.*
> (in Bauman, 2000:30)

Thatcher's watchword for her commitment to this position was *There Is No Alternative*. Bhaskar refers to her position, which usefully describes a common concept in society, as the "TINA compromise" (Bhaskar, 1993:120).

2.8.2 The illicit dialectic

Other sociologists such as Elias (in van Krieken, 1998:45) and Popkewitz (1984), have joined Bhaskar in explaining how this conundrum with regard to human agency (that it must be either determinist or voluntarist – both of which refuse agency) has, misguidedly, resulted in many sociological theories placing the idea of human agency or *action* or change, as central to their theories: " It is an irony of change models that they are designed to conserve" (Popkewitz, 1984:151).

According to Bhaskar (1996:66) the main problem with *both* the idealist and the naïve realist camps is the shared assumption that natural science is *correct* in assuming a positivistic account of natural science. Using the example of Peter Winch's "The Idea of a Social Science", Bhaskar explains how:

> *By in effect ceding natural science to positivism, Winch precludes himself from locating the true differences between the natural and social sciences. Lukacs in the Marxist tradition makes an exactly parallel mistake.*

Bhaskar (1989:74-77), when describing the two sociologies (the sociology which posits that society creates individuals - collectivism; and the sociology which posits that individuals create society - individualism) identifies Weber as providing an excellent example of a theory in which social objects are the results of human behaviour (individualism) and Durkheim as providing an excellent example of a theory representing the opposite, that social objects have a life of their own, external to and coercing the individuals (collectivism). He sees both Weber and Durkheim as attempting to move beyond the obvious problems of utilitarianism, exemplified in classic economic theory, and based on a positivist methodology and an individualist (of the modernist variety) object of study: Weber moves beyond the positivist methodology by using a neo-Kantian methodology; but he keeps the individualism. Durkheim eschews individualism, preferring collectivism; but keeps the positivist methodology (Table 2.1).

Durkheim's position is problematic because it moves the locus of "creation" of society from the individuals to the society. Thus, whilst we may be able to understand the world, we will never be able to change it, because we are merely pawns in the greater picture. As in the movie *Matrix Reloaded*, even the existence of change agents within society are to be expected and are a creation of the society as a whole, a requirement of its survival. There can be no free will in this formulation of society. Society will change as it will, and those activists who think they are pressing for new directions are merely predictable and inherent outcomes of the structure of society. This position, whilst it is attractive for its potential to offer sociological explanations, is thus guilty of the reification of society, assuming that society exists absolutely in a naively-realist, empiricist sense (an objectivist epistemology and ontology, in Figure 2.3). It is associated with the following world views/research approaches: empiricism, positivism, modernism, foundationalism, naïve objectivism, actualism, atomism.

The Weberian position is equally untenable because it proposes that there is no reality beyond what people have within themselves. Thus, society is merely a pseudo-real phenomenon, which we as individuals can change by just thinking about it (another idea explored in the movie *The Matrix*). This position is thus guilty of voluntarism, which assumes a subjectivist epistemology and ontology. It is associated with the following world views/research approaches: relativism, idealism, post modernism, poststructuralism, social constructivism, interpretivism.

TABLE 2.1: Tendencies in social thought with regard to the appropriate methodology and object of study for sociology (adapted from Bhaskar, 1989: 74)

	Methodology	Object of study in sociology
Utilitarianism Weber	Empiricist Neo-Kantian	Individualist Individualist

Durkheim	Empiricist	Collectivist

Note: concepts of methodology (social epistemology) are underpinned by general ontology; concepts of the object of study of sociology (social ontology) are underpinned by general epistemology.

A common way for the gap between the two sociologies to be bridged is to assume that both positions are true but that they represent different moments of the same thing. Bhaskar explains this idea using the example of Berger and Luckman's social constructionism (1967) (Figure 2.3). He also offers his alternative, calling it theory the Transformational Model of Social Activity (TMSA)

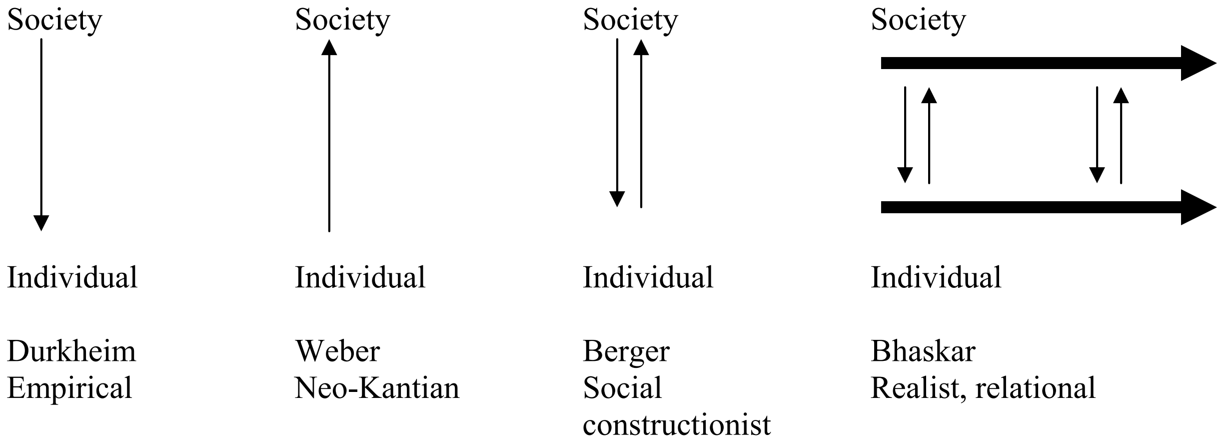

FIGURE 2.3: Summary of the different approaches to the individual/society dichotomy: including the Transformational Model of Social Activity (TMSA) (Adapted from Bhaskar, 1989)

Essentially, to avoid the dichotomy and the associated problems with each, Berger makes the mistaken claim that there is *simply no dichotomy,* and that society forms the individuals who create society; society, that is produces people, who produce society, in a continuous dialectic (Berger and Luckman, 1967:79; Bhaskar 1989:75). Popkewitz (1984:47) also writes about Berger and Luckman, explaining how they, "…define the dialectical quality of social life as involving three moments: society is a human product; society is an objective reality; man is a social product". This same approach, the dissolution-model or dichotomy-is-dead-model, is suggested by the sociologist Sztompka who argues for "a third sociology as opposed to both the sociology of action and of social structure, or better as merging them in the synthetic, more adequate approach to social reality' (in van Krieken, 1998: 21). Referring back to the earlier discussion of natural and social objects, this manoeuvre depends on the drawing of a radical distinction between natural and social facts: the latter, but not the former, do not exist independently of human activity (Bhaskar 1989: 75). A well-known proponent of the third sociology is Giddens. Giddens is an advisor to Britain's Tony Blair; his influence is strongly seen in the rhetoric of the "Third Way" espoused by New Labour.

In the actual working out of this dissolution-model in real-life research situations, proponents or 'critical theorists' often talk about *a certain kind* of *praxis*. "Praxis is to unite subject and object through the interplay of theory and practice (Popkewitz, 1984:197). The stated dichotomy to be dissolved is the practice/theory divide (which, if one examines it, is in essence the individualist/society or structure/agency divide, where the individual is associated with 'agency' or practice and society is associated with understanding the social and 'structure', so 'theory'). These sorts of models appear to involve something of a mystery. There is something about them which requires a leap of faith. They seem to involve continuous creation with genuine novelty, seemingly entailing incomplete social formation (Bhaskar, 1989:77). There is something about the dialectics of this kind of praxis which defies understanding. As, Popkewitz (1984:198,199) explains: "The relation of theory to practice remains clear yet a dilemma". And "Perhaps the most perplexing aspect of the argument and the one which requires the most humility is the problem of praxis".

2.8.3 **Relational-processual alternative to the third sociology**

According to Bhaskar (1989) the reason that the third, dissolution-model sociology is incorrect is because people and society are not related 'dialectically' - they are not different moments of the same thing. They are rather radically different kinds of thing, but nevertheless mutually constitutive. In the third sociology, society is an objectivation or externalisation of people and people are the internalisation or reappropriation in 'consciousness' in society. Thus,by seeing people and society as different moments of the same thing, this model encourages a voluntaristic idealism (methodological individualism) with regard to our understanding of social structure and a mechanistic determinism with regard to our understanding of people. Rather than making the best of both worlds, the third model maintains the worst of both worlds: an oscillation between voluntaristic idealism and determinism.

Van Krieken (2004) also suspects the inadequacy of the third sociology. Using arguments from Latour, van Krieken suggests that rather than seeing the oppositions between individual and society, agency and structure, and so on as simply 'false' or 'distortions', they provide important conceptual and practical resources. Thus, like Bhaskar, he proposes that it is incorrect to merge the two: rather they should be seen and dealt with as separate, albeit closely related, things. Bauman (2000:52) also indicates the importance of seeing these two things as separate and explains how individual autonomy (and thus agency) requires an autonomous society. He describes the inherent individualism in current Capitalist formulations, and links the worse of Capitalist playful lack of responsibility to the removal of public sphere and public power, made possible by the postmodern assumption that society does not exist in an autonomous way. Instead, individuals in Western society are assumed to have extreme creative powers, as the quote from Thatcher shows. The power of society to affect individuals is considered non-existent and individuals are expected to be fully responsible for creating their own reality using their skills and cunning. Poor people are blamed for their own poverty (Bauman, 1991:257)

In my analysis, Bhaskar's illicit dialectic or the 'dialectic' of the third model is similar to what Latour calls the 'modern constitution'. This constitution, writes Latour, has made the moderns invincible (Latour1999: 37). Van Krieken adjusts Latour's modern constitution to explain the structure agency debate (Figures 2.4 and 2.5, below). Translation is the process in which it makes no sense to talk about agency and structure separately; purification is the process whereby structure and agency are conceived as strictly different things. In order for these two positions to co-exist, they must be kept entirely separate; hence the unbroken line between them. Thus, the moderns are able to move 'dialectically' between these positions despite their logically incommensurable characteristics.

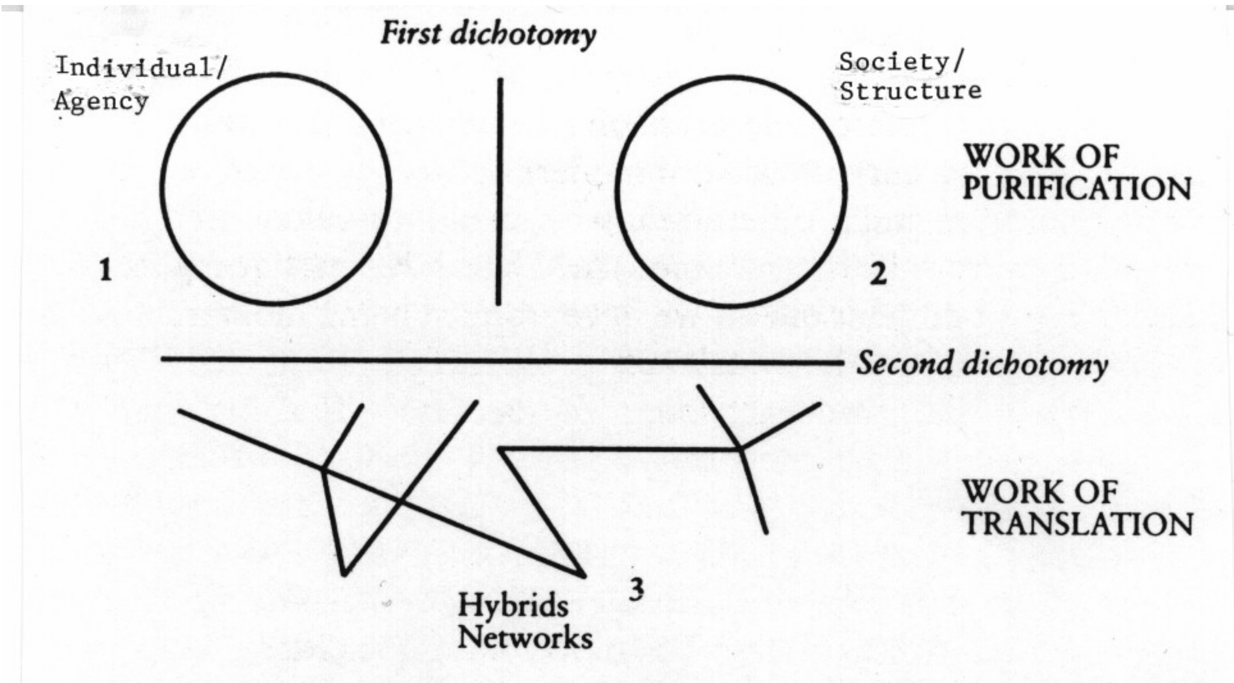

FIGURE 2.4: Latour's modern constitution applied to the agency/structure debate (van Krieken, 2004, no pagination)

The guarantees of this constitution would therefore be:
1. Even though Structure determines Action, Action is as if Structure did not determine it.
2. Even though we did not construct Structure, Structure is as if we did construct it.
3. Action and Structure must remain absolutely distinct: the work of purification must remain absolutely distinct from the work of mediation. Figure 2.5 shows illustrates the working of the dual determinisms

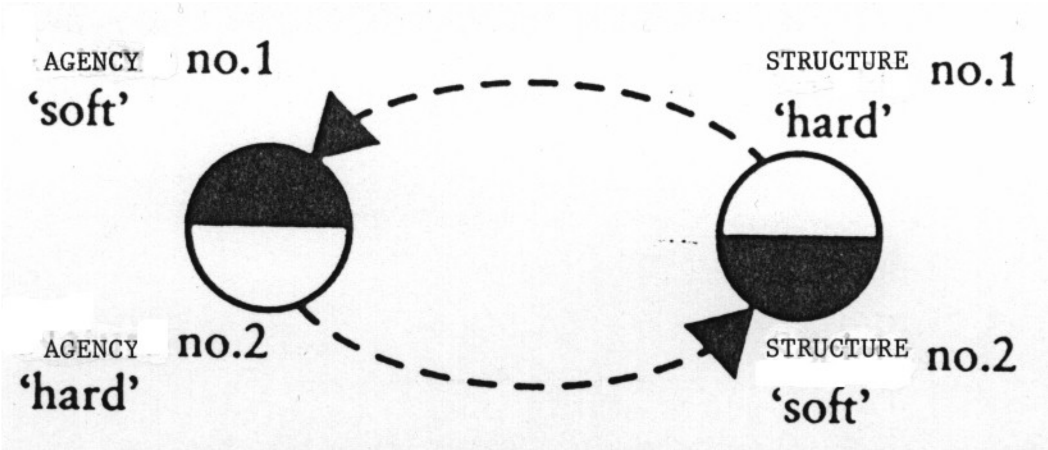

FIGURE 2.5: Dual determinism of structure agency (van Krieken, 2004, internet document)

The effect of the modern constitution (Latour sometimes calls it the modern settlement) is that we can, in a strategic/Machiavellian way, present any argument in such a fashion as to maintain our particular position (whether that be a marginalized or dominant position). In other words, we can change the rules when it suits us. By having both irons in the fire and by moving them fast enough, the moderns are rarely caught out (van Krieken, 2004, no pagination). The following is an example: for some anti-globalisation activists, 'big' business is at times a reified, hard thing that needs to be fought and destroyed (determinism); at other times it is a fiction, not existing in any real sense, merely a result of human agency and easily dismantled by changing the way actors perceive it (voluntarism), those perceptions being entrenched in legal documents. Likewise, for some analysts of land reform in Southern Africa such as Robert Mugabe, sometimes the commercial farms are assumed to be reified, hard 'things' that need to be removed from their occupants (determinism) and returned to the indigenous people. However, sometimes they are assumed to be fictions, a way of seeing brought by the colonialists and easily dismantled by changing the way they are perceived (voluntarism) and consequently validated in the law (Price, 2004a in Vol.2, Chap3).

In Bhaskar's realist or relational view of society, similar to that of Latour, collective social phenomena, which we might call objects, such as institutions, or groups, are seen as expressions of lasting relationships (whereas for Durkheim, enduring relationships must be reconstructed from collective phenomena). Thus, for Bhaskar, perhaps most controversially, lasting relationships are *antecedent* to collective phenomena and individuals, whereas for Durkheim, the collective phenomena or social objects are seen as antecedent and for Weber and utilitarianism, the individuals are seen as antecedent. Other authors who advocate that relations are antecedent to ontology include: Haraway (for example, 1991, 1997, 2004), Latour, (for example 1987, 1999), Bourdieu, (for example 1998) and Elias (for example in van Krieken, 1998, 2004).

2.9 INTERNATIONAL TRENDS IN MANAGEMENT THEORY

The current trend in management practices can be described as the movement towards: "…new management discourses which imagine management systems based upon 'teamwork', relatively non-hiearchical (sic), networked, ways of managing organisations" (Fairclough, 2002, no pagination). The following summary of approaches to strategic management is a précis of a paper by Levy *et al,* (2001), with occasional additions, references indicated. I chose this paper by Levy *et al.* because the authors bring a critical eye to their description of the different approaches to management. However, I deviate from their paper at the end to illustrate how their suggested optimal practice, Gramscian historical materialism, is based on the same structure/agency mistake made by Berger and Luckmann and Giddens.

Of all the different management disciplines, I have chosen to discuss strategic management because of its implication for long term environmental management strategy in business. Additionally, strategic management is usually the "capstone" course of business schools, "intended to synthesize the other sub-disciplines of management and provide a 'top management perspective'" (Levy *et al*, 2001:3). I have at first outlined contemporary strategic management approaches as they are found in the international academic literature. I have then given the South African and Zimbabwean management trends.

2.9.1 **Early approaches to strategic management**

The roots of strategic management lie in military strategy from the eighteenth century. The key concepts therefore include: defeat of the enemy; self-sacrifice; that collateral damage is disregarded; and that ends are emphasised over means. The latter two points have resulted in business largely overlooking issues of the environment and societal well-being, in order to maximise profit (Knight and Morgan, in Levy *et al*, 2001: 6).

Neuman and Morgan (1947 in Levy *et al*, 2001:6) were the first to develop modern scholarship in strategic management, drawing from the Tayloristic ideology of control and the strategic discourse of the Second World War. Their work was also a response to the increasing separation of ownership and control in Western economies. Along with this separation came multidivisional organisational structures which each needed their own plans and budgets in order to align themselves with the larger corporation (Levy *et al,* 2001:6).

2.9.2 **Contemporary approaches to strategic management**

As with the trends in education and educational research, there is much contradiction, complexity and over-lap in the different approaches to management strategy. One way to make sense of the complexity is to outline two major controversies which have coloured much of the strategic management literature; namely, the controversy of decision-making as either a linear or a non-linear process; and the controversy of the degree to which managers have agency or the capacity to adapt (Levy *et al,* 2001).

2.9.2.1 *Linear vs. non-linear process*

Levy *et al.* (2001:7) point to Andrew (1971) and Chandler (1962) as among the best known exponents of the view that strategy is a logical, linear process of analysis and planning. However, mainstream approaches based on game theory and variants of the positioning school also exhibit a rational, technocratic approach (Levy *et al*, 2001:7). Most text books show management to be an objective process in which rigorous research into industrial conditions and company capabilities lead to an evaluation of options, followed by implementation and then monitoring and control (Levy *et al*, 2001:7).

One approach which disagrees with this linearity is based on a concept of management as an art: the "art of war" (Sun Tzu, 1983 in Levy *et al,* 2001:7). This approach sees strategic management as non-linear, unpredictable and paradoxical. Another approach, prominently argued by Mintzberg (1994; 1998) in Levy *et al* (2001:7), emphasises the recursive processes of learning, negotiation and adaptation through which strategy is actually enacted. Thus, the planning-implementation distinction is unsustainable. In the same vein, Nelson (1991 in Levy *et al*, 2001: 7-8) claims that it is nonsense to presume that a firm can calculate an actual best strategy: a basic premise of evolutionary theory is that the world is simply too complicated for a firm to fully comprehend (Levy *et al,* 2001:8).

2.9.2.2 *The degree to which managers have agency*

The most common understanding of managerial agency is that core competencies develop over time; firms slowly adapt to the change incrementally with intentional resource allocation. Careful analysis and planning is required to select products and markets (Levy *et al*, 2001:8).

However, the evolutionary or population ecology perspective points to the relative inertia of organisations, claiming that active organisational adaptation is difficult, instead, firms evolve slowly, responding to change by a process of natural selection. The role of careful strategic planning is reduced. An example of this approach is McKelvey and Aldrich (1983) in McKiernan (1996, internet excerpt).

A third approach suggests that changes are so rapid, that planning is futile. Therefore, organisations must be nimble and adaptable: parallels are draw between management strategy and chaos theory. Managers are encouraged to "tune their organisational networks to the edge of chaos" (Levy *et al,* 2001:10). Brown and Eisenhardt (1999 in Levy *et al,* 2001:10) are good examples of this approach.

Contemporary approaches to strategic management are largely based on the work of Mintzberg and Porter- who suggested ten schools and 5 approaches to strategy, namely, plan, perspective (strategic vision), position, pattern and ploy (Levy *et al*, 2001:6).

More simply, McKiernan (1996) has suggested that strategic management has past through four stages:

1. Planning - based on Tayloristic assumptions of simple cause and effect and a strict locus of control.
2. Learning - based on several theories, perhaps held together by the idea that planning is not as simple to achieve as earlier thought. Decision-making therefore becomes a more complex, contingent exercise.
3. Positioning - is a shift away firm the logic of the business portfolio towards the idea of positioning individual business units so as to take advantage of niches of reduced competition. In other words, business success comes less from selling a high quality, trusted product and more from finding under-exploited market segments.
4. Resource-based view - sees the resource endowment of a firm as the principal source of strategy options rather than constant repositioning in the face of shifts in the external environment. The resources of the firm will provide the basis for its survival and success through time as external conditions in the environment change. Thus,tangible assets, such as a product which is in high demand is seen as less of a competitive advantage than intangible assets, such as management skills. Unlike the positioning school, which sought to find market niches, the resource-based view advocates actively building and sustaining monopolistic structures. “It was not without some justification, perhaps, that Microsoft argued in its anti-trust suit defence that is was merely pursuing the precepts of good business strategy” (Levy *et al*, 2001:7)

Of these four approaches, Levy *et al.* (2001) go so far as to claim that the resource-based view is currently the dominant view in business, although they may be referring to ‘big’ business in developed countries. However, Connor (2002:6) disagrees that the resource-based view is dominant, even in developed countries. He suggests that managers in smaller businesses that are not ‘big names’ or industry leaders normally operate in a fashion that is typically: operations and cost focused; customer driven; reactive; concerned with short-term results; and planned within a steady-state industry model. In these circumstances the stimulus for management decision making is usually provided by external pressure which, in combination with a probably price-

elastic demand function, would suggest that for small businesses the idea of strategic assets with their concomitant of market power is inappropriate.
Klein (2000) gives an account of the trends in strategic management in 'big business' using brand names as her foil. She describes how the use of brand names began as way to identify products as trusted and high quality. Later companies learned to keep their brand name as a symbol of quality, rather than signifying an actual product. In the positioning trend, new branded products were chosen to fill market niches, and later, within the resource-based paradigm, new branded products were used to *create* market niches. For Klein (2000), the multi-national corporations have become so focused on intangible rather than tangible assets that they do not make the products themselves, but have become 'virtual' companies with work contracted out and none of the actual production work being a part of the firm's core business.

2.9.3 **Critical approaches to strategic management**

Up to now, I have been discussing approaches and issues which do not seek to question some of the basic assumptions of management, or try to address the societal inequalities which, it might be argued, business-as-usual approaches tend to entrench. I will now, following Levy *et al* (2001), elaborate on three critical approaches to strategic management, all of which draw on a 'constructivist'[5] perspective to varying degrees. Elements of all of these approaches can be found mainly in management approaches based on organisation or institutional theory, which has become increasingly prominent in management thought. Strategic management discourse, although it occasionally contains 'constructivist' elements, has remained "remarkably immune" to the spread of constructivism, perhaps because strategy is more rooted in the positivist tradition or perhaps because the field is so closely related to management practice (Levy *et al*, 2001:9).

[5] I here define 'Constructivism' as an approach to epistemology which denies a simple, transparent relationship between the referent (the object of discussion) and the signifier (the word used to signify the object).

2.9.3.1 *The processual school*

Although several strains of the processual school are discernable, all the proponents agree that strategy is not a logical, rational process in which optimum strategies can be derived from rigorous analysis. Instead, the processual school examines the process by which strategy is actually developed in organisations. According to Levy *et al* (2001:9), there are three approaches within the processual school: the constructivist perspective which questions the objectivity of strategy by demonstrating that strategic assumptions and practices are socially constructed in institutional contexts; the political bargaining approach which suggests the strategy is a result of negotiation between rival in-house corporate factions; and, the emergent approach which posits that strategy is an emergent phenomenon, a consequence of complex organisational processes.

For followers of the constructivist approach, there is no fixed, objective environment; instead, organisations actively constitute and reify their environments "bringing sense and order to the tangled discursive webs in which they are located" (Weick, 1995 in Levy *et al*, 2002:9). The idea that organisations are embedded in their environments stems back to early systems theorists such as Emery and Trist (1965) and Trist (1983), in Levy *et al* (2001:9) but it was only in the 1980's that appreciation grew for the idea that firms are not located in fixed, objective environments but rather develop cognitive models or frames of markets and industries which channel organisational perceptions of their environment (Levy *et al*, 2001:9). Institutional theory, which has become increasingly important in management thought, is based on a strong constructivist perspective with its focus on cognitive and normative pressures in determining normative practices. However, constructivism is used mostly for social engineering, rather than being seen to have implications for the *status quo* (Levy *et al,* 2001:9).

The processual approach that looks at political bargaining suggests objective ways to avoid intra-company factionalism. It questions strategies, and unmasks relations of power, amongst company elites. Pettigrew (1985 in Levy *et al*, 2001:10) refers to the way that the existing structures and cultures within an organisation can be actively mobilized by the dominant groups to legitimise existing definitions of core strategic concerns and delegitimise new, threatening definitions. Whittington (in Levy *et al* 2001:10) extends this to include the existing external courses of power that managers can draw on such as "the political resources of the state, the network resources of ethnicity, or, if male, the patriarchal resources of masculinity" (Levy *et al* 2001:10). However, the political bargaining approach concentrates mainly on managerial factions rather than labour and external stakeholders and therefore loses some of its critical potential for the wider socio-economic context (Levy *et al,* 2001:9).

The most mainstream style of processual management is the emergent approach. This draws on complexity theory, networks and organisational learning literature, such as Brown and Eisenhart (1999 in Levy *et al*) and Senge *et al*, (1994). Strategy is seen as a craft, rather than a science and it is given a 'personal touch' (Mintzberg, 1987 in Levy *et al*, 2001:10). The managerial motivation for this approach is that it allows for more perspectives to be added to the melting pot of managerial options, and it results in greater 'buy-in' or 'ownership' of ideas amongst the employees. Levy *et al*, (2001:10) argues that this can be described as tapping the creative energies of the workers whilst suppressing insurgent strategies. He also argues that the emergent approach to management does not examine the factors which systematically prevent free communication; instead it allows management to wrap up their interests in participatory discourse. "Empirical evidence suggests that despite the popular discourse of networks and empowerment, there is no discernable trend towards increased decentralisation of strategic decision-making" (Levy *et al*, 2001:12).

2.9.3.2. *The deconstruction approach*

This approach is more radical than the processual approach. Strategy talk is itself questioned and is seen as ideological. Managers' subjectivities are considered by this approach to be produced by socio-economic and political structures that extend well beyond the company. Deconstruction asks how managers retain their positions and suggests that strategy constitutes not only the strategists and the implementers of strategy, but also the problems for which it claims to be a solution. In other words, the language that the strategists use to understand problems actually constructs those problems, and constructs the identities of the strategists. For example, the use of military metaphors constructs competitors as enemies to be defeated and mobilizes the employees (the soldiers) to sacrifice individual needs to the greater glory of the firm; thus military connotations reinforce a patriarchal orientation to the organization of work (Knights and Morgan, 1991 in Levy *et al*, 2001:12-13).

In a landmark paper, Shrivastava (1986) in Levy *et al,* (2001:11) used five operational criteria derived from Giddens (1979) to analyse the strategy field and suggested the following ways in which strategic management legitimises existing power structures and resource inequalities (the examples following each point are my own):

- The factual under-determination of action norms – for example, a certain management method is used simply because it is how things have always been done.
- Universalisation of sectional interests – for example, it is claimed that overall corporate success will ensure the best advantages for all of the workers; the 'trickle down theory'.
- Denial of conflict and contradiction – for example, an individual worker's emotional argument for a pay increase is ignored as 'unprofessional behaviour', indicative of their individual personality, rather than being interpreted as a sign of a wider restlessness; the charge of low pay is then ignored and it is claimed that the workers are being paid wages commensurate with the industrial norm.
- Normative idealisation of sectional goals – for example, it is assumed that the managers' goals are the goals for all the different employee groups.
- Naturalisation of the *status quo* – for example, it is assumed that is natural for certain people to be paid more than other people; it is thus natural for men to earn more than women as they are naturally the primary wage earners in a family and wives should naturally not be expected to carry this burden to too great a degree as they have to bring up the children.

Shrivastava draws on Habermas to suggest that communicative competence should be acquired by all the subjects to allow them to participate in discussion that will free them from constraints on interaction. He also calls on researchers to generate more universal knowledge about strategic management that is less ideologically laden (Levy *et al*, 2001:12).

More recent postmodern critiques would consider that Shrivastava's call for more objectivity betrays a modernist leaning. Instead, postmodernists abandon the search for objective truth or for autonomous individuals who can potentially recognise their 'real' interests. Postmodern critiques therefore interested in the constitutive power of strategic discourse, rather than reality or truth. For example, Knights and Morgan (1991, in Levy *et al*, 2001:12) see "corporate strategy as a set of discourses and practices which transform managers and employees alike into subjects who secure their sense of purpose and reality by formulating, evaluation and conducting strategy". Managers are not able to stand apart from this ideology, but are themselves entangled in the discursive webs, their sense of identity being as much constituted by their social field as that of the workers. That managers therefore often manage without being able to explain exactly why they do what they do, which in rationalistic management models might be seen as a problem, has been interpreted by some authors from this processual tradition as desirable; their argument being that rationalistic management is not necessary, perhaps not possible, and an apparently irrational approach to management may even have competitive advantages. For example:

> *The reasoning is that causal ambiguity is necessary not only to prevent managers in other firms from understanding the link between resources and performance in the focal firm, but it is also necessary among managers within the focal firm itself so that knowledge of causal links cannot be exported intact from the focal firm. If this is true then it would appear to be important that successful managers are not sure what they are doing right.*
> (Connor, 2002:5).

For Levy *et al* (2001:14) the main problem with the postmodern, deconstructive approach to critique is that if discursive disciplinary power pervades every aspect of society, then agents have little room to resist or evade the constitutive power of discourse. Furthermore, it denies the 'truth' of strategy. Levy *et al* (2001:14) argue that whilst strategy *is* a discourse, it nevertheless has real effects in protecting economic and social privileges. I would add that it also reduces agency by relativising 'truth' to such an extent that, even if actors managed to see beyond their social *habitus*, there would be not a possibility of discerning a better 'truth' since all truths are socially constructed and judging between truths would become yet another imposition of their sectional interests (Cf. Vol.1, Chap. 3.4.2).

2.9.3.3 *Strategy as power: the historical materialist approach*

This approach is favoured by Levy *et al,* (2001). They use the Gramscian notion of hegemony, based on the work of Machiavelli (Levy *et al*, 2001:4), to allow a place between the structural determinism of a crude Marxism and the endless slippage of meaning in postmodern discourse (Levy et al, 2001:14). They do this by suggesting an illicit dialectic between structure and agency, similar to that suggested by Giddens (1984) and Berger and Luckmann (1967) (Cf. Vol.1, Chap. 2.6). They write "Strategy as power operates through the dialectical interplay of structure and agency" (Levy *et al,* 2001:14). As I have argued in the section on agency and structure (Cf. Vol.1, Chap.2.6), instead of avoiding the determinacy of structural accounts and the voluntarism of postmodern accounts, this illicit dialect tends to entrench both.

As is characteristic of practitioners of the illicit dialectic (Price, 2004a in Vol.2, Chap.3), Levy *et al* (2001) tend to contradict themselves. An example of such a contradiction is their unproblematic promotion of Gramsci's notion of needing to adopt a "war of manoeuvre", but critique of mainstream management approaches because they draw upon war metaphors. Another example is that they indicate that postmodernism is hindered by its inability to address the real effects of discourse , claiming that their historical materialism does not make this mistake, yet they draw from Gramsci, for whom:

> *…the very idea of a reality-in-itself is a religious residue, and the objectivity of things is redefined in terms of a universal intersubjectivity of persons; i.e. as a cognitive consensus, asymptotically approached in history but only finally realised under communism…*
> (Bhaskar, 1989:140).

These contradictions are a result of the Machiavellian-style strategy, associated with the illicit dialect, in which strategists move between epistemologies depending on what they want to achieve. Levy *et al,* (2001:6) draw attention to the similarity between their Machiavellian historical materialism and the 'ploy' of mainstream strategic management, suggesting that perhaps this offers a strategic opportunity for emancipation, since managers must already be familiar with the historical materialist methodology it should be easier to introduce it into the mainstream.

However, I consider it a mistake to think that we can apply the same methodology of mainstream management in which means justify ends and war metaphors abound, and expect to get a different result. Bhaskar describes two kinds of 'power': $power_1$ and $power_2$. He says (1993:402): " $Power_1$ is the transformative capacity intrinsic to the concept of action as such, whereas $power_2$ is the capacity to get one's won way against either the overt wishes and/or the real interests of others in virtue of structures of exploitation, domination, subjugation and control, i.e. generalised master-slave-type relations". Both the historical materialist and mainstream management 'ploy' approaches to strategy assume the need for $power_2$ relations to achieve their desired results. The difference between the approaches lies merely in their objectives: mainstream management aiming to entrench the interests of elites; historical materialism trying to promote the interests of the marginalized. As such, even if historical materialism is trying to obtain emancipation for people, it must do so in such a way that it must exploit and control, as this is built into the methodology. I would prefer an emancipatory methodology, perhaps based on Bhaskar's critical realist methodology, in which $power_1$ rather than $power_2$ relations are sought after and developed by actors (Cf. Vol. 1, Chap.8).

2.10 TRENDS IN MANAGEMENT IN ZIMBABWE AND SOUTH AFRICA

In South Africa and Zimbabwe, the trends in management can only be understood adequately if we see their industry as strongly stratified; the major division being between companies which have a large external shareholder base, and locally owned, usually smaller businesses. Historically, all companies tend to have been hierarchical but the companies with external connections tended to be relatively progressive compared to the smaller, locally owned companies (White, pers. com.). This is in line with the observation by Connor (2002) that smaller companies tend not to follow cutting edge management practices but tend towards instrumental notions of management. However, because the externally based companies were nevertheless left largely to make their own management decisions, they were usually not completely in line with current international management trends. This situation has changed recently with globalisation, which has resulted in parent companies taking a more direct line of influence and therefore these companies are now more closely reflecting current international management trends. For example, at Anglo American, since 2000, the chain of command passes from Zimbabwe to South Africa, then directly to London. These companies are being forced to mimic their parent companies and introduce management processes which are unusual elsewhere in South Africa and Zimbabwe (White, pers. com.)

Ten years ago the whites had most of the economic power in South Africa and Zimbabwe, but this is changing. In South Africa, this change is being effected by the Black Economic Empowerment (BEE) initiative in which only black owned or black empowered businesses are allowed to do business with the government, and part of achieving the label 'black empowered' requires that a company must themselves only do business with black empowered/owned business, thus effectively requiring all business to be black empowered/owned, or risk discrimination (Geldenhys, 11 August 2006). In Zimbabwe, the indigenisation process is being speeded up by the land acquisition process, in which commercial farmers have been dispossessed of their land, and currently a National Indigenisation and Empowerment Bill is being tabled in which all companies will be required to be 50% indigenously owned (Mushekwe, 12 January 2007).

2.11 CONCLUSION

A pattern that has become visible in this chapter is the resemblance between the international trends in education, social theory and management: they all have been similarly affected by changes in philosophy. Therefore, there are parallel trends amongst each which reflect the philosophical trend away from positivism, towards phenomenological and postmodern philosophies. In the South African and Zimbabwean business and industry context, these trends are highly, although differentially, influential, depending on the international connections of particular companies. A significant characteristic of the South African/Zimbabwean business environment is their struggle to redress the inequality in their society, which is the result of their colonialist past. Also significant is the trend in both countries towards increasing disparity between the rich an the poor. In Zimbabwe, an unprecedented increase in poverty has resulted from the government's economic/redress polices.

Questions of structure and agency, unlike those of education and business, were not frequently considered in day-to-day discourse. However, this chapter has demonstrated that the illicit dialectic is present in the language of both Robert Mugabe and Tony Blair. For Mugabe, the example given is his approach to the land redistribution exercise, and for Blair, the example given is his approach to politics that he calls the 'Third Way', following Giddens.

CHAPTER 3 METHODOLOGICAL INVESTIGATIONS

Or

"The case of the missing agency"

Tempting as it is to start at the end of my explorations of methodology[6] and give just the final outcome of my quest for the most appropriate theory to inform my research choices, I have decided to write this chapter roughly in the form of a detective story, where the focus of the story is on the journey rather than the final destination (although this, of course, is important too). The aim of the story is to offer the evidence for why I am more or less justified, at this time, in believing that my chosen methodology is the best methodology for my research. This is based on Haack's (1993: 73) explication of epistemic justification, which is: "A is more/less justified, at time *t,* in believing that *p*, depending on how good the evidence is". This *explicandum*, as Haack explains, implies some important presuppositions, namely, that: "it is a *personal* locution, not an impersonal locution like 'belief that *p* is justified' which is primitive; that justification *comes in degrees*; that whether or to what degree a person is justified in believing something *may vary with time*" (Haack, 1993: 72; my emphasis).

In this detective story, I start with a description of my detective's tools, and then I look at the case (of the missing action) when I arrived at the scene. Others have visited the scene before me, and I will draw on their descriptions of the scene, as well as my own experience of it, to ensure I have a working picture of it. I will then interpret this scene, that is, give it meaning, from a variety of standpoints and finally I will try to explain the interpretations. In explaining the interpretations, I will suggest social preconditions for them. As a result of this explanation, as Peirce (in Bertilsson, 2004) and Bhaskar (1993) suggest should happen with explanations, there will be a tendency for a movement towards an imperative. This imperative will be expressed as

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[6] Lotz (2000, pers. comm.) described methodology as:

> *"…comprising 'the fundamental assumptions' about the 'general orientation to life, the view of knowledge, and the sense of what it means to be human' that direct the particular mode or method of enquiry in a study (Van Manen,1975:27) and also, 'consideration of the research design, data collection, data analysis, and theorising together with the social, ethical and political concerns of the social researcher'(Burgess, 1984:2). Methodology therefore provides the theory behind the cluster of techniques that comprise a research method".*

a “non-doing”, since it is based on the understanding of already existing preconditions. Thus, to change the preconditions and move beyond the dysfunction, I ask, “What can I not do?” This three-tiered approach to investigation is consistent with Peirce’s firstness, secondness and thirdness, and Bhaskar’s explanatory critique. Bertilsson (2004) acknowledges that the positions of Peirce and Bhaskar are largely consistent.

Thus, my explanation of the methodological scene will lead into a way forward for my personal methodology. In the way that a photograph artificially captures the image of a person, forever the same, so this thesis captures my thinking on methodology. It is falsely static, as close as I can get to my ‘truth’ about methodology in this moment, but none-the-less still a work in progress. This is the best that I can do in this moment, as implied by the ‘*t*’ in Haack’s *explicandum*.

There are two questions in this thesis: the research question and the question of which methodology I should use to address the research question. As mentioned already, traditional research would put the research question first and base the methodology upon it. However, I have assumed in this thesis that the research question and the methodology mutually inform, even co-constitute each other. Therefore, as I look at different methodologies, I will describe how there was a dialectical process in which my questions made me change the form of my methodology, and my methodology made me change the form of my questions. The self-reflexivity of the process of delineating my methodology will be reflected in the way that my research questions changed in response to this process.

This principle of self-reflexivity will be an underlying theme in all my work, both here, at the level of my methodology and later, as I broach the research process itself. One of my unabashed aims of this research is for emancipation. In the words of Bhaskar, for emancipation to be possible, one of the conditions that must be satisfied is “…continuing self-reflexive auto-critique (which) is the *sine qua non* of any critical explanatory theory” (Bhaskar,1989: 114). This important theme of self-reflexivity is also reflected in the following section in which I position myself in terms of my political/life orientation (make transparent my detective’s tools, my structures by which I think). Breese explains the importance of positioning the researcher:

> *As part of a realist approach is to consider critically the inter-relationships between the researcher (myself), and the research object (the ideas in this text), I will start by giving some personal background details. I do this not to presume that by doing so I can unearth all my motives, prejudices and assumptions, but, more modestly, as an attempt to communicate some information which will help the reader to place what I write in some context. As such I would also suggest that it is an exercise which could be routine in a realist approach to research, because of the centrality of the subject-object relationship.*
> Breese (2002:1)

3.1 "MY DETECTIVE'S TOOLS" Or personal background details

Here I have a brief look inside the carpetbag I carry everywhere with me. Perhaps the contents of this bag can be thought of as the tools of my trade as a detective: my magnifying glass, microscope and fingerprinting equipment. Although they could also be seen as my mental structures, determined by my social experience, that allow me to 'see' objects, in some ways even to construct those objects (Foucault, 1965; Sayer, 1999**),** and thus enable me to analyse them and make decisions as to how to act. However, just as a magnifying glass, microscope and fingerprinting process can distort the image of the object being examined and produce artefacts, so these tools or 'schemata' (to use Kant's terminology, in Eco, 2000) also distort my vision and need to be used with care (self-reflexively). Other authors have used different terms for these tools such as member's resources (MR)[7] or *habitus*[8] or molar content (MC)[9]. It could be argued that these terms are not completely synonymous, at times perhaps they are hyponymous, but regardless, in my opinion they are closely related.

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[7] Fairclough, N. (1989: 11) describes Member's Resources (MR) as both linguistic and non-linguistic representations stored in one's long term memory. He writes: 'These representations are prototypes for a very diverse collection of things – the shapes of words, the grammatical forms of sentences, the typical structure of a narrative, the properties of types of object and person, the expected sequence of events in a particular situation type, and so forth'.

[8] Bourdieu, P. in Lechte, J (1994: 49) describes *habitus* as to do with ' a sense of one's place' which emerges through processes of differentiation in social space, and that it is a system of schemas for the production of practices, as well as a set of schemas of perception and apperception of these practices.

[9] Eco, U. (1997) describes molar content (MR) as a "broadened knowledge", necessary for perceptual recognition, but including notions that are not indispensable for perceptual recognition, such as knowledge which allows judgements about that which is perceived.

Eco goes further than most when describing our MC, which is also the basis for abductive reason, abduction being the underlying reason employed during any honest investigation (Eco, 2000). For Eco (1983), there is over coded abduction (Boudieu's *doxa*) and under coded abduction (the ability to solve puzzles, requiring humility, the assumption that things could be different). The move from *doxa* to humility was what Peirce's pragmatism is about (Bertilisson, 2004). It requires self-reflexivity, and hence an appreciation of one's own (changeable) positioning. Under coded abduction can lead to meta creative abductions (when we think anew altogether) and possibly to creative abduction (the revolutionary discovery) [10].

Therefore, I offer here a quick over-view of what I see as the important strands in the formation of my MR. In providing this over-view, I hope to assume that things could be different, and thus allow my investigation to proceed beyond my societally-given *doxa*.

I am a white, lower-middle class, English-speaking Zimbabwean, 38 years old, and a mother. During my childhood, both my parents worked as civil servants (my mother, a junior school book keeper, my father, for the National Railways of Zimbabwe). My grandparents, those whose histories I know, were working class, such as factory workers, waiters, cinema ushers, etc, both in England and in Southern Africa. On my mother's side I am at least third generation African. My father came to Zimbabwe at the age of eight years old as part of the British government's programme to send orphaned/unwanted/deprived children to relevant colonies, namely, Zimbabwe, Canada and Australia. Born in Bulawayo at the end of the 1960's, I was just entering high school when independence arrived. I studied Biology and Geology at the University of Zimbabwe, Harare, and when I was twenty-one years old, I travelled 'overseas' on a working holiday where I joined a Marxist group in London (for a short while only – I disagreed with their methods) and later spent some time immersed in feminist/queer-style culture in the United States. My reading at this time was largely around feminism, but included some Marxism, ecofeminism, queer theory

[10] What we learn from Eco is that interpretative devices operate on many different epistemic levels: from the unconscious over-coded ones of society's *doxa*, to the more controlled and under-coded ones by which we make sense of everyday life and science, to the more spectacular interpretations by means of which a world view can be changed - or a mystery solved. The point is also to stress the interchange between all these levels (Bertilisson, 2004).

and people of colour/African studies. Some of my reading was fiction/poetry but some of it more analytical. Authors that I read included A. Dworkin, M. Daly, N. Farah, J. Grahn, D. Lessing, E. Reed, M Atwood, Y. King, E. Gadon, S. Griffin, S. Leland, A. Walker, R. Milan, N. El Sadawi, A. Carter, V. Shiva to name just a few. I also became interested in issues of language, especially where it had a feminist flavour, such as D. Spender, L. Spender, J. Kristeva, M. Foucault and R.M. Brown. However, the book which most dramatically influenced my thinking on language, was Kress and Hodge's 'Social Semiotics' (1988). On my return to Zimbabwe, I was active in the Gay and Lesbian rights movement in Harare and became involved in issues of environmental justice; for example, I volunteered to work with Zimbabwe's only environmental activist organisation Environment Africa. I saw my involvement in environmental education as a way to help make positive changes in the world. However, the more I read around the subject of activism, the more I developed angst about it; a key question I asked myself was how I could fight for social justice in a way which did not impose my own vision of what the problems were, and what the solutions were?

My interest in research methodology developed during my time as a student at the University of Zimbabwe whilst studying for a Master of Science (MSc) degree in Tropical Resource Ecology, in the early 1990's. As an acknowledgement that people were an important component of any ecological issue, the sociology department had been invited to help teach the course, which was based in the science department. During that time, we were privileged to attend a lecture by the guru of 'participation', Robert Chambers. I was quickly convinced by his ideas: my interest in equality meant that I was drawn to his participatory methodology, because of the aim held by its practitioners 'to hand over the stick' to the researched peoples (Chambers *et al*, 1989). However, mixing the social sciences-based participatory methodology with the science department's methodology was not easy. As one of my supervisors stated, we were going to get a *science* degree, so whilst we might like to play with the participatory methodologies, we would, if we wanted the degree, have to conform to the *proper scientific rules* of methodology. Thus, I discarded my participatory methodology, and immersed myself in measuring, counting and statistical analyses in order to get my Master's degree.

Teaching the Rhodes/Speciss participatory course on environmental education introduced me to the history of research and the idea of the social construction of knowledge. It was here that I first encountered, in an academic arena, the concept of poststructuralism and postmodernity and began to develop an understanding of the broader issues of methodology; in my Master's degree I was only exposed to scientific method and the new participatory methodologies, without being able to see them as part of a bigger picture.

Therefore, in summary, I would describe the relevant contents of my carpetbag[11], when I embarked upon this research project, as being neo-Marxist, feminist, queer and postmodern, as well as scientific and 'participatory', and coloured by my experiences of growing up as a white woman in pre- and post-independent Zimbabwe. As I have progressed with this research project, however, those contents have changed.

3.2 "MY VISIT TO THE SCENE OF THE INVESTIGATION" Or the methodological landscape, with special reference to environmental education

Here I look at the "scene of the crime", or the methodological problem that I faced as I entered this research. As a novice researcher, I was not offered a selection of tools, easily applied according to certain simple rules. Instead, I was offered a mystifying array of options, each apparently with advantages and disadvantages. Like most researchers of this era and in this discipline, my reading suggested a categorisation of methodologies along the lines of Habermas' knowledge interests, although I preferred the revision of Habermas from Lather (Table 3.1), which added the category of poststructuralism (which she also calls postmodernism).

[11] These contents were not, however, how I defined myself. For example, I did not define myself as a neo-Marxist, although neo-Marxism had influenced my thinking.

TABLE 3.1: Categorisation of research methodologies (Lather, 1991:7)

Predict	Understand	Emancipate	Deconstruct
positivism	Interpretive Naturalistic Constructivist Phenomenological Hermeneutic Symbolic interaction	Critical Neo-marxist Feminist Praxis-orientated Freirean Participatory Action research	Poststructural Postmodern Post-paradigmatic diaspora

Returning to my research question, based on the problem of industrial rhetoric not matching industrial action, I had a clear agenda towards emancipation (from the tyranny that perpetuates environmental destruction). Politically, as my background details indicate, I have always had an interest in social justice issues. This would apparently place my research in the category of "emancipate". Yet, intellectually I was drawn to poststructural methodologies, not least because of the language component of my study, but also because I agreed with much of the poststructural critique of truth, based on a critique of positivism. These critiques of "truth" also put into question the whole project of enlightenment and emancipation (see for example Foucault, 1965, Adorno and Horkheimer, 1944; St. Pierre, 2000), because to fight for emancipation was to acknowledge a truth beyond current formulations, but if there was no fixed truth, then how could a prospective social activist decide on a path forward, and therefore take *action*? In other words, where was the action?

Furthermore, to tactically insist on a path forward seemed tantamount to a kind of violence. It seemed that either the postmoderns must dominate in their efforts to liberate (resulting in Machiavellian-style strategy), or they must ignore resistance and be faithful to the ludic aspect of postmodernism in which joyful playfulness incidentally celebrates the *status quo* (Usher and Edwards, 1994: 15, 16). Lather (1991: 16) summed up this problem of agency in these words: "It is precisely this question that the postmodern frames: How do our very efforts to liberate perpetuate the relations of dominance?" Usher, who quotes Cherryholmes (1994: 98), gives another example:

> *Coercion appears to be necessary for emancipation while simultaneously subverting emancipation. The emancipation/oppression distinction thereby*

deconstructs and its deconstruction highlights an issue that critical educators keep at the margin of their discourse: which forms of domination (coercion, constraint) are justified in furthering which forms of emancipation.

Therefore, I was faced with, on the one hand, the failure of positivism: "a definitive critique of positivism has been established and…our challenge is to pursue the challenges of a postpositivist era" (Lather 1991:2)., and on the other hand an uneasiness with postmodernism because of its inability to support emancipatory *action*: "I continue to share with many academics an ambivalence about the politics of postmodern thought and practice." (Lather, 1991:2). See self-reflexive note, Text Box 3.1.

Text Box 3.1 Self-reflexive note: "Ooer, this doesn't feel right...?"

I was uncertain about the oppressive implications of this strategic approach to research. In one of my emails to my supervisors, I wrote uneasily (September 22, 2000):
To be honest, I didn't dare say : "One of the aims of my research is to identify which forms of emancipation/domination are justified in environmental education" – even though this would appear to be the question being asked by Usher and Cherryholmes…I would appreciate any advice…?? How can I frame this question in my research proposal? Is there anything I am missing in this analysis?

Therefore, a consequence of this contradiction is that it leads researchers to suggest that the point of research is not to search truths but to dominate. Haack (1998:132) suggests this when she says "…those who despair of honest inquiry cannot be in the truth-seeking business…; they are in the propaganda business". Haack (1998:132) illustrates her critique of this approach with a quote by Grosz, who uses it in the context of feminist research. "…feminist theory…is not a true discourse…It could be appropriately seen, rather as a *strategy*,…[an] intervention with definite political…aims…*intellectual guerrilla warfare*".

Academics, who have discussed the problems of a postmodern or irrealist (acknowledged or implied) position are plentiful and include Bauman (2000), Bhaskar 1993), Eco (2000), Haraway (1997), Lather (1991), Latour (1999), Norris (1996), Sayer (1999). These authors tend to use different adjectives and nouns to name positivism and postmodernism in their discussions, depending on their particular discipline of origin. Their discussions are also at different levels, some look at the strictly philosophical level, that is, have a mostly epistemological and ontological critique, whereas some focus more on the political/social aspects of a naïve realist or naïve idealist approach (although most will at least touch on both aspects).

Thus, Eco (2000) critiques structuralism and poststructuralism, since he is focussing on semiotics, whereas Bauman (2000) talks about positivism and postmodernism, because these are better suited to discussions of sociology. Lather (1991), acknowledging the difference between poststructuralism and postmodernism, chooses to use the terms interchangeably. Some authors approach the classification with much creativity, making it difficult to pin them down to an easy, one-word term, such as Haraway (1991: 184), for whom positivism is: " the modernist poetic moment when cells seemed to be cells and organisms, organisms, pace Gertrude Stein" and postmodernism is "the law of the father and its resolution of the problem of objectivity, solved by always already absent referents, deferred signifieds, split subjects, and the endless play of signifiers".

Table 3.2 below summarises the different terminology used by a selection of different authors. Perhaps this table should be viewed as a summary of the intersecting descriptions of the scene of the investigation. Please note that these authors may use a variety of terms, thus this table serves merely to give some samples of their language. Also, whilst their critiques of positivism and postmodernism are similar, I would not go so far as to say that they are identical, merely that they mostly do not disagree with each other. To draw from Haack (1998), these authors' stories about the methodological problems are quite different, but are not significantly contradictory. Thus, it would not be easy to come up with a unified story by putting all of their stories together, but each of their stories, in different ways and from their different positions, usefully add to the understanding of the problem. All of these authors express a critique of both positivism and postmodernism and the tone of some of their names intimates this.

Although many of these authors merely placed positivism in opposition to postmodernism, some also included phenomenology in their critique, such as Latour

(1999:5-8), for whom phenomenology was just as guilty as positivism and postmodernism in terms of separating the mind from the world. For him, whereas positivism could be summed up as “mind-in-a-vat” and postmodernism as “mind-still-in-a-vat” but now, we are happy about it, then phenomenology resulted in “each-mind-to-its-own-vat”. For Latour, phenomenology created the most dramatic split in the story of splitting. Bhaskar (1993:10) has also given an account of alternatives to positivism and postmodernism. As for Latour, Bhaskar’s alternatives also ‘split reality’, but unlike Latour, he suggests more than one way to do this, such as along: eidetic/sensual (Platonic), phenomenal/noumenal (Kantian), or social/physical (hermeneutical) lines.

TABLE 3.2: Some academics’ names for the non-compatible approaches to methodology.

Academic	*Discipline/s*	*Description of positivism*	*Description of postmodernism*
Bauman (2000)	Sociology	Modernism	Postmodernism
Bhaskar (1993)	Political economy/philosophy	“Compulsive determination of knowledge of being by being”; ontic fallacy p205, 206	“…the denegation of ontology takes the form of the analysis of being as our discourse about being”; linguistic fallacy p206.See also “social conventionalism” p168
Eco (2000)	Semiotics	Structuralism	Poststructuralism
Haack (1998)	Analytic philosophy	Foundationalism	Coherentism
Haraway (1997)	Feminism/ Science studies	Modest witnessing; “the culture of no culture”p3	“Intensified commitment to virile modesty”p35
Lather (1991)	Education	Positivism/modernism	Poststructuralism/postmodernism
Latour (1999)	Science studies	Quest for absolute knowledge; mind-in-a-vat.	Quest for absolute knowledge is dropped, replaced by various relativist settlements; mind-still-in-a-vat, but now we are happy about it.

3.3 "BACK AT THE LAB, PIECING TOGETHER THE CLUES" or What does is all mean?

Like most private detectives, I was operating parallel to the police, the press and various activist groups (this being a highly publicised case). In this section, I therefore give some competing interpretations of the clues. My reporting of these interpretations of methodology is overly simplistic since the police, the activists and the popular press are sharing information and interacting with each other, so that there are no clear boundaries between them. My use of the fictional terms police, press etc serves to remind the reader that I am not hypostatising; that my terms are not the things-in-themselves. It also serves to emphasise the epistemological relativism[12] with which I know these difference positions. Thus, although these positions really exist, my knowledge of them cannot be absolute. Even if I were to use 'non-fiction' terminology, these positions would be fictions of a sort, but fiction based on the real world. Arguably, all fiction is based on the real world, since all writers must get their material from their experience. My use of fiction makes obvious an aspect of knowledge that we sometimes forget, namely, its non-foundational, social, relational nature.

Therefore, lets say that the activists represent critical theory, the police represent extreme poststructuralism[13] and the popular press represent participatory/contextual methodologies (based on poststructuralism and phenomenology, or mixtures thereof). Table 3.3 indicates the relationship between my detective story interpretations and Bhaskar's typology of methodological positions. See also Diagram 3.1, an out line of different methodologies.

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[12] Cf. Vol.1, Chap.4.2.1, transitive and intransitive truth.

[13] Extreme poststructuralism was my earlier leaning, and arguably the leaning of my supervisors and the key thinkers in environmental education. I say 'arguably' because whilst these academics would have approved being associated with poststructuralism, their methodological positions fell along a continuum of mild to extreme poststructuralism. This is an example of the difficulties faced in trying to make neat categories. To label the poststructuralists 'the police' is purposefully ironic, given that they supposedly have the least absolute rules.

TABLE 3.3 Bhaskar's (1993:10) typology of methodological assumptions, when the mind is separated from the world, and their rough parallel to my detective story interpretations

Bhaskar's typology of methodology	**Detective story typology of methodology**
1. It can ***objectivize*** *reality, e.g by extruding thought from it;*	*1. The activist interpretation's underlying theoretical leaning*
2. *It can* ***subjectivize*** *reality, e.g. by failing to locate thought within a non-ideational and mediated reality encompassing it;*	*2. The police (or the official) interpretation's underlying theoretical leaning*
3. It can ***split reality,*** *e.g. on eidetic/sensual (Platonic), phenomenal/noumenal (Kantian), or social/physical (hermeneutical) lines*	*3. The popular press interpretation's underlying theoretical leaning*
4. It can adopt ***some combination*** *of the above expedients.*	*4. The vulgar pragmatic compromise, found in all of the above*

3.3.1 **"Activist interpretation" or The critical theories interpretation**

For the purposes of this story, I will assume that the activists are those of the 'dialectical materialism' school, for whom knowledge acquisition is an empirical dialectical process which ultimately leads to 'the' scientific truth (Bhaskar, 1989: 126)[14].

In terms of the dilemma over agency and relativism, followers of this position seem largely ignorant of it. Their unexamined position is that of objective or 'scientific truth' which begins with Descartes (1596 – 1650) who believed in the mind world split.

[14] However, a key thinker for contemporary critical theorists is Habermas, member of the Frankfurt School, who moves beyond the positivism and determinism of Marx's later writing (Ewert, 1991; Fien, 1993:60). The Frankfurt school critical theorists, in accepting the critique of positivism, fall into some of the same relativist problems as the extreme poststructuralists and phenomenologist's, such as Adorno who denied the usefulness of explicitly emancipatory practice (Levy *et al*, 2002:5). It is beyond the scope of this thesis to discuss these contemporary critical theories in detail.

Latour reminds us that Descartes raised the question of the autonomous existence of reality when he asked how an isolated mind could be *absolutely* as opposed to *relatively* sure of anything in the outside world. Descartes was asking from the mind separated from the body, or the "mind-in-a-vat", for an *absolute certainty*, which, according to Latour, was not needed when the brain (or mind) was firmly attached to its body and the body thoroughly involved in its normal ecology. For Descartes, the only way that the mind-in-a-vat could re-establish certain connection with the outside world was through God. Thus, it is not entirely odd that the question "Do you believe in reality?" is similar in its tone to the Sunday school question, "Do you believe in God?"

However, after Descartes, philosophers began to wonder if the world could directly send us enough information to produce a stable image of itself in our minds. These empiricists did not go back and question the 'mind-in-a-vat' assumption. Instead they decided that they needed to train the mind-in-a-vat to extract from the meaningless stimuli experienced by the mind everything needed to recompose the world's shapes and stories. In their attempt to be absolutely certain of the outside world, they assumed an identical correspondence between the representations of things and the things in-themselves, resulting in naïve objectivity. As Haraway (1997:139) describes it, "they tended to succumb to epistemological arteriosclerosis, or, in Watson-Verran's terms, 'hardening of the categories'".

The activists of this story, influenced by such ideas, therefore have a tendency towards absolute, hard categories such as such as oppressor/oppressed, men/women, black/white, ours/theirs. In the words of Bauman (1991:14) "The central frame of both modern intellect and modern practice is opposition – more precisely, dichotomy". Bauman has linked this to violence: "Invariably, such operation of inclusion/exclusion is an act of violence perpetrated upon the world, and requires the support of a certain amount of coercion" (Bauman, 2000:2).

My first research questions (Text Box 3.2) were a good example of this approach to research, in which I set up a strong oppositionals, such as between management/workers and environmental educators/industrialists.

Text Box 3.2 Self-Reflexive Note: Activist questions

Below are some questions from an early version of my research proposal:

- *What are the tensions experienced by myself and other practitioners who find themselves working with/in a context where an political orientation different to "theirs" is dominant, e.g. I think that the workers should be able to discuss/act on economic issues they face, as part of an environmental programme - the management label workers who bring up issues of money and pay as "troublemakers"?*
- *What are the tensions caused by the contradictions in our ideologies e.g. the tension of the rhetoric of participation as emancipatory that contradicts the experience of participation as being regulatory?*
- *How do these tensions develop? In what ways are they dissipated? How are they maintained?*

In the above questions, some influence from my supervisors is evident, mainly in the last point. My supervisors frequently warned against my oppositionalising, coming as they were from a more poststructural position. I had at least enough idea about the problems of oppositionalising to put the word "theirs" into inverted commas. For example, one supervisor (Janse van Rensburg, 2000) pointed out:

Trouble spots:

- *An oppositionalised distinction between 'EE orientation' and 'industry orientation'. Setting up such distinctions and then collapsing them as 'not really how it is' is a popular modernist intellectual strategy and not very useful. Images such as amalgams of discursive strands may be a better description.*

- *A reification (part of the oppositionalising) of a certain approach to EE. I am not sure that an emancipatory EE is practiced anywhere, and perhaps not even described as such, and 'the rhetoric of participation as emancipatory' – where would you source that to? EE has, as far as I know, not been promoted as a strategy for personal emancipation, although many learners experience the kind of learning that happens on EE courses as personal growth and 'emancipation' or 're-learning'.*

My main problem at this point was that I was feeling silenced and unable to act. I wanted to do this research from a social justice point of view but it seemed whenever I reached for my activist language, I was oppositionalising. At one point, in order to get away from this oppositionalising tendency (not particularly successfully), I changed my questions to make them broader and open ended. I asked:

- *How do semiotic and non-semiotic factors shape and maintain the environmental discourses in a Zimbabwean industry context (nevertheless implying the existence of different, i.e. oppositional, discourses)*
- *How do we, as environmental educators in a Zimbabwean context, critically engage with particular discourses in our teaching/training in industry?*

Notice how, despite the rewording, I was still implying the unspoken existence of non-environmental educators as an oppositional to environmental educators.

3.3.2 "Police interpretation" or The extreme poststructural interpretation[15]

This position openly admits that there is no reality beyond what our minds construct, that is, there is no reality beyond our mind's representations. Baudrillard's hyperreality (in Poster, 1988) is perhaps one of the most obvious examples of this approach. It can be found in more extreme versions of poststructuralism and postmodernism, although in practice, poststructuralists and postmodernists must necessarily contradict this lack of belief in their daily lives. An example of the mind-over-matter approach in environmental education is to be found in the work of Usher and Edwards (1994), as these quotes illustrate:

> *Postmodernism goes beyond anti-realism. It questions representation and the underlying belief of a reality that is independent of representation yet capturable by it. However, it also puts forward the notion of a reality constructed by representations and therefore of multiple perspectives where representations become reality and where reality is always, necessarily, represented.*
> (p14)
>
> *The 'truth' of research is an outcome of textual strategies rather than the extent to which the text faithfully represents 'reality'.*
> (p150)

(Please note the inverted commas around 'truth' and 'reality' implying that there are no such things as truth and reality).

However, a poststructural or postmodern researcher cannot stay purely with this extreme version of irrealism if they hope to change in the world. One way to effect change but remain true to the idea that there is no reality beyond representation is to link representation with the desire to dominate or the 'will-to-power', rather than with reality. Therefore, a type of pragmatic position tends to be adopted in practice, with Foucault's operations of power replacing reality (Usher and Edwards, 1994:16-18).

Here researchers attempt to avoid the dilemma by suggesting a movement between an objective ontology and a subjective one, depending on strategy e.g. sometimes, I will be an objective 'woman', and thus fight for women's rights, but sometimes I will

[15] I call this *extreme* poststructuralism because the founder of poststructuralism, Derrida did not take poststructuralism to the irrealist extremes of some of its advocates (Norris, 1996:248).

argue that I am due the same rights as men because I am no different from them, using the subjectivist/idealist argument that gender is merely a social construct (Lather, 1991). This position was supported by other environmental activists, such as Giroux (in Gough, 1997: 161) who wrote:

> *We need to combine the modernist emphasis on the capacity of individuals to use critical reason to address the issues of public life with a critical postmodernist concern with how we might experience agency …unsupported by transcendent phenomena or metaphysical guarantees.*

Gough (p161) describes Giroux's position as: "an *uncritical* attempt to combine critical enquiries with poststructural analyses and expand its empire" (my emphasis). See Text Box 3.3 below for my attempt to uncritically combine modernism and postmodernism.

Text Box 3.3 Self reflexive note - "Just-do-it"

Thus inspired towards a "just-do-it" Nike interpretation of methodology – i.e., just *uncritically* combine modernism and postmodernism[16] - I wrote: *We should perhaps be very aware of the limitations and strengths of both approaches to research and use them accordingly. Maybe, more than this, we should see them as working parts of the same tool, like two halves of a pair of scissors. If either one of them is missing, the scissors are useless. And just as we should keep the blades of both scissors sharp, we should be the best practitioners we can be, of both positivism and poststructuralism.*

However, this strategy results in a fluctuation *between* the problems of a positivist methodology and a postmodern methodology, rather than offering a solution to these problems. When applied to the question of agency, positivism results in the assumption that hard absolute categories determine society, whilst irrealism assumes that the mind makes reality, resulting in voluntarism.

McNay draws attention to this tendency in the writing of Foucault when she explains that his thought vacillates "between the moments of determinism and voluntarism" (McNay, 2000:9). She says:

[16] Following Lather (1991) I use the terms 'poststructuralism' and 'post-modernism' interchangeably.

> *The insights in the work on discipline are not fully integrated with the later work on the self and so Foucault can only offer the over-determinist view of the subject subsumed by the operations of power upon the body or the solipsistic outlook of an aesthetics of existence…While Foucault's work does not foreclose an account of agency in so stark a manner as the Lacanian reification of the phallocentric order, it is seriously limited by its conceptual underdevelopment.*

Popkewitz and Brennan (1998) provide a good example of this sort of pragmatism which follows the idea that, ultimately, for pragmatic reasons, we must sometimes insist on our preferred constructions of the way forward, and thus we must dominate. Using the work of Foucault, they suggest that we avoid the problems of both positivism and poststructuralism by using both strategically. They advocate an education research that includes both power as 'sovereignty' and power as 'deployment'. In its incarnation as 'sovereignty', power for them (1998:17) is "'something' that people own, and that ownership can be re-distributed among groups to challenge inequities", i.e. this is the positivist side of their position. In its incarnation as 'deployment', power for them is productive (1998:19), "The effects of power to be found in the production of desire and in dispositions and sensitivities of individuals". In this conception, there is no recourse to truth or reality, all that there is, is power – and that power produces reality. Thus, (1989:19) "…the concern is not to find the origin of repressive mechanisms (but to find) how 'sense' is produced through the complex inscriptions of power relations." This is the postmodern side of their position. Although Popkewitz and Brennan offer criticisms of the 'sovereignty' view of power, they do not critique the 'deployment' view, which has their intellectual approval. For them, acknowledging a role for power as 'sovereignty' is a pragmatic necessity; whilst they remain none-the-less true to an intellectual commitment to power as 'deployment'. I was also committed to this approach initially.

Deciding to use both deployment and sovereignty approaches to politics does not give a direction for researchers. How will they know when to use which? This must require some way of choosing better or worse truths. These poststructural researchers must therefore look to the other kinds of pragmatisms to determine a 'truth' which can give direction to their strategic political and epistemological activity. These kinds of pragmatisms include those which advocate that we are justified in our choice of truths if those truths serve humanity (e.g. Lather, 1991; Harding, 1991; Doll in van Rensburg, 1995:167), begging the question of how we will tell what is best for humanity (Peirce in Haack, 1998: 109). Or, those pragmatisms which suggest that the measure of truth is the degree to which it is aesthetic (e.g. Cherryholmes, 1999), begging the question of whose idea of beauty should be used (Masuchika Boldt, 2001).

However, as Sayer (1999:71-72) has pointed out, some postmodern researchers refuse to choose between these two extremes. These authors not only lack an alternative but attempt to make a virtue of this by arguing that answers cannot be expected and that all one has to do is persist with sceptical questioning. Lotz (1999:18) illustrates this position when she writes at the conclusion of her paper: "In 'ending' this narrative, I wish to tentatively open up aspects of this latter challenge for further consideration and debate." Note the quotation marks around 'ending', indicating there is really no such thing as an end, but only more questions. This is a useful strategy in that it ensures pluralism and avoids dogmatism. However, it tends towards relativism, and thus a lack of ethics, for how can we make ethical choices when there is no possibility to choose between better and worse theories?

3.3.3 "The popular press interpretation" or The participatory/contextual conventionalist interpretation

This kind of consensualist, conventionalist pragmatism, is often based on a poststructural epistemology, although sometimes also a phenomenological one, but I have given it a section of its own because of its large, popular following, especially amongst development workers trained by Robert Chambers (see for example, Chambers, 1989, 1997, 2004; Selamna, 1999). It has become, arguably, the most popular researching/training tool in Southern Africa and is the favoured method of the World Bank (Salmen and Kane, 2006). This is because contemporary researchers are highly sensitive to colonising influences; and participatory research methods supposedly avoid research findings which marginalize (colonise) disadvantaged groups.

This conventionalist approach also results in relativism, because there is no way to judge better or worse interpretations. For example, when Chambers (2004:7) asks “Whose reality counts?” he is perhaps implying the phenomenological position that there is no shared reality, only purely subjective realities, resulting in relativism. To overcome the problem of being unable to decide between realities for the purposes of decision-making and action, Chambers takes the position that poor people’s realities are more right than other realities. Researchers using participatory methodologies are encouraged to “hand over the stick” (Chambers, 2004:9). Therefore, in this example of the popular press, like the official police interpretation above, a turn must be made towards a pragmatism (in this case conventionalism) in order to decide a way forward.

Sauve’s (1999) conception of a reconstructive (rather than a deconstructive) environmental education is an environmental education example of this pragmatic approach that allows action by suggesting a conception of relativist truth, based on contextual discussion amongst actors. She writes, “Postmodern educators adopt an ethical posture that is also relativist (where the context is taken into account). This involves a critical discussion among the actors within a situation in order to provide a basis for contextually appropriate decision-making” (p13). This pragmatism runs into the problem that dominant or popular constructions of truth may be wrong (Bhaskar, 1993:216; Peirce, in Haack, 1998:113).

Nabudere’s (2002) approach to ‘hermeneutic’ research is another example of the participatory/contextual methodological approach, this time with a phenomenological/hermeneutic epistemological background, although Nabudere also draws on postmodern authors to illustrate his position. He writes (2002, no pagination), “…phenomenological and hermeneutic (…) philosophies have impacted to create new paradigms, methods and techniques. These are the participatory action research method and the rapid appraisal methods, which have become a focus of paradigmatic struggle” .

3.4 "INVESTIGATORS OR COLLABORATORS? THE DISTINCTION GETS FUZZY" or explaining the function of the methodologies in maintaining the social order (network of social practices)

This detective story is streetwise. Nobody is innocent. Despite their protestations otherwise, the activists, the police and the popular press are not merely reporting what they see as the truth. Rather, the differences between their positions are significant artefacts to help them to achieve their particular agendas (recall Latour's claim that the search for absolute validity of truth is aimed at overcoming, or dominating, the "mob") (Cf. Vol.1, Chap3.2). This section therefore seeks to illuminate the preconditions for the existence of the different methodologies. Since the number of preconditions are likely to be several[17], I do not claim this section will be exhaustive. I will describe only two preconditions, which I think are most significant, namely:

- The requirement of the necessity of dominance, of imposing individual will against the masses
- The requirement that our methodology does not contradict our understanding of the nature of matter: for the activists this was Newtonian physics; and for the police and popular press, it was Bohr's, Bell's and Everett's interpretations of quantum physics.

Therefore, this section seeks to examine answers for such questions as:

> *Why, in the first place, did we need the idea of an outside world looked at through a gaze from the very uncomfortable observation post of the mind-in-a-vat?*
> (Latour, 1999:12)
>
> *And why burden this solitary mind with the impossible task of finding absolute certainty instead of plugging it into the connections that would provide it with all the relative certainties it needed to know and to act?*
> (Latour, 1999:12)
>
> *Why did empiricism win…?*
> (Bhaskar, 1993:182)

[17] Other preconditions might be belief/non belief in God or assumptions about reason. For example, postmodernism requires atheism, as does critical theory.

> *The (...) difficult task is (...) how to begin to explain irrealism. For that is the real scandal of philosophy.*
> (Bhaskar, 1993:214).

3.4.1 **"Playing dirty: tactics to insist our position wins" or The precondition of the necessity of dominance, of imposing individual/community will against the masses"**

3.4.1.1 *The activists play dirty*

In order for activists to insist on their political positions, for example, in order for men to dominate women (or slaves or any other category of person), the women must first be ontologically and epistemologically objectified: made into a 'natural', inhuman category that exists entirely objectively, in both the epistemological and ontological senses (Foucault, 1965; Haraway, 1989, 1991). In other words, the scientists must be able to claim that their 'making' of the category of an innately inferior 'woman' was nothing to do with their agendas, but merely a natural given, the category was not 'made' at all, but merely found. The morality of it, that men must dominate women, is unquestionable, since the existence of the category 'woman', with its inferiority constructed by men (but where the construction is unacknowledged and hidden) is *apparently* self-evident[18]. Thus, men do not dominate woman because they have *decided* (which would open them to the possibility of being wrong, and thus they would lose the force of their argument – 'might' could overcome 'right'), but rather because the superiority of men is an objective fact, an unarguable position in terms of the naturalness of the 'way things are'.

Or, to use a non-human example, a pathological virus is, in terms of mind-in-a-vat philosophy, portrayed without qualification, as an objective thing in itself. The researcher merely 'finds' it and then 'objectively' describes it and its mode of transmission. The scientist's particular worldviews are not supposed to come into the question, thus his/her research is portrayed as entirely objective and 'true'. An example of such a virus is the HIV virus. Here, the linkage of the objective, naturalness of the mode of transmission of the virus, to moral standings on 'right' is well-documented by, for example, Haraway (1989) and Dougherty (2001). The

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[18] This concept is discussed in more depth later (see Cf. Vol.1,)

scientists state, ‘objectively’, that due to its mode of transmission, the virus, devoid of its human constructedness, is most easily contracted through homosexual sex. Moralists can take this ‘fact’ and use it to show the wrongness of homosexual sex: therefore, the Biblical warnings against homosexual sex are right. Likewise, another researcher with the aim of protecting homosexual rights, might emphasise the transmission of the virus in terms of certain sexual practices, which can be found in heterosexual or homosexual sex. The moralists from this side of the moral combat zone can also use the objective ‘fact’ of the transmission of the virus to argue that HIV infection is an issue for all sexual beings and that homosexuality vs. heterosexuality is of no consequence in the fight against HIV transmission.

Thus, the objective ‘rightness’ of the scientific information is translated into the objective ‘rightness’ of a moral stand. Proponents can feel morally justified in their position because of the scientific ‘facts’. This is an example of what Latour describes as the modernist settlement (Figures 2.4 and 2.5). In other words, the methodological problem (Cf. Vol.1, Chap. 3), Latour’s mind-in-a-vat approach to knowledge acquisition, is held in place because it can be used to bolster the power of those who dream of dominating the people (Cf. Vol.1, Chap. 3.5.1).

3.4.1.2 *The police play dirty*

How do the postmoderns claim political advantage through their epistemological position? Postmoderns, by definition, would deny there was such a thing as legitimate epistemological privilege (Harvey, 1989). For some postmoderns, this leads to an inability to act and they follow Nietzsche, becoming nihilistic and ineffectual. Completely devoid of the possibility of meaning, for some postmoderns, travail and suffering, even suicide, are all that remain: “Being exists only as ‘suspension and shirking.’”(Vattimo in Eco, 2000:47).

However, for other postmoderns, saying that there is no way to judge better or worse truth, rather than leading to nihilism, opens up pragmatic possibilities for dominance, because no-one is allowed to question whatever position one might fancy to hold (Bauman, 2000). These pragmatic possibilities might be buoyed by the idea that truth is what is best for society, begging the question of who is to decide what is best for society (see the Hitler quote below) but such a noble claim is not necessary (see the quote below by Mussolini). At least in the positivist tradition, there was the option of argument. Now there is the possibility of unrestricted truth making, without being answerable to anyone else's position. Bauman (2000:260) calls this "The protective wall of playful unconcern…"

Hitler and Mussolini are two examples of totalitarian leaders who have made use of the relativism found in postmodernism:

> *There is no such thing as truth. Science is a social phenomenon and like every other social phenomenon is limited by the benefit or injury it confers on the community.*
> (Hitler, in Sayer, 1999:47)
>
> *Everything that I have said and done in these last few years is relativism by intuition…From the fact that all ideologies are of equal value, that all ideologies are mere fictions, the modern relativist infers that everybody has the right to create for himself his own ideology and to attempt to enforce it with all the energy of which he is capable.*
>
> (Mussolini, in Sayer, 1999:47)

However, many of the advocates of this position can hardly be equated with Hitler and Mussolini. Possibly, there is another motive for the attractiveness of this irrealist alternative to positivism, namely the ability of these writers to maintain popularity within a certain part of society. That belonging to a group can bestow symbolic capital is documented, for example, by Blumberg and Soal (1997) who has described and explained the potential advantage of belonging to marginalized bisexual groups. In a criticism aimed specifically at Bachelard, Kuhn, Feyerabend, Rorty and Derrida, Bhaskar makes this statement: "But on close inspection all these beautiful souls[19] (…) turn out to be still at work in the struggle for symbolic capital, money and power." (see self –reflexive note, Text Box 3.4, below). He also states: "If realism is true, if it is really true, why is it that irrealism is so dominant? Well, irrealism is so dominant because it reflects the irrealist, reified, heteronomous, oppressive structures of the

[19] "The beautiful soul" is the term applied by Hegel to the archetypal figure of alienation, the pure agent who will not reconcile herself to the norms of, and so is alienated from, her community (Bhaskar, 1993:167). Ironically, although irrealism is a dominant concept in society's universities and organisations of influence, its proponents nevertheless identify as marginal, alienated and radical thinkers.

society in which we exist." (Bhaskar, 2002:171) In other words, to stand against irrealism is to stand against a dominant construction of society.

Text Box 3.4: Self reflexive note – "Wanting to fit in…"

I have always identified with marginalized people, possibly because I belong to a marginal group myself, and I have always felt a personal need to work towards emancipation. My interest in the environment was an extension of this desire for social justice. My initial attraction to postmodernism, apart from its stance against positivism, was that I felt comfortable with its (albeit ambiguous) interest in marginalized groups and their emancipation.

The greatest self-reflexive step that I made to help me solve my methodological riddle was my movement away from *doxa*, my strongly held, socially generated, beliefs. In this difficult process, I was worried that I would lose my peer approval, and with it, symbolic capital, not to mention my self esteem. When I first began exploring what seemed to be the heretical possibility of realism, my language was extremely tentative in my discussions with my peers. Fortunately, my research friends' commitment to honest inquiry has meant that they have allowed me much leeway on my journey, even when I was moving in a direction with which they were unfamiliar and of which they were at times unsure.

3.4.1.3 *The popular press plays dirty*

In insisting on the impossibility of a shared experience of truth (phenomenology), or on the impossibility of truth (postmodernism), the popular press look to democracy and the voice of the marginalized to determine truth (Haack, 1998). Truth thus becomes what a majority of people say it is, also known as consensualism (Bhaskar, 1993: 216) or, if the majority are seen as the oppressors, then truth is what the marginalized, or the poorest say it is (Jaggar, Harding and Nelson in Haack, 1998: 126). No one can argue with your (or your community's) truth because, since no-one can share your world experience, no-one argue with your interpretation of it. The popular press participatory contextualism is conservative as it furthers pre-existing community agendas.

Whilst this is a useful strategy to insist on marginalized people's agendas, it is not a method that allows for a search for truth. Indeed, non-truths can be claimed as truths to further particular questionable agendas. An example might be the questionable claim, common in Southern African countries such as Botswana (Ntseane, 2004), that it is wrong for women to insist their partners use a condom (despite the risk of HIV), since the dominant belief in that culture is that women must always play the submissive role. Another example is the claim that we cannot argue against female circumcision, despite its demonstrable harmful effects on women's emotional and physical health (El Saadawi, 1980), since this is a cultural norm in regions where it is practised (Cf. Vol. 2, Chap. 7). This is not to say that condom use and cessation of circumcision is absolutely right, but it is to say that, if we can agree on some result, such as, the continued life of the person in question, then it is more difficult to argue the alternative position. A good example of the fallibility of knowledge is male circumcision, which progressive academic thinkers recently thought was inhumane and unnecessary, but which recent research shows to significantly decrease transmission of HIV (BBC, 25 October 2005).

3.4.2 "Will our copy contradict the boss?" or The precondition that our methodologies do not contradict our understanding of the ontology of matter

> *After the demise of positivism in the wake of the double blow of relativity theory and quantum mechanics, philosophy found itself in a double bind. In failing to thematize (or at least reproblematize) ontology and so to articulate a new one — which could accommodate transitive and intransitive change and stratification alike — it tended to transmute along the transitive dimension (...)*
> Bhaskar (1993:213)[20].

There are several key education research texts that look to quantum physics to demonstrate the inadequacy of deductive-nomological (positivist) science and to hint towards an alternative (for example, Lather, 1991, Usher, 1997). If, as Bhaskar above suggests, Newtonian science was initially influential in the acceptance of empiricism as a dominant philosophy in methodology, it seems likely that quantum physics would now influence our more recent methodological choices.

This section is similar to the paper that Gough (2002) wrote on the parallels between education research and detective fiction. He noticed a parallel between what he was

[20] For a description of the transitive and intransitive dimensions see Cf. Vol.1, Chap. 4.2.1 and Vol.2, Chap.3

thinking about in education research and the detective fiction books he was reading. Here I notice a parallel between education research and our understanding of physics (see also Shipway, 2002). Norris (2000) has also noted this parallel and comes to similar conclusions to myself, most notably the conclusion, expanded upon later, that the best interpretation of quantum physics for methodology is not the mainstream Copenhagen interpretation, but rather Bohm's interpretation. This interpretation assumes the existence of an implicate order and non-local connections, or, in other words it assumes that relations exist before objects.

Gough (2002) felt that detective stories gave more than just a metaphor for research. Rather, they were inter-textually linked manifestations of cultural and semiotic shifts associated with postmodernity. This section is therefore based on the assumption that just because educational methodological texts and physics texts are not closely linked, this does not necessarily mean they are not influencing each other or reflecting the same cultural and semiotic trends. They are intertextually-linked; or, to use a quantum metaphor, we might say that they are twinned particles, connected non-locally.

3.4.2.1 *"The activists: the Newtonian interpretations"*

Bhaskar (1993:182) states that empiricism "won" because of, amongst other things[21], "Newtonian science". For the activists, their dichotomies and assumption of a simple relationship between truth and representation was twinned with the assumptions of Newtonian science. I will not go into this section in much detail because this linkage between positivist research methodology and Newtonian science is well-acknowledged.

3.4.2.2 *"The police: the pragmatic interpretation"*

Most physicists do not follow the logic of quantum theory to its ultimate extreme. They tacitly agree that somewhere…quantum physics somehow turns into classic physics, in which the independent reality of tables, chairs and moons is never

[21] Bhaskar's (1993:182) 'other things' which allowed empiricism to 'win' were "Bourgeois individualism (…) and the post-Hegelian kenosis of reason".

doubted. Bohr, who is credited with what has been termed the Copenhagen[22] interpretation of quantum physics, said that this metamorphosis required 'an irreversible act of amplification' of quantum disturbance, leading to macroscopically detectable results, but he left it vague as to exactly what this act entails (Davies and Brown, 1993: 31).

As the quote which follows illustrates, this pragmatic stance is commonly adopted by poststructuralists and postmodernist education researchers: "The agnostic option of bracketing out questions regarding the truth or practical adequacy of the discourses under investigation has become popular, particularly in sociology." (Sayer, 1999: 49,50). For the education researchers, as for quantum physicists, methodology has hefty implications for epistemology, but more radically for ontology: it brings into question the existence of a separate reality, a reality beyond the observer. For most, but not all, poststructuralists and physicists, the easiest way to deal with the paradox inherent in their worldview is to maintain an agnosticism on the question of reality. In their work, they use a theory which implies that reality is merely a consequence of epistemology (faithful to their agnosticism, they are rarely pinned down to an actual statement to this effect), but in their everyday lives they act as if reality really exists. Bhaskar might call this sort of contradiction "a performative contradiction – or theory-practice inconsistency" (1993:117). See the section "The police interpretation" above for a description of how this irrealism/agnosticism plays out in education theory/practice.

3.4.2.3 *"The popular press – its many universes interpretation"*

(for its pragmatic conventionalism, based on postmodernist irrealism, see above)

For physicist Hugh Everett the problems of quantum physics and the real world are avoided by suggesting that the universe is split into an infinite number of slightly different copies. In the case of the Schrödinger cat experiment, then, the universe splits into two: one universe containing a live cat, the other a dead cat. Both universes also contain one copy of the experimenter too, each of whom thinks she is unique. Hence we must accept that there is an infinity of 'parallel worlds' co-existing

[22] The Copenhagen interpretation is considered by many to be the only plausible interpretation and is currently the mainstream position (Davies and Brown, 1993:71).

alongside the one we see at any instance. Moreover, there is an infinity of individuals, more or less identical with us, inhabiting these worlds. An argument in favour of the existence of many universes is that it would provide an easy explanation for the formidable number of mysterious co-incidence found in physics, biology and cosmology. The seemingly contrived organisation would be no mystery as all possible arrangements of matter and energy would be represented somewhere amongst the infinite ensemble of universes. Our universe would only be remarkable in that we had selected it by our own existence (Davies and Brown, 1993: 38).

The many universes interpretation of quantum physics is similar to phenomenological positions found in certain existential kinds of populist education research which study the structures of consciousness as experienced from the first person point of view. In these positions, reality is split along phenomenal/noumenal (Kantian), or social/physical (hermeneutical) lines, allowing an objective ontology (in non transcendental idealist versions[23]) for the real, pre-reflexive world, but a subjective ontology for the individuals who experience that world. Each person thus lives in a different universe. In environmental education, the work of Wals (1993) is an example of a phenomenological approach to research. However, Wals (1997) and Wals in Corcoran *et al,* (2004) make a pragmatic move to include critique as a part of their research to accommodate the problem of agency linked to phenomenological investigations, which have the purpose to "describe" rather than change (Habermas in Lather, 1991:7). This makes theirs a mixture of critical and phenomenological approaches to education research, but risks criticism from phenomenological purists.

[23] According to Smith (2003, internet document), Husserl proposes a realist phenomenology in his "Logical Investigations" (1900-01) and a transcendental idealist phenomenology in his "Ideas 1" (1913).

3.5 "THE END (FOR THE TIME BEING, AND WRITTEN IN WASHABLE INK)" or The agency has been found, indeed it was never missing

> *We cannot not act*
> (Bhaskar, 2002:252)

> *Pragmatism is the principle that every theoretical judgment expressible in a sentence in the indicative mood is a confused form of thought whose only meaning, if it has any, lies in its tendency to enforce a corresponding practical maxim expressible as a conditional sentence having its apodosis in the imperative mood.*
> (Charles Peirce in Bertilisson, 2004:371).

In this section I move from describing, interpreting and explaining towards an imperative: a way forward for my methodology. Since the explanation has given two preconditions for the existence of the methodological problem, I will begin this section initially in terms of what I should not do, to absent those preconditions. I will then give an outline of the key characteristics of my methodology if I follow the earlier suggestions of what I should not do. I use metaphors to introduce the guiding principles of this methodology, and expand on the methodology in more precise language in the next chapter.

3.5.1 **I should avoid insisting that my truth is absolutely right, thereby attempting to impose it on others.**

The trick here is not that I should stop arguing for what I see as better positions, but rather that I should stop trying to argue that I am absolutely right. Latour (1999:15) says, "We do not lack certainty, because we never dreamed of dominating the people". Thus, I should assume a position of 'not-knowing-absolutely' and look towards relative (not absolute) certainty for 'good enough' knowledge that will enable agency. This means letting go of the need to win arguments and accepting always that I might be wrong. It is an acceptance of epistemological relativism. Thus, my methodology must be fallibilist. Haraway wrote the following about her fable "The Companion Species Manifesto", to indicate her commitment to fallibility and thus epistemological relativism:

> *The accounts I offer are idiosyncratic and indicative rather than systematic, tendentious more than judicious, and rooted in contingent foundations rather than clear and distinct premises. Dogs are my story here, but they are only one player in the large world of companion species. Parts don't add up to wholes in this manifesto-or in life in naturecultures. Instead, I am looking for Marilyn Strathern's 'partial connections,' which are about the counter-intuitive geometries and incongruent translations necessary to getting on together, where the god-tricks of self certainty and deathless communion are not an option.*
> Haraway (2003:25)

Haraway's 'counter-intuitive geometries' suggest that whenever we use language we must be aware, counter-intuitively, that our words are not the things and of the limited necessity for words, the impossibility of them giving absolute truth. Her 'incongruent translations' refers to how a pluralism of interpretation is a requirement for knowledge development. Her 'god-trick' of 'self certainty' refers to how the idea of absolute knowledge is a self-deception. Her 'god-trick of deathless communion' refers to another self deception, namely, the idea that we can live in this world without being changed by it, the self deception that the mind is separate from the world. As researchers, this is the self-deception that we can engage with our research material, human and non-human, and not co-constitute it as well as be co-constituted by it.

3.5.2 I should avoid irrealist or positivist approaches to physics to justify my methodology.

I assume it is well-established that positivism is an untenable methodological position. However, to further explain avoiding irrealism, it is useful to note that the founders of both poststructuralism and quantum physics have never been so bold as to imply that their theory requires the irrealism. Einstein's debate with Niels Bohr is an example. Einstein maintained that the way in which quantum physics was being interpreted was incorrect, that its implication that the observer determined reality, was incorrect, and that therefore there must be an incompleteness within the theory of quantum physics itself (Davies and Gribbin, 1992:21). "Surely", Einstein once asked, "the moon exists whether or not somebody is looking at it?" (Davies and Brown, 1993:30). Likewise, Derrida has consistently denied the anti-logic or anti-ontology ascribed to his work by readers who demonstrate, in his opinion, only an ignorance of his work. Norris draws attention to the misinterpretation of Derrida with this statement (Norris prefers to use the term ‘deconstruction’, rather than ‘poststructuralism’, to indicate his distance from the non realist poststructuralist interpretations):

> *To be sure it is the case – as neither Derrida nor de Man would for a moment deny – that ...claims are open to argued and cogent refutation; that they involve determinate values of truth and falsehood (as well as protocols of right reading) which set deconstruction firmly apart from its pseudo-deconstructive offshoots in literary criticism.*
> (Norris, 1996:248)

Instead of positivism or irrealism, I might look towards an entirely different, realist approach to guide my methodological assumptions of truth. Such an approach has evolved out of the attempt to construct a hidden variables theory of quantum mechanics. I will give a brief description of this approach to physics, as I will be using some of its language later, to provide me with metaphors to guide my research.

3.5.3 **A realist approach to physics**.

A key piece of evidence in support of this realist theory, though by no means proving it, is the violation of Bell’s inequality which “comes from an analysis of the consequences of the idea that there should be no action at a distance…strictly speaking no faster-than-light signalling. In a less rigid sense no action at a distance simply means that there are no hidden connections between things” (Bell, in Davies and Brown, 1993: 45).

Quantum mechanics predicts that Bell’s inequality should be violated, and these predictions have been supported by certain experiments[24]. If this violation is in fact correct, and quantum physics has never been wrong in 50 years (Davies and Brown, 2000:4), then it is necessary to relinquish one of the two physical assumptions that went into proving it. One of these is reality. Bohr’s Copenhagen interpretation adopts this stance. The other assumption is that of non-locality: roughly speaking, there should be no propagation of physical effects faster than light.

[24] Namely by Alain Aspect, in 1982 (Davies and Brown, 1993: 40)

If locality is abandoned, it is possible to re-create a description of the macroworld closely, similar to that of the everyday world, with objects having a concrete independent existence in well-defined states and possessing complete sets of physical attributes. The trade off is that non-local effects bring their own difficulties; specifically, the ability for signals to travel backwards into the past. This would open the way to all sorts of causal paradoxes.

In spite of these difficulties, some researchers, most notably, David Bohm, have pursued the ideas implied by a non-local hidden variables theory. This is similar to the more familiar potentials associated with force fields such as gravity or electromagnetism, but differs in that the activity of the quantum potential depends on the holistic structure of the system. That is, it encodes information about the measuring apparatus, distant observers and so on. Thus, the entire physical situation over a wide region of space (in principle the whole universe) is embodied in this potential. (Davies and Brown, 1993:39). In Bohm's realist view, all the separate objects, entities, structures, and events in the visible or explicate world around us are relatively autonomous, stable, and temporary "subtotalities" derived from a deeper, implicate order of unbroken wholeness. He writes that we must learn to view everything as part of "Undivided Wholeness in Flowing Movement" (Bohm, 1980: 1).

Bohm suggests that the whole universe can be thought of as a kind of giant, flowing hologram, or *holomovement,* in which a total order is contained, in some implicit sense, in each region of space and time. The explicate order is a projection from higher dimensional levels of reality, and the apparent stability and solidity of the objects and entities composing it are generated and sustained by a ceaseless process of enfoldment and unfoldment, for subatomic particles are constantly dissolving into the implicate order and then recrystallizing.

This approach to physics assumes action-at-a-distance. ‘Objects’ are a consequence of movement and flow; or rather, they *are* movement and flow. Thus, they cannot not act. Other authors have noticed the potential of Bohm’s interpretation of physics.

For example, according to Hartwig (in Bhaskar, 2002:257, 258), Bhaskar has indicated in his book *Reflections on Meta-Reality* that “a non-dual world or ultimate zone of being underpins and is co-present in an occluded way in the dual world of alienation and contradiction in which we live, as a condition of its possibility". Bhaskar calls this non-dual world the cosmic envelope (in which the deepest natures or ground states of all beings sit and are connected), describing it also as Bohm's implicate order of pure enfolded being or of pure potentiality.

Carolyn Merchant (2003: 209, 210) has also commented on the importance of Bohm's way of seeing the world. She explains how the explicate order of the Newtonian world in which we live unfolds from the implicate order contained in the underlying flow of energy, which Bohm calls the holomovement. Most significantly, Bohm's non-dual world implies connection and intimate relationships, as well as realism. Intimate connections and relations are therefore the content of the next section.

3.5.4 **What I should do? (Don't forget the washable ink!)**.

The conundrum of relativism versus absolutism, and the consequent problem of agency, is unnecessary. The alternative option, a realist but not positivist or empiricist, philosophy, avoids this problem. I will call this philosophy 'relationalism'.

> *The technical and the political are like the abstract and the concrete, the foreground and the background, the text and the context, the subject and the object. As Katie King reminds us, following Gregory Bateson, these are questions of pattern, not of ontological difference. The terms pass into one another; they are shifting sedimentations of the one oddly fundamental thing about the world-relationality. Oddly, embedded relationality is the prophylaxis for both relativism and transcendence'*
> (Haraway, 1997:37)

The preconditions for "embedded relationality" include an acceptance of Bohm's (realist) quantum physics and an acceptance of fallibility, or the refusal of absolutes. Relationalism is consistent with methodologies based on CR, but also methodologies based on the work of authors who are exploring realist-style methodologies and who are using metaphors which imply "substantial relations of connection" (Sayer, 1999: 21; Price, 2004a:438), such as: networks (Latour, 1993; Callon, 1991), 'cats cradles'(Haraway, 1997:268)[25], rhizomes (Crawford, 1993; Gough and Sellers, 2004;

[25] I acknowledge that Haraway and Gough may not approve of their methodologies being called realist. At least for Haraway, her realism is noticed also by Sayer (1999: 103, n.13), who writes: "Thus, despite

Gough and Price, 2004; Engestrom, 2004), and fungal mycelia (Engestrom, 2004). Another metaphor, which is consistent with this position, is one of flowing streams and vortexes. For example, rather than seeing the positive as mushrooms that pop up every now and again out of the mycellial web (Engestrom, 2004), Bhaskar prefers that we: "(…) see the positive as a tiny, but important ripple on the sea of negativity" (1993:5). In thinking about Bohm's non-dual world, the potential for his language to offer me metaphors to guide my research became apparent.

3.5.5 Metaphors of holograms, streams, vortexes and flow: my indispensable training wheels

> *Tropes are what make us want to look and need to listen for surprises that get us out of inherited boxes."*
> (Haraway, 2003:32)

In my introduction, I mentioned the importance of metaphor. Although the web-implying metaphors, which currently abound in environmental education methodology seem compatible with Bohm's implicate order, they are comparatively static and one wonders what exists between the strands? Perhaps we could do better with the metaphors of 'streams' and 'flow'.

To illustrate the usefulness of the metaphors of flow, here is a quote from Bohm, who uses the metaphor of a flowing river:

> *On this stream, one may see an ever-changing pattern of vortices, ripples, waves, splashes, etc., which evidently have no independent existence as such. Rather, they are abstracted from the flowing movement, arising and vanishing in the total process of the flow. Such transitory subsistence as may be possessed by these abstracted forms implies only a relative independence or autonomy of behaviour, rather than absolutely independent existence as ultimate substances.*
> (Bohm, 1980:48)

This metaphor is helpful as a guide for my methodology. The objects of my research (student essays, meeting minutes, company reports, industrialists, educators) can be seen as ever-changing vortices, ripples, splashes, which have no independent existence as such. Rather they are abstracted from the flowing movement, arising and

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Haraway's professed rejection of her realism, her discussion of objectivity and the situated and perspectival nature of knowledge is compatible with *critical* realism, and indeed helps develop it."

vanishing in the total process of the flow. Although the following quote could as well be used to describe non-human things, this idea of "things as process" is illustrated thus, "(…) persons are best conceived as intra-active processes-in-laminated products-in-pre-existing/ongoing processes" (Bhaskar, 1993:276).

This metaphor also seems to be a helpful illustration of the Bhaskar's Transformational Model of Social Activity (TMSA) (Cf. Vol.1, Chap. 2.6.3), in which societal structures have a real, relatively independent existence and cannot be reduced to the individuals which give them their material existence. To paraphrase Bohm's metaphor, "…societal structures arise and vanish in the total process of the flow (of people), implying only a relative independence or autonomy, rather than absolutely independent existence as ultimate structures".

Another way of saying that objects have only relative independence is to say that they co-constitute each other. This suggests another of my favourite metaphors, the cyborg, made popular by Haraway (1991). More recently (2003) she has suggested the idea of "significant others", which she sees as a verb passing for a noun (p18), to insist on the significance of the inter-related co-constitution of things. She writes, "Co-constitutive companion species and co-evolution are the rule, not the exception" (p32). However, she also tends in this work towards tropes that imply a certain amount of fluidity, at least, her tropes imply the existence of a plasticity in which things are discernable but not separate, such that human flesh and dog flesh are part of the same, neither one nor two. For example, in describing her use of the word 'metaplasm' (which conjures up images of ever-flowing living cytoplasm and protoplasm) she writes, "I use metaplasm to mean the remodelling of dog and human flesh, remolding codes of life, in the history of companion-species relating" (p20).

Bohm's metaphor of the hologram (Bohm, 1985:10), which he uses to illustrate his conception of the non-dual world, is another important metaphor for my methodology. To make a hologram a laser light is split into two beams. One of these beams is reflected off an object onto a photographic plate where it interferes with the second beam. The complex swirls of the interference pattern recorded on the photographic plate appear meaningless and disordered to the naked eye. However, the pattern possesses a hidden or enfolded order and when it is illuminated with laser light it produces a three-dimensional image of the original object. This image can be viewed from any angle. A significant feature of a hologram is that if a holographic film is cut into pieces, each piece produces an image of the whole object, though the smaller the piece the hazier the image. Clearly, the form and structure of the entire object are encoded within each region of the photographic record. In the words of Bohm (1985:10), “The point is that each part of the holograph is an image of the whole object.”

This latter metaphor could significantly imply that no matter how small the piece of the world we analyse, it contains the image of the whole, although as the pieces get smaller, the picture gets hazier. This is not the same as saying that what one finds out in a small case study is easily and directly applicable to other situations, but rather that the case in point could only be as it is because of the whole, and therefore it is also a reflection of the whole. For my research, this means that instead of seeing my research as limited to its specific context, it can, through its integral process of explanation, offer insights into a broader world. Critical realist Sayer (1999:22) puts it thus: “Intensive research (his alternative name for case study/qualitative research) seeks out substantial relations of connection and situates practices within wider contexts, thereby illuminating part-whole relationships”.

Furthermore, this metaphor has guided me in the process of writing this thesis. A measure of the theory/practice consistency of my thesis is how much it is like a hologram. Every chapter, perhaps even every paragraph, should reflect the whole. This is another way of saying that my thesis should be methodologically consistent throughout, or that, even without reading the whole thesis, I should be able to discern its methodological position from just a chapter. Hence, the reader may notice that the self-reflexive, epistemologically relativist structure of this chapter reflects my approach to methodology as a whole. Text Box 3.5 below gives the result of this reflexive process on my research questions.

Text Box 3.5: Self-reflexive assessment of questions

At last, I had found a way to write my questions that avoided simplistic dichotomies *and* satisfied my requirement that my research lead towards emancipation. In this last phase of my question-writing, I used the idea of the 'quasi-object' (I could also have used 'cyborgs') to insist on the networked, relational nature of my research objects and to remind myself of their counter-intuitive nature as being deeply meshed with myself and themselves. Instead of seeing poor practice as being 'caused by' certain characteristics of industry, I now saw poor practice and industry as co-constitutive. Furthermore, by talking of preconditions, I was insisting that 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), and thus I had managed to move beyond the problem of agency which had beset my earlier thinking about methodology. Paraphrasing Haraway (1991:149), I had found a way to contribute to frontline politics without a vanguard.

1. What are the *educational/textual practices* (in business and industry) (quasi-object A) that form the preconditions for unsound social/environmental practice (quasi-object B), reflected in *the activities of business and industry*.
2. What is absent from unsound environmental/social praxis (quasi-object B) that provides the preconditions for the '*educational/textual practice' of business and industry* (quasi-object A)? (First two points adapted from Sayer, 1999:16).
3. Based on my answers to the above, what tentative suggestions might I make for environmental education in business and industry that might absent the preconditions and thus help us move beyond the problem? (Last point suggested by Bhaskar's "explanatory critique" in Fairclough, 1999 and Bhaskar, 1989, 1993).

3.6 CONCLUSION

Bhaskar suggests that perhaps the most important mistake made by Western philosophy is the insistence on ontological monovalence, that is, that what is real is only what is positive (Bhaskar, 1993:406). In this chapter, I have outlined a relational alternative to ontological monovalence. My key motivation for arriving at this relational approach to methodology was that it offers a way out of the agency problem. In the next chapter, I will give a brief explanation as to why, out of the relational approaches available to me, I chose to follow most closely Bhaskar's Dialectical Critical Realism (DCR). I will then give a step-by-step outline of my methods.

CHAPTER 4 METHODOLOGY

Or community service towards suffrage of humans and non-humans… written in washable ink

In line with my commitment to relationalism, as described in Vol.1, Chap. 3, I have chosen DCR as the base for my methods. My preference for DCR is based on the following:

- Roy Bhaskar, DCR's originator, outlines his philosophy more broadly and more systematically than the other authors. For example, Haack's work is thorough but primarily deals only with DCR's first moment (Cf. Vol.1, Chap. 4.2.1). Haraway and Latour touch on all of Bhaskar's levels, but lack Bhaskar's systematicity. Also, Bhaskar's thoroughness makes his ideas relatively easy to apply in a project.
- Early on in my research, I realised that semiotic, as well as non-semiotic phenomena were likely to be important in my analysis on environmental education in industry. By fortuitous chance, the discourse analyst I found most inspiring, Norman Fairclough, was also a critical realist and had well-developed ideas about the importance of combining semiotics with CR. For example, Fairclough *et al,* (2001) argue convincingly that CR's 'emergence' (Cf. Vol.1, Chap. 4.2.3), requires, amongst other things, an understanding of semiotics. Furthermore, they suggest that basing discourse analysis on CR can avoid the problems of voluntarism and lack of agency. These problems are associated with discourse analysis when it is based on 'discourse imperialism': the idea that social practice can be reduced to semiosis alone.

Therefore, my methods are based on Chouliaraki and Fairclough's (1999) Critical Discourse[26] Analysis (CDA), rather than Fairclough's earlier discourse analysis which was not explicitly critical realist. These can be seen as drawing together two important academic threads: CDA and CR.

[26] Discourse is here loosely defined as 'language' and includes such forms of communication as visual images and body language.

In this section, I give some of the key characteristics of CDA and CR as they relate to my thesis[27].

4.1 **Critical Discourse Analysis**

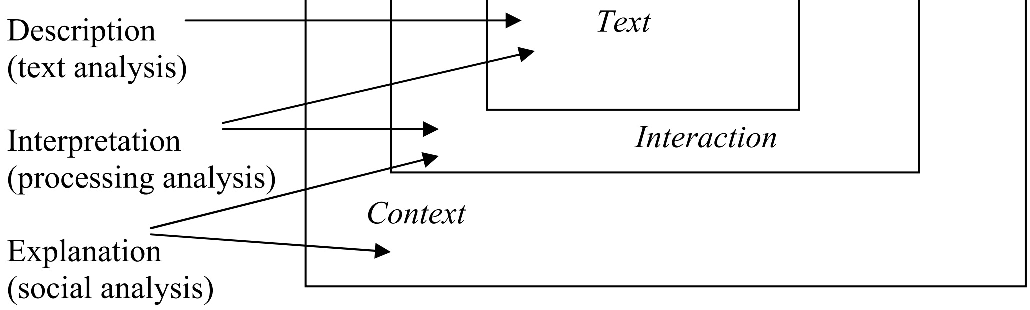
CDA is an approach to language that regards 'language as social practice' and considers the context of language to be crucial (Fairclough in Wodak, 2001:1). CDA also has a particular interest in the relation between language and power: most CDA examines discourse in order to understand more or less overt relations of struggle and conflict. The 'critical' in CDA can be defined as "…making visible the interconnectedness of things" (Fairclough in Wodak, 2001:2). The 'critical' in CDA has also been linked to CDA's commitment to moving from analysis to "a sociologically informed construction of society" (Wodak, 2001:2).

There are many kinds of CDA (Wodak and Meyer, 2001) but this research uses Norman Fairclough's version. Fairclough's earlier work on CDA (for example, 1989,1992) structured the process of analysis into three embedded boxes (Fig 1). It is useful to have an understanding of his initial three boxes because they play an important role in the steps of this research:

- Box 1 - description – a detailed description of the text (the choice of words and phrases, their juxtapositioning, their sequencing, their layout)
- Box 2 - interpretation – the way that the characteristics of the text structure human and non-human relations through processes of interaction (writing, speaking, designing, reading, listening, viewing)
- Box 3 - explanation – the way that socio-historical conditions have provided the preconditions for these processes of interaction

[27] For extensive coverage of these methodologies, see for example Sayer (1999), Shipway (2003), Phillips and Jorgensen (2002), Chouliaraki and Fairclough (1999) and Fairclough (2000).

FIGURE 4.1: Discourse as text, interaction and context, adapted from Fairclough (1989:25)



The embedding of the boxes indicates the way that these three stages of analysis are closely linked and interdependent. Because of the embeddedness, it is perhaps not entirely possible to follow a sequential approach to the analysis. For example, in choosing what to describe, an analyst will already have begun to interpret and explain, since this will be how she decides what is important to describe in the first place.

In his more recent work, Fairclough, with Chouliaraki, (1997) has added to his three-box structure by placing it within the Critical Realist 'explanatory critique' framework. This 'explanatory critique' (see Vol.1, Chap. 4. 2 and Table 4.1) essentially forms the basis of this research; it guides us from knowledge to emancipation[28].

[28] However, my version of CDA within Bhaskar's explanatory critique differs from Fairclough's to some extent, for example: I have designed this version for analysts who are not strongly separate from the texts they analyse, but indeed themselves produce and consume those texts and consequently my interpretation of 'reflexivity' also differs from Fairclough's; unlike Fairclough, I have made use of Bhaskar's (1993) concept of inaction and absenting; and I do not subscribe to Fairclough and Chouliarki's (1999:33) idea of separating analyses into two kinds, transitive and intransitive, as I consider transitivity and intransitivity to be a part of all analyses, indeed, Bhaskar is on record as suggesting that his earlier separation of these two, in order to justify ontology, was an exaggeration (Hartwig, 2005).

4.2 **Critical Realism**

Critical Realism[29] (CR) is perhaps best understood as a philosophical base for method, whether that method is qualitative or quantitative, these distinctions themselves being considered unhelpful (Sayer, 1999:19). Discourse analysts have often been accused of failing to provide an adequate methodology with which to back up their methods and CR is a feasible way to address this oversight (Norris, 1996).

One way to think about CR is to see it as structured around four levels[30], as outlined in Bhaskar's "Dialectic Pulse of Freedom" (1993), which are as follows.

1. First moment (M) which is: ontological stratification, that is, social structures and mechanisms, though not empirical, are nevertheless real; and epistemological relativism, resulting in pluralism of interpretation. This is the level of being (ontology).

2. Second Edge (E) which is ontological bi/polyvalency instead of positivism; it suggests the primacy of the negative; the Transformational Model of Social Activity (TMSA) is important here (Cf. Vol.1, Chap. 2. 6), since to transform is to absent. In this level, " (…) we have to deepen our thinking of being to encompass being as a process, we have to think being using concepts of absence, think being processually, think being in terms of change." (Bhaskar, 2002:249)

3. Third level (L) which is relationships and normative statements, assuming totality rather than separation and leading to a naturalistic ethics[31]; the explanatory critique is relevant here (Cf. Vol. 1, Chap. 4.3). In this level we, "(…) think of being as being bound together" (Bhaskar, 2002:249).

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[29] Although I refer to Critical Realism, this is more correctly Dialectical Critical Realism (Bhaskar, 1993) because of it processual nature, its focus on absence and its focus on the explanatory critique.

[30] In Bhaskar's more recent work he suggests a fifth level after transformative praxis which he describes thus: "This cycle has a fifth level which is the fulfilment of intentionality on the world" (Bhaskar, 2002:249).

[31] Critical realism has a well-developed argument for a naturalistic ethics. It is based on the acceptance of the *alethic truth of falsity.* Critical realists implicitly criticise any action derived from a criticised belief (Bhaskar, 1993:258). It is not in the mandate of this thesis to examine the question of the possibility of a naturalistic ethics. My use of the explanatory critique presumes my acceptance of a naturalistic ethics, since I am assuming that from criticism we can discern an ethical way forward.

4. Forth Dimension (D), which is transformative praxis and reflexivity; equivalent to *practice* and leading to emancipation.

4.2.1 **First moment**

Therefore, instead of a naïve, empiricist realism (what is real is only what can be observed), critical realists suggest that reality is stratified: there is the real (mechanisms), then there is a sub-set of the real, which is the actual (events) and finally a sub-set of the actual which is the empirical (experiences) (Bhaskar, 1989:190; Sayer, 1999:11).

FIGURE 4.2: The real, actual and empirical domains of reality (in Plant, 2001).

	Domain of real	Domain of actual	Domain of empirical
Mechanisms and structures e.g. unequal gender relations in society (real, but neither actual nor empirical)	√		
Events e.g. at wedding, husband is given dominion over wife (he really, actually has power over her, which as yet is unexpressed)	√	√	
Experiences e.g. husband stops his wife from working against her will (he really, actually and measurably has power over his wife)	√	√	√

Bhaskar's stratified view of reality implies that human experiences are just a small part of 'what is' (ontology). The domain of the real is far richer and more extensive than an empiricist conception of ontology allows.

Another characteristic of CR which distinguishes it from other philosophies, and which makes it particularly useful for discourse analysis, is that it insists there are two components of 'truth': the *transitive* and *intransitive*. In trying to understand these terms, it perhaps helps to remember that they are commonly used to make a grammatical distinction between types of verb. An intransitive verb implies simple 'isness', such as 'to be' or 'to sit' or 'to jump'; there is no implied relationship between the object and anything else. A transitive verb implies the existence of a *relationship* between the object and a subject, e.g. 'to hit' implies there is something being hit; there is a relationship between whoever is hitting and that which is being hit. Thus, the intransitive aspect of truth is that aspect which 'just is'; it is an essence of the thing. The transitive aspect of truth is that component of truth which is formed through *relationships* with others and is the component of truth through which we must necessarily know the intransitive aspect. This suggests we can never have absolute knowledge since we can only know the intransitive truth through our fallible transitive relationship with it.

The idea of transitive and intransitive truth is useful for CDA because it fits with the idea that there can be many different interpretations of a text (transitivity), but there are limits to our interpretations (intransitivity); some interpretations are better than others. If there was no way to choose between interpretations, this could lead to a situation of 'anything goes' (relativism). This leads to the inability to act, since how can we act if we cannot choose between better or worse? Or, in a more sinister situation, the idea of relativism could be used to silence opposition; all one would have to say is "You can't argue with my interpretation, as all interpretations are equally valid!" Relativism is a charge that has been levelled at much discourse analysis work and CR offers a way out of the problem (Norris, 1996: 159-161).

4.2.2 **Second Edge**

The Critical Realist Roy Bhaskar (1989) has taken the idea that society is an open system, and along with his critique of other sociological positions, has developed an approach to understanding of how we act (agency) which was explained earlier in Vol.1, Chap. 2, Table 2.3 **.** His (1989:77) approach to agency is called the Transformative Model of Social Activity (TMSA). In this model, relations precede 'what is', and thus agency depends on changing underlying relations, rather than changing positivistic, reified[32] objects. In the TMSA, people do not create society; neither does society create people. Rather, people and society constantly reproduce and transform each other in a way that is context specific and historical. Transformation is always absenting, and thus this moment depends on the assumption of the reality of absence.

[32] Cf. Vol.1, Chap. 2.6 for an explanation of 'reified objects'.

Mindful of the TMSA and society's open system, this research therefore approaches the way we ask initial questions, and our answers to those questions, by examining the preconditions for the existence of problems. This way of questioning deflects analysis away from objects and simplistic cause and effect, towards underlying relations. It also insists on the importance of spatio-temporality in our analyses. For example, we would not ask: "What are the characteristics of language that help cause inequality?" rather we would ask: "What are the language preconditions which (amongst other things) reproduce inequalities?" (adapted from Sayer, 1999:16).

Furthermore, for CR, sociological research cannot be predictive, again because of the open system: something may be real and have real effects, but because these effects are not actualised as might be predicted, this does not mean the 'thing' does not exist. For example, there may be a real tendency in society for peaceable co-existence, but this tendency may never have been significantly actualised or its effects become measurable because of circumstances. Since this tendency has never been expressed, it cannot be measured directly, but for critical realists this does not mean it does not exist: there are real absences.

Therefore, this research involves deepening knowledge of reality/nature as a process of tracing the origins of our experiences through to depth explanations of them at the level of unempirical structures and processes (Plant, 2001). However, unlike in positivistic accounts of science, where constant conjunctions of events 'prove' causality, because the CR assumes an open system, 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 (Plant, 2001; Sayer, 1999:14). Contrary to Bourdieu (1998), this results not in "practical reason" but in "reasonable practice" (Bhaskar, 1993:13).

In this research, I thus consider validity to be a function, not of measurement, but of the adequacy of 'explanation' or 'corroboration' (Sayer, 1999:21). Alternatively, to use a quantum metaphor, validity is measured by how well my research acts as a piece of the holographic plate (note how this implies that my research is a constituent of, that is, not entirely separate from, what I am researching). Therefore, I assess the success of my attempts to construct adequate knowledge by the degree to which my work ‘explains’ the textual features. This process is called ‘abduction’ or ‘retroduction’ and was originally described by Peirce. Peirce described it as “neither more nor less than guessing” (1901, in Mingers, 2003, internet paper). In practice, abduction involves triangulation, as well as guesswork. In my case, I triangulated by looking at other related texts to confirm that my explanation was able to explain even quite small features of them (Fairclough, 1992:238).

4.2.3 **Third level**

This is the level of the ‘explanatory critique’. Here CR assumes that the taboo against talking rationally about values was wrong and that we can use the findings of research, or more generally factual statements, to inform ethical and political positions (Bhaskar, 1989:104, 105; Bhaskar, 2002:210). That we are allowed to make this movement, from facts to ethics, and thus to action, depends on our existence as part of the world, that is, it depends on the denial of the mind/world separation. “We have seen that differentiation is a condition of totality and diversity of unity” (Bhaskar, 1993:278). “Irrealist philosophy almost inevitably detotalizes being” (Bhaskar, 1993:274), that is it results in alienation and splitting and the consequent relativism that problematises the movement from fact to value and thus to action. This third level is therefore about relationship and the refusal to accept human alienation from the world and each other. Because we are distinct but not separate from the world, we can act, or rather, we cannot not act. Therefore, this level is also about “hope and possibility” (Bhaskar, 1993:273; 2002:209).

Totality allows discursive argumentation, participatory democracy, the Habermasian ‘public sphere’, but it is also beneath the superveillance techniques described by Foucault, neo-colonialism, capitalist accumulation and empire-building generally (Bhaskar, 1993:273). In itself, totality is neither good nor bad. However, irrealists, seeing its role in what they despised, understandably yet mistakenly, threw it out altogether. Totality also explains why texts and reality appear at least potentially intelligible to us, thus totality “ (…) closes the hermeneutical and epsitemological circles” (Bhaskar, 1993:273)

In CR texts, the totality ethically prioritised the individual since the well-being of the individual – Bhaskar might say their wholeness, or "concrete singularity" – is the condition for the well-being of all. This is another way of saying that as long as one person is being harmed by society, society is not whole, but rather has absences that should be absented. Bhaskar (1993:278) gives an example of how totality and the individual are related. He says, "Thus ecological policy would have to be decided at a global level, and be designed conceptually, to liberate concretely singularized individuals from the constraints of, for example, pollution".

Bhaskar describes the explanatory critique thus:

> *For if one can demonstrate the (contingently necessary) sufficiency of a structure (state of affairs or set of circumstances) for a false, inadequate or partial (one sided) belief, then one can pass straight away ceteris paribus to a positive evaluation on action rationally directed at removing, transforming or dissolving it and thence ceteris paribus to such action.*
> (Bhaskar, 1989:186, 187).

Thus, a CR approach to research searches for depth explanation of social phenomena to inform action. It avoids overly simplistic, critical, dichotomies of 'them (objects) and us', whilst acknowledging the limited necessity of such terminology. Instead, it uses inter-relationships and networks as the basis for action.

Bhaskar's word for these spatially and temporally tensed networks is a nominalization of the verb 'to emerge', i.e., "emergence" (Bhaskar, 1993: 49). As a process expressed as a noun this word implies the processual nature of be-coming that the networks entail. Thus, Bhaskar also talks about things, including humans, as "processes-entified-as-products" (Bhaskar, 1993:52) and the past as "all pervasive" (Bhaskar, 1989:144). Extending this argument to the things that we call 'facts' Bhaskar remarks that a degree of necessity is attached to perceiving them positively as things, but nevertheless, facts are an ideological category that scientists in their reflective process must transcend (Bhaskar, 1989:61). In this research methodology, facts might more usefully be called "factishes" (Latour, 1993) or "quasi-objects" (1999) in order to remind us that a fact is, "…a potentiality actualised in discovery, sustained in practice (both discursive and non-discursive) and objectified in sense perception (Bhaskar, 1989:60).

Haraway (1997:99) also describes these constructed facts:

> *To be a construct does not mean to be unreal or made up; quite the opposite. Out of each of these nodes or stem cells, sticky threads lead to every nook and cranny of the world. Which threads to follow is an analytical, imaginative, physical, and political choice. I am committed to showing how each of these stem cells is a knot of knowledge-making practices, industry and commerce, popular culture, social struggles, psychoanalytical formations, bodily histories, human and non-human actions, local and global flows, inherited narratives, new stories, syncretic technical/cultural processes, and more.*

Therefore, this research moves beyond critique of facts to follow the sticky threads towards depth explanation of the reproduction and transformation of facts. Significantly, as well as requiring an exploration of local and global flows, social struggles, popular culture and human and non-human actions, this explanation requires exploring *inter alia* cognitive structures: such as psychoanalytical, phenomenological and ideological explanations of false consciousness (Bhaskar, 1989:112). Thus, this research will assume that a part of the process of absenting the blockages to absenting ills is to understand cognitive blockages (our own and other's) to absenting ills (Bhaskar, 1993, 2002). This is divergent from much contemporary sociology which is largely dismissive of psychology, with the notable exception of the sociologist Elias, who put Freud into his theory from the outset (van Krieken, 1998:48). Haraway has also used explanations based on psychoanalysis (1997:210-213).

Reflexivity is an important aspect of this level. It is the inward aspect of totality. It is perhaps reminiscent of Eco's statement that "the mind is the world coming to know itself". Reflexivity is the ability of an agent to monitor and account for his/her activity. It is closely connected to an agent's position in a social and historical context and to his/her engagement in praxis. However, it can be as much dependent on superveillance techniques and mass mediatization (increasingly homogenised) as to the possibility of something Bhaskar calls meta-reflexivity. This, as far as I can tell, is reflexivity based not on a subjectivity that is informed only by fideism (belief that something is true just because it is what one has been told, or read, or it is what everyone else believes, or what one has to believe to be accepted by society), but by a subjectivity grounded in *some sense*, or over-reached, by objectivity (Bhaskar 1993:249). Haraway (2004:50) is perhaps suggesting meta-reflexivity and linking this to ethics when she writes, “I believe that all ethical relating, within or between species, is knit from the silk-strong thread of ongoing alertness to otherness-in-relation”.

Reflexivity based on alertness to otherness-in-relation would require some sort of objectivity, or links to the other (in this case, silken threads). This is different from reflexivity based only on what others are telling us or what we would find convenient to be true (that is, superveillance techniques and mass mediatization).

4.2.4 **Fourth Dimension**

This dimension is about intentional transformative praxis (Bhaskar, 1993:393). It has a special affinity with the second edge, “(…) since agency is (intentional) causality, which is absenting,” and the second edge pivots on the idea of the primacy of absence or negativity (Bhaskar, 1993:393). The problems of (irrealist) philosophy, which arise at this level, include a lack of agency via disembodiment or disintentionality. Bhaskar thus stresses what he calls “embodied, agentive agency” (where ‘embodied’ emphasises the dismissal of the mind/body duality – we cannot act if we are not somehow a part of the world, i.e. embodied - and ‘agentive’ insists on our agency having intentionality, i.e., that it is not completely determined, but can be rational and novel).

Agency is caused by real reasons which result in a state of affairs, unless it was over-determined (as in a firing squad), which would not otherwise have occurred. Agency may be based on reasons consciously derived in the present and consistent with evidence available, or they may be based on habit and/or unconsciously derived and/or contradictory and/or decided upon previously (Bhaskar, 1993:393).

Creativity or novelty is a feature of agency. Bhaskar reminds us how difficult it is not to be creative by giving the example of the extraordinary regimentation required by a factory line to prevent creativity. For Bhaskar, “Creativity is essential to change and is implicit in every transformative human act” (Bhaskar, 2002:248).

Bhaskar also reminds us that “We cannot not act “ (2002:252). Even if we think we are abstaining from action, indeed, this is an action. Furthermore he reminds us that when we act, because of the way that we are in some way part of the holographic plate that is our world, every act affects all planes of our social being: namely, our personality, our material transactions with nature; our subjective relations with each other; our social relations which affect social institutions. “Whether you like it or not you will be engaged in a process of social change. Either repetition and reproduction or transformation and change” (Bhaskar, 2002:307)

Another aspect of CR agency is that it acknowledges that human agents are habituated by and dependent upon, although not predictable from, the social structures and mechanisms in which they are embedded. Thus, CR helps agents to understand the limits of their causal efficacy, reducing “burnout” as agents try to do too much (a common problem in irrealist, voluntarist approaches to activism). Therefore, a CR concept of agency would give agents a more balanced view of the “real world”. Shipway (2002:309) gives an example of this sort of agency in his description of teacher burn-out in educational systems. In the words of Bhaskar, (2002:277) “We can never do better than our best”.

Finally, acting is spontaneous, and when we act spontaneously our thought does not figure in the event. “I wonder what I should say next, but at some point I just have to say it” (Bhaskar, 2002:308).

4.3 THE STEPS OF MY ANALYSIS

As already mentioned, placing Fairclough’s three embedded boxes into Bhaskar’s explanatory critique, as Fairclough himself has done (Chouliaraki and Fairclough, 1997:60; Fairclough, 2001:125), provided me with the method for this research.

My discourse analyses can therefore be seen as constituting several stages. First, there was referential detachment[33] (I distanced myself from the texts) and description of the

[33] Referential detachment is, in the words of Bhaskar (1993:38) “the ontological detachment of the referent from the (inter-subjective/social) referential act (reference)”. It is based on the assumption that truth has transitive and intransitive dimensions.

texts. This stage concentrated on the empirical features of the text. I then moved into interpretation (from two perspectives), positioning the textual features in terms of actual, not empirical, processes of human and non-human relating. Next, I explained the contextual and historical preconditions for those relations and textual features already discussed, in terms of real deep structures and mechanisms, neither actual nor empirical. This was followed by verification and expansion of the ideas generated so far by examination of other related texts. I then looked at how the problem (in this case poor environmental and social practice) was somehow needed by the current social system. Following this, I looked at the research reflexively and finally moved from my description, interpretation and explanation to an imperative: a way forward. This mirrors Bhaskar's empirical, actual and real stratification of reality. That is, empirical description, actual cultural practice or interpretation, and real explanation through societal structures.

Below, I give the steps 1-12 of my research methodology as a general outline.Mostly, I carried out the steps on my own, for others, I carried out collective analyses with people involved in Environmental Education in industry (See Appendix 1).

4.3.1 **Step 1: Choose a problem**

I chose a problem that needed to be addressed and which had a language component. For example, the problem that plastic production produces harmful waste substances may not be significantly reproduced by language (the process of making plastic will probably always make pollutants, no matter how we talk about it). However, the problem that the strategies to ameliorate the effects of those pollutants are not working may be significantly reproduced through language (i.e., how we talk about the pollutants from plastics factories is likely to affect how we deal with those pollutants).

In my case the question that I asked was why, despite the extensive environmental sustainability rhetoric and the environmental education efforts in industry, the environment is still threatened. Later, due to carrying out analyses with people in industry, I realised that I could not logically separate the mechanisms which were discriminating against the environment from mechanisms which were responsible for other discriminations. Hence, although the focus is on environment, I found I had to broaden my question to include explanations for discrimination as a whole.

4.3.2 Step 2: Convert the problem into a question

I converted the problem into a question or questions. I phrased the question/s to draw attention to that which (at least partly)[34] presupposed, or was the necessary foundation for, the problem. To put it another way, I asked what discourse does the problem (at least partly) *need* in order to continue? Writing the question/s in this manner directed my analysis away from 'the problem' and its 'causes' and towards the relations which constantly reproduce the problem[35].

Discourse analysis assumes that language does not merely describe the world, but in some ways helps to construct (make) the world, including inequalities and poor environmental practice. This research therefore looks specifically at the language preconditions for problems, and thus limits analysis to this area. However, it also looks at the social preconditions for the language, and thus non-language components of the problem, too, are considered.

4.3.3 Step 3: Gather corpus

My corpus consisted of business and industry environmental education materials collected over a period of eight years. In industry, there is a blurred distinction between education and management practices. This makes it difficult to distinguish between training and management materials. Therefore, I used a broad definition of business/industry environmental education material as any material written with the aim of facilitating change towards better environmental practice in business and industry.

[34] We are dealing primarily with discourse preconditions. Other, non discourse, preconditions may be material, cultural, institutional, legislative, or psychological (e.g. it may be a psychological precondition for globalisation that marginalized groups lack confidence and feel powerless; it may be a material precondition for globalisation that marginalized groups lack access to education or other resources).

[35] Assumes that relations precede ontology, thus avoids naïve realism, suggests an open, rather than a closed, social world (avoids naïve cause and effect) and insists on a spatio-temporal component to the problem.

I collected typical examples of public text (spoken or written) that were relevant to the problem being analysed. Analysis of private texts was avoided, unless permission was clearly given, and I was certain that the text owner understood the implications of a discourse analysis. One way to obtain private texts for analysis was with the use of my own writing prior to learning about discourse analysis. It is likely that my texts were just as representative as others' texts: surviving in the professional world implies that I, too, have learnt the language strategies which help construct that world (Bourdieu, 1998).

Much of the corpus consisted of materials written as training resources for the Rhodes/Speciss Environmental Education Course for Industry and Business, as well as materials used as extra reading from a wide variety of sources, local, regional and international. I also collected materials from the environmental education-training programme developed during one of my consultancy projects. The managers of the company involved kindly allowed me, and indeed their environmental manager helped me, to carry out a discourse analysis of the minutes of their Safety, Health and Environment meetings.

4.3.4 **Step 4: Locate problem in the network of practices**

I located the problem within the network of practices that surrounded it. I have reported this background work in Vol.1, Chap. 2. This was a broad descriptive exercise, and, as I explained in the introduction to the latter chapter, it was arguably too broad (Myers, 2006). In brief, I assumed that I would need to know about management trends, globalisation, educational trends, as well as assumptions of structure and agency and political events, both internationally and in the South African/Zimbabwean context.

4.3.5 **Step 5: Choose the texts for analysis**

I chose texts for analysis from my collection. I preferred texts whose content was representative or typical of the current situation rather than non-representative or non-typical (Cf. Vol.1, Chap. 4.3.3). Statistical sampling and representational validity were not an issue because, in terms of (CR) methodology, the appropriate test is corroboration not replicability. To refer back to the metaphor of the hologram, each piece of text, illuminated correctly, will offer insights to the whole society in which it was made: "the world in a grain of sand" so to speak.

I also looked for texts which had an aspect of discord within their grammar and presentation. Perhaps the author was texturing together more than one discourse, or perhaps, and this is particularly true in spoken texts, there was evidence of a lack of certainty in the speakers tone, awkward silences or possibly even some conflict between speakers. These discordant moments, Fairclough calls them "cruses", often offer interesting insights into the reproduction and transformation of the dominant and marginal discourses. They are often moments where the natural rightness of a discourse is being challenged and thus they are often analytically most useful (Fairclough, 1992:230).

Originally, I had planned to carry out analyses of several documents and report them separately. However, I discovered that there was too much similarity between the texts to justify separate analyses. I therefore concentrated on one text (which I call my 'entry text'). This text was being used in the 2006 Rhodes/Speciss Environmental Education Course for Business and industry as reading material. It was entitled: "Recommendations: 8th International High-Level Seminar on Sustainable Consumption and Production, 15-16 November 2004, Monterrey, Mexico" (UNEP, 2004a), and came out of a meeting organised by the United Nations Education Programme Division of Technology, Industry and Economics (UNEP DTIE). The text is reproduced as Figures 5.1 and 5.2. The motivation for the meeting was from the World Seminar on Sustainable Development (WSSD) mandate to develop a ten-year framework on sustainable consumption and production and the related activities established under the Marrakech process. There were over 230 high level decision-makers present at the invitation-only seminar. Included amongst the participants were five Environmental ministers from: Argentina, Mexico, Nicaragua, Peru, and Tanzania (UNEP, 2004c). The event was held in top quality surroundings, most of the speakers were male, and most of the participants travelled to the venue by air (UNEP, 2004c). A draft of the recommendations was presented to the participants for discussion in the afternoon of the final day, and the programme allocated 1 hour for this event.

The choice of the entry text was based on the following criteria:

- it was representative of the current language associated with environmental issues in industry;
- it included at least twenty references to education or education-related practices, and was a key international document in the promotion of environmentally sustainable practice for business industry;
- it was in use in the course I was teaching on environmental education for industry as required reading; and
- there was (relatively concealed) evidence of challenges to the *status quo* in the text.

A criticism I anticipate with regard to my choice of this text is that, although it was being used in a Zimbabwean course on environmental education, it was an international document and, presumably, not written by a South African or a Zimbabwean. CR, as I understand it, does not see this as a limitation because it considers environmental education in Zimbabwe to be a part of the totality of environmental education in the world. Furthermore, CR takes into account the stratification of what is ontologically present. International trends, perhaps at times unexpressed, thus existing only as 'potential', which lead to global initiatives such as the WSSD, are considered by critical realists to be real (Bhaskar, 1989). Therefore, whilst there are characteristics of environmental education in Zimbabwe that distinguish it from other countries, nevertheless, it is party to the trend in which all countries are subject to an increasingly homogenised global discourse (Fairclough, 1999).

To understand what is happening in South Africa and Zimbabwe, we need to take into consideration these actual global initiatives and the real, sometimes unexpressed, trends behind them. Likewise, the way in which environmental education in the South African and Zimbabwean context, global initiatives and global trends mutually co-construct each other can provide valuable insights into the totality, so that analyses and suggestions for praxis developed from this research are likely to be pertinent to (though not simply replicable in) countries other than Zimbabwe (Sayer, 1999). This analysis becomes more distinctively Zimbabwean and South African in the later phase of the research when I examine examples of texts written by businesspersons, students and teachers from these two countries.

4.3.6 **Step 6: Description**

In this step, I described the text, using the checklists provided in Tables 4.2-4.6. These checklists were just a guide and were based on Chapter 8 of Fairclough's (1992) *Discourse and Social Change*. The description includes some interpretation; since interpretation is involved merely in our choice of what to describe. However, it is useful at this stage to try to avoid interpretation. A way to test whether or not one has lapsed into interpretation is to ask if the description is fairly neutral; even the text's author should be able to agree with the description, no matter how contrary one's later interpretation is compared to the author's preferred reading. For example, if there is an example of nominalization (making a verb into a noun), no-one can question this as the evidence is in the text (this is simple description). However, the interpretation is a different matter: the nominalisation could be to strategically hide an agent, or it could simply be a space saving tactic. For example, "Paper companies have released toxins into the river and this has resulted in…" vs " The release of toxins into the river has resulted in…". Here, the nominalization of the verb 'to release' (making it 'The release') could function to save space or to hide the responsibility of the paper companies. The need to avoid interpretation is highlighted in the headings of the tables which mention certain characteristics which might usefully indicate certain effects of the text "in the interpretation phase".

4.3.7 **Step 7: Interpretation**

I interpreted the text (gave it meaning), twice: the first time, I merely described the overall impression that the text was trying to give (I read *with* the text); the second time, I gave an oppositional reading of the text (read *against* the text).

In reading 'with' the text, we are accepting the preferred reading and thus offering unquestioning support for the *status quo*. The reason that we read ‘with’ the text is so that we empathise with the producers and compliant consumers[36] of the text to put us in a better position to understand their motivations and constraints. One might ask how I am gained access to the participants’ discourse processes of production and interpretation? According to Fairclough (1989: 167)

> *These processes take place in people’s heads and it is therefore not possible to observe them as one might observe processes in the physical world. The only access the analyst has to them is in fact through her capacity to herself engage in the discourse process she is investigating. In other words, the analyst must draw on her own MR[37] (interpretative procedures) in order to explain how participants draw on theirs. The analysis of discourse processes is necessarily an insider’s or a member’s task.*

Reading with the text made my critique of the producer/consumers position more detailed and, in the explanation phase, gave me a basis to explore the socio-historical underpinnings of their language as I tried to understand why they wrote/spoke the way they did. The ‘reading ‘with’ section should not be perceived as a section which I later debunk. Rather, it should be seen as providing an alternative interpretation, which provides a useful over-view of the positive aspects of the Monterrey recommendations, whilst at the same time sometimes demonstrating evidence of the performance contradictions explored in the ‘reading against’ section. Just as Derrida (Cf. Vol.1, Chap.2.3.2) pointed out that globalisation is both happening where it is supposed to be happening and not happening, for both better and for worse, we could say that the effect of the Monterrey recommendations is both happening as it is supposed to happen, and not happening as it is supposed to happen, for both better and for worse.

In reading ‘against’, the text I was using CDA techniques to deliberately resist the text's apparent naturalness. I offered an alternative reading, i.e. I asked such questions as: How is the text positioned or positioning? Whose interests are served by this

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[36] ‘Compliant consumers’ are consumers who accept the preferred reading of a text, rather than question it; they do not produce oppositional readings.

[37] Members’ Resources (MR) are: “..what people have in their heads and draw upon when they produce or interpret texts – including their knowledge of language, representations of the natural and social worlds they inhabit, values, beliefs, assumptions, etc. …they are cognitive in the sense they are in people’s heads, but they are social in that they are socially generated …” (Fairclough, 1989:24).

positioning? Whose interests are negated? What are the consequences of this positioning? In other words, I was asking how the text performed in society to reproduce/transform the *status quo* (Janks, 1997:329).

4.3.8 **Step 8: Explanation**

I explained my interpretation findings in terms of the social preconditions for them. Here I asked what were the societal characteristics which explained (formed the preconditions for) the discourse. For example, the choice of colonialist language implying the bringing of 'light to darkest Africa' used by the South African electricity company ESKOM (Price, 2002 in Vol.2, Chap.2) can only be understood in the context of South Africa being a dominant country in Africa which is rapidly 'colonising' surrounding countries through its market dominance of the region. A precondition for this language to seem normal is that we have not moved much from the colonial idea of development: it is still predominantly seen as 'helping' people and is supposedly a linear progression towards perfection, a move from 'dark' to 'light'; there is one grand solution to everyone's problems. Furthermore, the South African government's insistence upon affirmative action perhaps makes language that would seem crass and abusive in a USA-based company document, seem noble and natural in a dominantly black South African company (it is expected that black South Africans should be able to openly use tactics disallowed for 'previously' advantaged groups, to allow them to 'catch up'). Another precondition is perhaps the short social memory for the history of certain language: would the writers of the ESKOM text have used the words they did if they were aware how similar they were to colonial words?

4.3.9 **Step 9: Verification and expansion**

I verified and expanded the initial findings. In this phase, I looked through my collection of texts for evidence which supported or contradicted my initial interpretation and explanation. As described in Step 3, my corpus texts was large and spanned roughly ten years. To simplify the analysis, I divided the corpus into three groups, namely:

- Company reports
- Company minutes
- Educational materials supporting industry and business environmental course work, including some of my own textual production

The company report analysis, I completed on my own (Price, 2002 in Vol2. Chap.2) and later carried out a second, unpublished analysis with a group of people from industry. The company minutes analyses were carried out with a group of people from industry, at workshops funded by the International Institute for Environment and Development (IIED), as part of the process of testing a discourse analysis tool that I developed for the IIED "Powertools" series (Price and Sathiagnanan, 2005). I had originally thought to report these analyses separately, but, as explained earlier, I found that the results were too similar to justify such an approach. Additionally, since these analyses were my earlier attempts, and carried out with novice analysts, they had not attained the depth of my analysis of the Monterrey recommendations. I therefore, instead, compared the findings of these analyses to the findings for the entry text, looking for confirmations and contradictions. They were ideal for this function. I kept in mind that my explanation, if it was a good one, should be able to explain even quite small features of the texts (Cf. Vol.1, Chap. 4.3.8). I also looked for, where appropriate, changes in the discourse patterns over time.

In CDA, verification is much like a crossword puzzle in which one looks for intersecting clues to support the interpretation; if an intersecting clue does not 'fit' other intersecting clues must be checked to decide how to proceed with the contradiction.

If the analysis is a strong one, it should explain quite small features of the texts in the collection (Fairclough, 1992: 238; Potter and Wetherall, 1987: 169-72). For example, in my initial analysis I suggested that companies were motivated by the need to *be seen* to do the right thing, rather than the need to *actually* do the right thing. Evidence for this was in the form of theory/practice inconsistencies (e.g. the environmental report you analysed was very glossy; if the company was serious about the environment it would have recycled, non-glossy paper). However, in this phase of verification I found that the pattern of theory/practice contradiction continued, but another pattern emerged which perhaps added extra support to the analysis: more recent documents had a much reduced focus on environmental issues, and had turned instead to social issues, in line with current trends, i.e., as my analysis might suggest, companies changed their focus when another fashion came along.

Inconsistencies between my initial analysis and what I found in my larger collection of texts were examined and adjustments made to my interpretation to accommodate them; at times I had to discard aspects of my initial analysis altogether, or at least change them significantly. For example, I had felt it was significant that in the set of minutes I had analysed, the name of the secretary was missing, only to discover that all my other minutes in the corpus included the secretaries name: it must have been merely an oversight in that first text.

Another crossword connection was that of other people's research. I therefore looked at other discourse analyses of the discourse of business and industry for confirmation or contradiction of my findings.

In this phase I also looked out for important time-related changes to the general pattern of discourse practice: for example, I found a difference between earlier corporate documents which focussed on environmental issues and more recent documents which had a greater social equity focus.

4.3.10 **Step 10: Reflexivity**

I reflected on my theory and practice: were they consistent? This reflective process is called *reflexivity* and was applied both to theory/practice contradictions in my analysis itself (e.g. in one of my analyses, the process of reflexivity indicated that whilst my methodology disallowed the reification of objects, I was in fact doing just that) or to general daily practice pertaining to the problem at hand (e.g. I found that I was implicated in the practices that I was critiquing). Thus, change was not only something that we effect 'out there' but was something of which I was a part, since we are all implicated in the world. In this step, I therefore examined my original questions with an eye to how we (including myself), as producers and consumers of industrial environmental education texts, are implicated in the problem. This is not unlike the suggestion by Val Plumwood (1996), quoting Audre Lorde, that we come "…to grips with the colonizer within, 'that piece of the oppressor which is planted deep within each of us'". It is also related to Bhaskar's (2002:276) position that "…if you want to transform society, you have got to educate and transform yourself."

Reflexivity is also necessary because our critique is part of the very process it is interested in and is therefore subject to the same possibility of unreflected determination that it describes (Bhaskar, 1989:114) (Cf. Vol.1, Chap. 4.2.3). Some reflexivity has already been reported in Vol.1, Chap. 3, in the reflexive notes, Text Boxes 3.1 to 3.5, especially where this was to do with my reflexivity around my research questions and methodology, and where I show how initially I was determined by the research norms around me, rather than finding my way by an engagement with "otherness-in-relation" (Vol.1, Chap. 3).

Along with Steps 8, 9 and 10, the contradictions highlighted through reflexivity (Step 11) are important in leading to the next step.

4.3.11 **Step 11: What can we not do?**

This was a move from explanation to a formulation of how we can deal with our problem. I asked what can we NOT do in order to solve the problem? Having identified the preconditions for the problem, I now asked how we can change those preconditions in order to change the problem. Approaching our suggestions for change by asking what inactions we can do (rather than asking what actions we can do) is based on a view of the world in which problems (or social structures in general) do not exist in a vacuum: rather, they are constantly being reproduced by their interactions with other things. Trying to change the 'problem' is likely to be rather pointless if we do not change the preconditions for its existence. To use a metaphor, if we try to change a whirlpool by scooping it up with a bucket, it will re-form the second we stop scooping. To change the whirlpool, we need to change its preconditions.

For example, I found that one of the things we 'do' linguistically (our language practice) which provides some of the preconditions for inequalities, is to portray globalisation as the only right minded approach to economy. This prevents the transformation of the world economy to a fairer one, because it precludes discussion of alternatives and constructs globalisation as a dominant, unquestionable, even moral position, by making it seem absolutely 'natural'. Therefore, in this step I identified various ways to 'not do' this, from refusing such language in our own writing, to absenting our simple acceptance of this portrayal when reading other's writing, to refusing the silence around this issue by speaking about it, to absenting the concealed nature of the manipulative function of this sort of language through education, etc.[38] Without the discourse preconditions that globalisation needs to be constantly reproduced it will no longer be viable in its current form[39]. 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[40]. Hence, this is similar to Ghandi's non-violent non conformance.

However, some of the social preconditions for the language itself will, to some extent, 'force our hand'. For example, we perhaps want our company to stop hiding information, but perhaps there is legislation which forbids information disclosure, e.g. until recently South Africa had legislation which forbade nuclear waste figures from being disclosed. We may therefore need to lobby for changes in legislation. Another example is that people might feel that they will lose their jobs if they begin using clear and honest language, rather than indirect language, to describe incidents. Again, we may need to look towards legislation initially, along with education, to insist on certain changes. It is important to remember that we can only do what we can do with the resources we have (Bhaskar, 2002:46).

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[38] It is thanks to a generation of people who absented the silence around gender insensitive language, and who absented gender markers from their own writing, that gender insensitive language is largely unacceptable in our society today. However, despite the gains that this change in language has given women, the fact that there are still gender inequalities, shows that discourse analysis, whilst helpful, cannot be the only approach to change.

[39] Admittedly, as explained in the example of the change in gender discourse above, changing our language will help, but can only be part of the process towards emancipation; material, cultural, legislative, institutional and psychological preconditions may also need to be changed.

[40] Bhaskar (2002:318) had the following to say about supply lines: "When we have all cleared the rubbish from ourselves we cut off the supply lines to oppression, servitude and unfreedom. Everything in the social world subsists on our love, our creativity, it could not exist for a moment without them. But oppression is real. These are real structures and real systems but we have the capacity to cut off their supply lines. It is a difficult thing to do, but we can do it".

However, these “solutions” are only tentative and should be written in washable ink. Although I had to finish this thesis, and thus end my analysis here, the process of revisiting these solutions should continue.

4.3.12 **Step 12: Praxis**

This involves carrying out the ideas generated in Step 11. It is this step that serves as the purpose for this thesis. It is worth bearing in mind that even inaction, such as the refusal to co-operate with oppression, makes a difference (Bhaskar, 1993:210). A summary of the steps of my methodology are provided in Table 4.1 below.

TABLE 4.1: A summary of the steps of my method

Step	Checklist of things to remember
1.Choose a problem	• Make sure that the problem is one that is significantly reproduced through language?
2.Convert the problem into a question or questions	• Phrase the question/s so as to draw attention to that which (at least partly) presupposes, or is the necessary foundation for, the problem.
3.Collect typical examples of relevant public text (spoken or written)	• Analysis of private texts should be avoided, unless permission has been clearly given, and the text owner understands the implications of a discourse analysis.
4.Do some background homework on the problem	• In deciding on what information will be useful, think about what maybe useful to know when carrying out the interpretation and social analyses that follow. • I would suggest that the critical realist concept of 'agency' is important here
5.Choose a text for analysis from the collection	• At this stage, prefer texts that are typical of the current situation rather than atypical or oppositional (text which is already questioning the *status quo*).
6.Describe the text, using the checklists provided (Tables 4.2-4.6)	• The checklist is just a guide, feel free to add to it or ignore aspects that seem irrelevant. • We might summarise this process as looking for textual strategies that hide reality, or textual strategies that have the effect of positioning certain individuals, groups of peoples, or even nonhuman entities, relative to one another • The description should avoid interpretation as much as possible

TABLE 4.1: A summary of the steps of my method, continued…

7.Interpret the text	• Carry out two interpretations: the first time, merely describe the overall impression that the text is trying to give (read *with* the text); the second time, give an oppositional reading of the text (read *against* the text)
	• In reading against the text we ask the following questions:
	    o What strategies is the author of the text using to support his/her position?
	    o Whose interests are served by this positioning?
	    o Whose interests are negated?
	    o What are the consequences of this positioning?

8.Explain the interpretation findings in terms of the social preconditions for them	• Here we ask what the characteristics are of the relevant society which explain (form the preconditions for) the discourse.
9.Verify the initial interpretation's findings.	• If the interpretation is a strong one, it should predict quite small features of the texts in the collection. • Verification is much like a crossword puzzle in which one looks for intersecting clues to support the interpretation; if an intersecting clue does not 'fit' one needs to check other intersecting clues to decide how to proceed with the contradiction. Also look for important time-context-related changes to the general pattern of discourse practice in this phase
10.Reflect on the theory and practice of the study: are they consistent?	• This reflective process is called *reflexivity* and can be applied both to theory/practice contradictions in the analysis itself, or in the general daily practice pertaining to the problem at hand. • Reflexivity is necessary because our critique is part of the very process it is interested in and is therefore subject to the same possibility of unreflected determination that it describes.
11.Move from explanation to a formulation of how we can deal with the problem	• Ask what can we NOT do in order to solve the problem? Or, how can we cut the supply lines of the problem? • Approaching our suggestions for change by asking what inactions we can do (rather than asking what actions we can do) is based on a view of the world in which problems (or social structures in general) do not exist in a vacuum: rather, they are constantly being reproduced by their interactions with other things. • This approach to agency is reminiscent of Ghandi's non-violent non-conformance
12.Carry out what you can of the solutions to the problem	• "We can only do what we can do with the resources we have got" (Bhaskar, 2002:46)

TABLE 4.2: Textual characteristics which, in the interpretation phase, may be useful as evidence of strategic concealment of information

Textual characteristic	How this characteristic might be relevant in the interpretation phase of analysis
Absences of relevant information	Perhaps hides a reality that the author would rather gloss over, e.g. the absence of information on nuclear waste disposal in the environmental section of an company annual report.
Concealment of the 'agent' (the person, people, or even non-human thing which was responsible for something)	Can allow the allocation of responsibility to be avoided, e.g. 'the multinationals can make goods in low cost countries' (active sentence indicates who is doing what) vs. 'goods can be made in low cost countries' (multinational agency is concealed – a passive sentence).
Nominalisation – representing a process as a noun	This may be a space-saving strategy, but it may also conveniently hide responsibility. For example, the newspaper heading: "load-shedding causes problems for motorists" (Fairclough, 1989). The phrase "load-shedding" is a nominalisation of the process whereby poorly prepared trucks shed their load as they travel the roads. It hides the fact that it is the people who pack the truck, or perhaps their company, who are responsible for this load-shedding.

TABLE 4.3 Textual characteristics which, in the interpretation phase, may be useful as evidence of the reproduction of unequal social relations

Textual characteristic	**How this characteristic might be relevant in the interpretation phase of analysis**
Assumption of mutual knowledge	For example, the use of professional language excludes those who do not understand it.
Turn taking	This is usually significant if unequal, but the context is important in understanding the significance, e.g. in one context, marginalized persons may be given fewer opportunities to speak, but, in another context, a leader might insist on having the marginalized speak, especially in participatory discussions, and thus the ones with power may speak less (Fairclough, 1992:234).
Politeness	Informality can indicate that the person being addressed is part of the 'in' crowd, but, depending on the context, informality may be an indication of a large gap in social standing, for example, in colonial countries, the colonisers tend to call the colonised people by their first names, never 'Mr' or 'Mrs', which would indicate status (Fairclough, 1992:235).
Allocation of agency	A dominant person will often be given active roles, whereas excluded persons are often 'acted upon', e.g. "employers pay workers more" – the employers are active, the workers passively being acted upon. Fairclough (1992:236) states that, "A major concern is agency, the expression of causality, and the attribution of responsibility".
Slippage of meaning	For example, sometimes 'we' means everyone, sometimes it means a certain group of people, and other aspects of the text must tell us how to interpret this 'we'. In a speech by Tony Blair, sometimes 'we' seems to mean NATO, sometimes 'we' means Britain and sometimes 'we' means an unspecified grouping of nations. This vagueness was to Blair's advantage when he said in a speech that 'we' must invade Kosovo. He was perhaps saying 'we' the responsible citizens of the world, but he was perhaps also meaning 'we', NATO. In fact NATO had made the decision to invade, but to be overt about the power monopoly of NATO would have been a political faux pas (Fairclough, 2000:152, 152).

TABLE 4.4: Textual characteristics which, in the interpretation phase, may be useful as evidence for a tendency to avoid discussion and dissent and thus potentially avoid challenges to the *status quo*

Textual characteristic	**How this characteristic might be relevant in the interpretation phase of analysis**
Use of metaphors/language which indicate inevitability	This can refuse discussion or dissent, e.g. "...no country is immune to the massive change that globalisation brings" (Fairclough, 2000:163).
Presupposition that something is given and achieved	This can also refuse dissent, e.g. the phrase 'the new global economy' presupposes that there is a new global economy – that is, it takes it for granted, as something we all know (yet most analyses of globalisation see it as an uneven and partial tendency) (Fairclough, 2000:163).
Use of graphs, diagrams and statistical data	These can indicate, perhaps questionably, that the text contents are based on irrefutable scientific knowledge, giving professional weight to the document.
Use of professional textual markers, such as highly technical professional words	Again, these can be used to imply that a text is official and/or objective and thus unarguably true.
Bullet points	These also tend to refuse different opinions; they are 'to the point', with little room for argument.

TABLE 4.5: Textual characteristics which, in the interpretation phase, may be useful as evidence of the author's political orientation

Textual characteristic	**How this characteristic might be relevant in the interpretation phase of analysis**
Choice of descriptive wording	For example, the choice of emotive vs. euphemistic language: "Two people were violently murdered on Saturday night" vs. "Unknown gunmen were associated with the deaths of two immigrants on Saturday".
Collocations, the frequency with which words are associated with each other	These can also indicate the author's political orientation, e.g. in Britain's New Labour party documents, the word 'business' tends to be associated with words such as 'partnership' and 'helping'. In the Old Labour documents the word 'business' tended to be associated with words/phrases indicating conflict e.g. 'uncoordinated selfish business decisions directed to private profit' or was merely used descriptively e.g. 'business education' (Fairclough, 2000:31).
Non-identification language	This can distance the author from an idea or political orientation, e.g. "People who hold this position..." rather than "As one who holds this position…"
Modality, the speaker/writer's level of commitment to the truth of what they are saying	This can indicate the writer's beliefs or political orientation, e.g. "there's no future for that…" (strong modality) vs. "I don't think there is a future for that (weaker modality) or "you must not do that" (strong modality) vs. "perhaps it's a bad idea to do that" (weaker modality).
The position of a topic in a list	The higher a topic is placed in a list, possibly the more important that topic is to the author.
"Questions" which are functioning more as statements	For example, depending on the context, this question: "Is it not true that protecting the environment reduces profits?" could be more of a statement, indicating that the writer herself thinks that protecting the environment reduces profits. Often these questions can also be described as 'leading questions'.

TABLE 4.6: Textual characteristics which, in the interpretation phase, may be useful as evidence that indicates relatively concealed challenges to the *status quo*

Textual characteristic	**Example of how this characteristic might be relevant in the interpretation phase of analysis**
Over-wording/anticipation of conflict	For example, in a manual on corporate governance there was a highlighted note on gender "The masculine pronoun has been used throughout this manual. This stems from a desire to avoid ugly cumbersome language and no discrimination or prejudice is intended." This statement anticipates conflict around gender issues. Note the over wording with regard to 'ugly, cumbersome' (just 'cumbersome' would have been adequate).
Resistant readings	These can show that a text is not common sense and normal, even though it may be presented as such, e.g. On an advertising bill board for cigarettes, graffiti erases a few key letters and parts of letters to turn the phrase "New. Mild. And Marlboro" into the phrase "New. Vile. And a bore." (Hodge and Kress, 1988:8).
Infringement of systems of rules about 'who' can say 'what', 'when' and 'how' (such as systems of politeness and professionalism)	These systems of rules are often the sites of conflict when the *status quo* is being challenged (Kress and Hodge, 1988:4). They can also indicate that there is perhaps more to the text than the authors are aware or sharing. For example, in the comment on gender-sensitive language above, the word 'ugly' is typically not usually an appropriate word for a professional text. Its surprising presence in a document which otherwise is perfectly professional perhaps indicates the presence of conflict, at least for the author, around gender issues.
Hesitancy and rewordings (in hand written texts), contradictions, use of terms indicating uncertainty (modality)	For example, an author might write: "Perhaps we should, do this" rather than, "We should do this." She may be uncertain of changes that have already happened to the *status quo* (such as trying to negotiate her role as a manager in a company which is transitioning from 'top-down management' to 'participatory' management), or perhaps she is herself challenging, cautiously, the *status quo*, testing the waters, before giving her full linguistic commitment to the challenge.

CHAPTER 5 DESCRIPTION AND INTERPRETATION OF THE ENTRY TEXT

5.1 INTRODUCTION

In this chapter, I report the results for steps 6 - 7 of my CDA. Steps 1 – 5 have already been completed in the previous chapter, in which I also reported that the research entry text chosen was the 8th International High-Level Seminar Recommendations on Sustainable Consumption and Production, 15-16 November 2004, Monterrey, Mexico.

In this chapter I use the checklists (Tables 4.2-4.6) to structure the description of the text, and I then offer two interpretations of the text: I briefly read with the text, and then offer a more comprehensive reading ‘against’ the text. For a deeper explanation of the descriptive and interpretative process, please refer back to Steps 6 and 7 in Vol.1, Chap.4.

5.2 STEP 6. DESCRIPTION (TEXTUAL ANALYSIS).

The entry text is reproduced in this chapter in a form that allows reference to its worded components (Figure 5.1) and in a form that shows the layout and general style of the document (Figure 5.2). Stand-alone numbers in brackets in this chapter refer to the numbered lines in Figure 5.1.

FIGURE 5.1: The research entry text, recommendations of the 8th international high-level seminar on sustainable consumption and production, lines numbered for purpose of reference.

1. *Sustainable consumption and production*
2. *Recommendations*
3. 8th International High-level Seminar
4. on Sustainable Consumption and Production
5. 15-16 November 2004, Monterrey, Mexico
6. *Building on the WSSD mandate to develop a*
7. *ten-year framework on sustainable consumption*
8. *and production, and the activities already initiated*
9. *under the Marrakech process, as well as taking*
10. *into account the global priorities identified in the*
11. *Millennium Declaration, SCP8 participants agreed*
12. *to endorse the following recommendations:*
13. **1. Concretize and strengthen the SCP agenda**
14. **and its links with other development priorities,**
15. **such as poverty reduction, access to**
16. **basic services including access to water, energy**
17. **and food, and economic development.**
18. **Key actions:**
19. Develop a common SCP language, including
20. indicators, benchmarks and surveys.
21. Develop and share case studies on successful
22. SCP initiatives.
23. **2. Governments should take leadership by**
24. **building appropriate policy frameworks,**
25. **including economic, regulatory and social**
26. **instruments.**
27. **Key actions:**
28. Integrate SCP in poverty reduction, economic,
29. trade and financing, and social policies.
30. Support initiatives on (public) green procurement
31. programmes, triple-bottom-line reporting,
32. and corporate environmental/social responsibility.
33. **3. Business should become more active in**
34. **SCP implementation.**
35. **Key actions:**
36. Establish concrete partnerships between UN
37. and multinational corporations to support specific
38. projects in developing countries.
39. Encourage large organizations to assist small and
40. medium-sized enterprises in implementing SCP
41. through the use of tools such as greening the supply
42. chain.
43. Support business and engineering schools in
44. integrating SCP curricula into higher-level education.
45. **4. Financial institutions should create favourable**
46. **financial conditions and a stable and**
47. **competitive economic framework for SCP**
48. **investments.**
49. **Key actions:**

50. Establish partnerships with business and governments
51. to develop financing strategies for
52. investments in SCP activities, in particular for
53. SMEs.
54. Mainstream green accounting for business and
55. governments to internalize environmental costs.
56. 5. NCPCs and similar organizations should
57. strengthen their role by expanding the traditional
58. CP focus on processes to also include
59. products and services and address poverty
60. reduction and other development goals.
61. Key actions:
62. Develop NCPCs' service packages as "total solutions"
63. to their core clients (business) and include
64. tools like product and service design, life-cycle
65. management, corporate social

FIGURE5.1 continued...

66. marketing, and access to funding sources.
67. 6. International organizations should
68. expand the SCP stakeholder group by
69. involving intermediary organizations
70. between producers and consumers, in
71. particular in retail and marketing.
72. Key actions:
73. Establish partnerships at global and national levels
74. with retailers, distributors, and marketing
75. agencies
76. Collect lessons learned from successful campaigns
77. seeking to change consumer behaviour and
78. apply them for SCP.
79. 7. Policies and strategies to provide access to
80. water for all should be adopted at all levels,
81. and need to recognize the importance of
82. efficient water management, development of
83. new water infrastructure, and demand side
84. management.
85. Key actions:
86. Establish public-private partnerships as a key
87. element in water sector development strategies.
88. Apply tools, such as revenues generation, costs
89. management, and future revenue-based financing,
90. to mobilize finance for the development of
91. the required infrastructure.
92. Support programmes for improved demand side
93. management and reduced distribution losses,
94. through improved pricing, metering and fee collection
95. systems.
96. Enhance developing countries' capacities for the
97. development and implementation of integrated
98. water resource management programmes.
99. 8Build capacity at the local level, including
100. local authorities, entrepreneurs, and
101. banks, to develop sustainable energy systems

102. that take into account local resource availabilities
103. and energy needs.
104. Key actions:
105. Develop awareness and willingness amongst
106. local banking and community financing schemes
107. (including seed funds, installation and growth
108. capital) with the active involvement of local entrepreneurs.
109. Expand the services of NCPCs to the provision
110. of energy services and local financing support
111. through the development of green funding programmes.
112. 9. Promote sustainable energy systems as an
113. attractive solution for business development.
114. Key actions:
115. Develop energy business models for the promotion
116. of alternative energy resources into existing
117. energy regimes.
118. Develop education curricula on energy development
119. and management with a particular focus
120. on business schools.

121. 10. Develop a marketing strategy for sustainable
122. agriculture, so as to educate
123. buyers, engage producers and generally
124. improve the image of sustainable agricultural
125. products.
126. Key actions:
127. Develop guidelines and case studies explaining
128. how sustainable agriculture may be translated to
129. realistic and practical on-the-ground action.
130. Develop a business case showcasing proven benefits
131. from sustainable agriculture through benchmarking
132. of benefits, Business to Business (B2B)
133. benefits, and benefits to intermediaries.

134. 11. Establish continuous improvement
135. through better practices as a more
136. realistic model for achieving a transition to
137. sustainable agriculture than immediate
138. adoption of best practices.
139. Key actions:
140. Support transfer of established sustainable agriculture
141. practices, highlighting the process for
142. adopting these.
143. Work with governments to provide incentives
144. for producers/farmers to start the transition.
145. Secure financing mechanisms to assist companies
146. in the transition period.

147. 12. Communication on sustainable
148. consumption needs to be in simple
149. language, highlighting the benefits that
150. would come from changed consumption

FIGURE5.1 continued...

151. patterns, not only for the environment,
152. but also in terms of improving health, price,
153. and comfort.
154. Key actions:
155. Develop partnerships with advertising agencies
156. and the media to explore strategies to integrate
157. SCP into the messages transmitted to consumers.
158. Icons, such as sport stars and artists, would need
159. to be mobilized to help communicate sustainable
160. consumption as a "cool" lifestyle, including sports
161. and leisure perspectives.
162. Establish means of engaging youth in SCP in a
163. modern fashion such as the UNEP-UNESCO
164. youthXchange programme, which should be
165. updated and translated to additional languages.
166. Communicate SCP to the elderly, and explore
167. opportunities for engaging existing organizations
168. for senior citizens in SCP promotion campaigns.
169. 13. Create systematic conditions that
170. favour resource efficient technologies,
171. products, and services.
172. Key actions:
173. Develop mechanisms to foster rapid access,
174. adaptation, and implementation of clean and
175. resource efficient technologies, particularly in
176. small and medium-sized enterprises.
177. Initiate sustainable procurement programmes
178. at governmental and company levels, so as to create
179. a market for sustainable products.
180. Develop recognition mechanisms for sustainable
181. products, such as marketing, testing, and
182. labelling of products
183. Engage national level education authorities to
184. integrate SCP in technical educational curricula
185. at all levels.
186. 14. Expand the traditional CP focus on
187. processes at the plant level to the
188. industrial cluster, community, and national
189. levels.
190. Key actions:
191. Identify and share strategies for establishing system-
192. wide cooperation at the industrial cluster
193. level, the community level, and the national level.
194. Motivate large companies, through partnerships,
195. case studies, recognition of champions, and
196. the use of existing initiatives such as the Global
197. Compact, to integrate technology sharing with
198. smaller companies as a component of their CSR

FIGURE5.1 continued...

199. strategy and standard in their business manuals.

200. 15. Business models on the development
201. and implementation of alternative
202. development models conducive to SCP need
203. **to be shared and replicated.**
204. Key actions:
205. □ Compile and consolidate existing experiences
206. on alternative development models and make
207. them available for further replication.
208. □ Strengthen the engagement of the private sector
209. in multi-stakeholder efforts of promoting sustainable
210. consumption and production at different
211. levels.

212. 16. Promote the implementation of alternative
213. development models, specifically
214. replicating community and local initiatives
215. such as the circular economy in China and
216. **zero emission initiatives**.

217. Key actions:
218. □ Enhance capacities for an integrated assessment
219. of sustainable development.
220. □ Develop a mechanism that would facilitate the
221. integration of alternative development models in
222. existing strategy frameworks such as “cities development
223. strategies” and “national poverty reduction
224. and sustainable development strategies”.

FIGURE 5.1 continued... The research entry text, recommendations of the 8th international high-level seminar on sustainable consumption and production, lines numbered for purpose of reference.


Sustainable consumption and production

Recommendations

8th International High-level Seminar on Sustainable Consumption and Production
15-16 November 2004, Monterrey, Mexico

Building on the WSSD mandate to develop a ten-year framework on sustainable consumption and production, and the activities already initiated under the Marrakech process, as well as taking into account the global priorities identified in the Millennium Declaration, SCP8 participants agreed to endorse the following recommendations:

Energy

Water

Sustainable consumption and production

Consumption

Resource use, technology and products

FIGURE 5.2: The recommendations of the 8th international high-level seminar on sustainable consumption and production as they appeared in UNEP's (2004) journal *Industry and Environment* (pp6-7)

5.2.1 Textual characteristics which, in the interpretation phase, may be useful as evidence of strategic absences and concealment of information (Table 4.2)

Although demand-side strategies are suggested for the use of water (83), possibly significant is the absence of demand-side strategies with regard to energy consumption, agricultural production, mining production and consumption and production in general. For example:

- Instead of reduced consumption, the document suggests "changed consumption" (150).

  It is suggested that agriculture develop a marketing strategy for sustainable agriculture (121) and establish continual improvement processes (134), but nothing is mentioned about the possibility of reducing unnecessary agricultural production or encouraging agricultural production to occur in the regions it will be consumed to reduce environmentally costly transport of goods.
- Whilst it is suggested for example that "technologies, products and services" are resource efficient (170,171), there is no suggestion that industry and business reduce the quantities of resources that they use.

Also possibly significant is the absence of strategies to reduce carbon dioxide emissions. There is no mention of mining activities and activities associated with procuring fossil fuels. There is no mention of world-wide dissent with regard to these issues (Hansen,13 July 2006).

Grammatical strategies are inconsistently employed. In the first half of the document (13 – 84), which considers non-production/consumption-related networking and frame-work building opportunities, almost all of the main headings have an agent who, it is suggested, "should" carry out certain tasks. When the document moves on to look at energy and agriculture, resource use and production and consumption (85 to end), it becomes less specific about who the agents should be.

The Monterrey recommendations do not suggest that companies attain set environmental standards. They only suggest that companies establish continuous improvement (134).

A surprising absence was reference to gender issues and issues related to marginalized social groups, with the exception of the youth and the elderly.

5.2.2 Textual characteristics which, in the interpretation phase, may be useful as evidence of the reproduction of unequal social relations (Table 4.3)

The nature of the document as a "high-level" seminar is by definition exclusive (i.e. excludes those in the 'low-levels'). Furthermore, agency is allocated to non-human collectives such as business, financial institutions, governments, industries, multinational corporations and perhaps environmental experts (not specifically mentioned, but there presence is assumed). These entities are given active roles, for example they: develop (19), establish (36), support (43), collect (76), build (99), expand (109), and identify and share (191). However, consumers and other community groups such as the youth, the elderly, local entrepreneurs and developing countries are given passive roles. For example, the active groups: support them (30), change their behaviour (77), involve them (108), engage them (162), communicate to them (166) and enhance their capacities (218).

5.2.3 Textual characteristics which, in the interpretation phase, may be useful as evidence for a tendency to avoid discussion and dissent and thus potentially avoid challenges to the *status quo* (Table 4.4).

The appearance of the text in a journal published by the United Nations, along with other markers of professionalism, such as the desk-top publishing style text layout and photographs of important people which precede it, give the text institutional legitimation even before one reads it.

The participants at the Monterrey seminar also legitimate their right to make these recommendations by:

- suggesting they are responding to the WSSD mandate to develop a ten-year framework on sustainable consumption and production; and
- suggesting they are building on the activities already initiated under the Marrakech process
- suggesting they are taking into account the global priorities of the Millenium Declaration.

The WSSD mandate, the Marrakech process and the Millennium Declaration were arrived at through a process of international consensus and it is implied that this consensus gives the Monterrey seminar participants the right to make the recommendations.

The language of the text is also very definite (strong modality). There are no textual markers of epistemological uncertainty, such as ‘perhaps’, ‘maybe’ or ‘possibly’. A characteristic of all the sentences is that they are written as imperatives.

The document assumes that knowledge is something already in existence, merely needing to be collected (76) and/or developed (115, 118, 121, 127) into something user-friendly. The consequence for education is that knowledge needs merely to be integrated into curricula (156, 184), applied (78, 88), developed into “packages” as “total solutions” (62), transferred (140), showcased (130), shared and replicated (203), communicated (147, 159, 166), transmitted (157) and made available (207).

5.2.4 **Textual characteristics which, in the interpretation phase, may be useful as evidence of the author’s political orientation (Table 4.5).**

The metaphors in the text are drawn largely from military, civil engineering and mechanical sources, such as: “build” (6, 99), “concrete partnerships” (36), “concretise and strengthen” (13), “tools” (41, 64, 88), “strategies” (51, 79, 87, 121, 156, 199, 222, 223, 224), “practical on-the-ground action” (129), “models”(115, 136, 200, 202, 206, 213, 221), “mechanisms” (145, 173, 180, 220), “mobilize” (90, 159) and “campaigns” (76, 168). Well-defined headings and bullet points dominate the text structure. Those things perceived to be of value have been re-described as products and educational processes have become marketing strategies. Thus, for example, a “marketing strategy” should be developed for sustainable agriculture, “so as to educate buyers, engage producers and generally improve the image of sustainable agricultural products” (124, 125).

5.2.5 Textual characteristics which, in the interpretation phase, may be useful as evidence that indicates relatively concealed challenges to the *status quo* (Table 4.6).

A textual presence, which may indicate a concealed challenge to the *status quo*, is the non-typical use (in environmental activist circles) of the words “consumption and production”. Environmental critics of the current world system usually use these words when referring to the problems associated with a ‘consumer society’ and ‘excessive production’. They tend to call for a decrease in consumption and production. For example, in the environmental club guidelines distributed by the Zimbabwean environmental activist group, Environment 2000 (n.d.), the “Four Rs” of the conservation movement have been described as ‘recycle, reuse, reduce and refuse’. In the Monterrey document, the words ‘consumption’ and ‘production’ are used in a way that does not mean decreased consumption and production. Attention is strongly drawn to these words because they are part of the heading, printed in large font and in a different colour from the rest of the text (Figure 5.2) and are repeated regularly (consumption 9 times, production 5 times and the acronym SCP, ‘sustainable consumption and production’, 18 times).

The document also appears to be ‘speaking to’ (responding to) critiques often made of business and industry, which implies the presence of these critiques. For example, there is mention of poverty reduction (28), triple bottom line reporting (31), environmental/social responsibility (32), partnerships between multinationals and developing countries (37, 38), greening the supply chain (41, 42), local entrepreneurs (108), youth (162) and the elderly (166).

5.3 STEP 7: INTERPRETATION (PROCESSING ANALYSIS)

The interpretation has been divided into two components: reading with the text, that is, suggesting the preferred reading of the text, as the authors would like it to be interpreted, a reading which supports the *status quo*; and reading against the text, in which an oppositional reading it suggested, one which challenges the *status quo*. I therefore finish with two different interpretations.

5.3.1 **Reading with the text**

Reading with the text was made simpler because UNEP had provided some background to the document. In a large, highlighted text box, referring to the recommendations from the 8th International High-Level Seminar on Sustainable Consumption and Production, the executive director of UNEP was described what the text meant:

> *We – governments, business, and civil society – have committed to make change a reality. Our challenges now lie in the speed with which we move ahead. We need to do the job faster because people's lives and the health of the planet are at stake. Let us not forget the goal – the ultimate focus of these efforts is the poor – those who do not have access to basic services, such as clean water, food, and energy, and who are exposed to health risks due to improper waste management. They need to become consumers. For others, there is the need to consume differently – with less environmental and social impact on the world. We need to create the "space" for a better quality of life for all.*
> (Klaus Toepfer, Executive Director, UNEP, 2004:3)

Thus, this document is seen as a commitment by governments, business and civil society to "make change a reality". It shows their genuine concern for the environment and for their social responsibility "to create the 'space' for a better quality of life for all". To state the obvious, this is a document endorsed by high-level decision-makers from around the world, written in plain English, showing their commitment to changing patterns of production and consumption, in a way that is sustainable and socially responsible. It is a significant achievement because, until recently, it would have been hard to imagine such joint commitment and partnership amongst the world's decision makers. This document is evidence that governments, business and civil society intend to work in a way that will benefit all of society and the environment. In particular, the following are important characteristics of the text.: they were participatory, aimed to improve world wide equity and included reference to up-to-date environmental management technology.

5.3.1.1 *The Monterrey recommendations were participatory*

The Monterrey recommendations were part of a participatory process which was designed to ensure that high-level decision makers from around the world could contribute to a world consensus on the best way forward for business and industry with regard to sustainable consumption and production.

5.3.1.2 *The Monterrey recommendations aimed to improve global equity*

In addition to providing a forum for the world's high level decision-makers to contribute to the recommendations, the Monterrey seminar was also sensitive to issues of equity. The final recommendations aimed to help address poverty (15, 59), made a link between social and environmental issues (32) and aimed to support developing countries (38) and small and medium enterprises (53) in their efforts towards improved sustainability. Furthermore, they aimed to reduce unequal distribution of knowledge through technology sharing (21, 191, 197, 203) and partnerships (155, 192, 194) amongst relevant organisations.

5.3.1.3 *The Monterrey recommendations included reference to up-to-date environmental management technology*

The Monterrey recommendations were bold in suggesting management approaches to production and consumption that will require significant changes to business practice. For example, they suggested green procurement practices (30), green accounting (54), internalisation of environmental costs (55), life cycle management (64), alternative energy sources (116) and even the possibility of achieving zero emissions (216). These approaches are well-documented as resulting in improved environmental performance (for example, Onita, 2006).

5.3.2 **Reading against the text**

In reading against the text, I will follow the general headings used in the description. I am asking: what are the business and industry education and training language characteristics that perhaps form the preconditions for questionable characteristics of environmental/social practice?

5.3.2.1 *Absences and strategic concealment of information*

The high-level decision-makers have agreed only to activities that will not change the preconditions they need to ensure high profit margins. In the words of Sharon Beder (2005:14), "Sustainable development seeks 'win-win' solutions to environmental problems that do not interfere unduly with business activity."

In line with the trend described by Beder, the Monterrey recommendations mention production and consumption, but only in the context of changing it, not reducing it. Indeed, ironically, there is evidence that they are using the sustainability movement to *increase* their market, and *increase* consumer activity, for example, they suggest advertising and marketing strategies for sustainable goods (121, 155) and they want well-known personalities to advertise these products (158-161). This is in line with the claims made by business critics such as Levett (1994:254) who states, "(Companies') pro-environmental actions are directed to exactly the same end as their anti-environmental ones: commercial security and success".

The critique of excessive production and consumption is well-established. For example, Welford and Starky (1996:xii) suggests that, "Sustainable production would therefore be production where the throughput of materials and energy was reduced to a level where the regenerative and assimilative capacities of environmental sources and sinks were maintained." Levett (15 May 2006:iv) states:

> *Hearing that I am an environmental consultant, people often ask me what they should buy to reduce their climate change impacts. (...) A Toyota prius? A condensing boiler? Solar panels? I try to say something positive about whatever gizmo has caught their fancy, but add that the really big, foolproof savings come from just using less.*

It therefore seems questionable that the changes we need to protect our environment can be effected through increased production, even if it is an increase in ‘sustainable’ products, and even if we are using more environmentally friendly technologies. It seems it is largely the excessive production itself that is the problem. This is not to say that the development of sustainable goods and technologies are not welcome, but it is to say that these developments should perhaps be coupled with a commitment to decreasing production and consumption. I have tried, in the section on ‘reading’ with the text (Cf. Vol.1, Chap. 5.3.1), to show some of the positive contributions being made to the environmental cause, in business and industry.

Also not mentioned in the Monterrey document is an attempt to reduce our extraction and consumption of minerals. Again, reduced production of these materials seems an imperative given the destructive effects of their extraction and the pollution problems posed by their processing and often their consumption. It seems possible that in failing to mention the need to reduce extraction and consumption of minerals, the authors are setting up conditions to allow their extraction and consumption to continue unchecked.

Furthermore, the decision-makers want to reduce the use of our water resources, but do not mention reducing the use of fossil fuels, or the reduction of energy. As with the consumption and production of goods, it appears that they are willing only to *add* sustainable energy production to the world’s energy production, and not to reduce energy production. This conservative approach does not seem adequate to deal with the environmental crisis. The now well-established effect on the world weather patterns of global warming, most likely linked to burning fuels, especially fossil fuels (Hansen, 13 July 2006), would seem to suggest that reduction in energy consumption should be an imperative. The absence of suggestions for decreased production and consumption, of manufactured goods, raw materials and energy, perhaps forms a precondition for continued excessive production and consumption of these.

It appears that the document has obscured the responsibility for carrying out activities related to production and consumption and resource management. Technically, the way that the document is worded, it should be that *all* the members of the business and industry establishment have agreed to *all* the activities that: “develop”, “expand”, “support,” “establish”, “apply”, “enhance”, “secure”, “work with”, “create”, “identify and share”, “motivate”, “compile”, “strengthen”, “promote” and “enhance” sustainable production and consumption. However, we also know that it would be inappropriate for them all to do all of this work. Just as was made explicit at the beginning of the document, with regard to less threatening, non-production/consumption-related networking and frame-work building opportunities, certain organisations will be better positioned to do certain things. However, removing explicit reference to responsibility in the section on production and consumption and resource management and leaving it up to the readers’ interpretations as to how the labour should be divided, may provide the precondition that allows organisations to avoid doing anything, assuming (strategically?) that someone else will do it.

For example, with reference to energy systems, one might ask which are the agents responsible for: building capacity at the local level (99); developing awareness and willingness amongst local banking and community financing schemes (105, 106); and promoting sustainable energy systems? (119).

With regard to the absence of the recommendation that business achieve set standards of environmental performance, committing instead only to only continual improvement (134), this might be because managers do not want to damage their commercial positions by setting high environmental performance targets. Managers reading the Monterrey recommendations would be aware that environmental management standards such as ISO 14001 (1996) only suggest continual improvement according to criteria set by the company itself. Although companies are required to stay within the law, legislation does not consider many of the possible environmental protection strategies or provide strict enough emissions controls. If a company voluntarily implemented environmental performance beyond that required by the law, this may give non-environmentally-concerned competition an economic advantage. Continuous improvement therefore seems impracticable since there are competitive disincentives to make improvements beyond that required legally (Levett, 1996:265).

The absence of direct reference to the inclusion of marginal groups and women is surprising given the recent necessity for most high level documents to include them. The absence of their mention seems like a reversion to earlier ways of writing and perhaps serves as a precondition for them to become invisible such that their needs are overlooked.

5.3.2.2 *Reproduction of unequal social relations*

As mentioned in 5.1.2, the very nature of the document as ‘high-level’ implies exclusivity and non-human collectives such as business, financial institutions, governments, industries, multinational corporations and perhaps environmental experts are given active roles whereas the consumers, the youth, the elderly, local entrepreneurs and developing countries are given passive roles. The text therefore provides a precondition that allows the reproduction of unequal social relations amongst these social players, such that the businesses, financial institutions, industries, multinational corporations and environmental experts (often sponsored by the above) decide what sustainable behaviour is. The youth, the elderly, the local entrepreneurs and the developing countries, it is assumed, will, after appropriate education, passively change their behaviour accordingly.

5.3.2.3 *Tendency to avoid discussion and dissent and thus potentially avoid challenges to the status quo*

The authors of this text provide preconditions for the avoidance of challenges to the truth of what they are saying in three ways:

- Firstly, the style of the document, its publication in UNEP’s “Environment and Industry” magazine, and reference to institutions such as the United Nation, the World Summit on Sustainable Development (WSSD) and the Marrakech process suggest international consensus with regard to its truth. The Monterrey seminar participants therefore assume epistemological privilege based on international agreement. They assume that these recommendations must be based on true premises, and must therefore be sound, because experts and representatives from governments and wealthy, well-established organisations consider the premises to be true? Supported by such impressive credentials, this document is bestowed with powerful institutional legitimation and it is thus difficult to argue with it. However, epistemological theorists such as Haack (1993, 1998) and Bhaskar have demonstrated that consensual agreement is not an absolute measure of truth. It is possible for a million Frenchmen to be wrong (Bhaskar, 1993:214).

- Secondly, the authors assume that knowledge is a given, something to be found, developed and then transferred or transmitted. By hiding the social constructedness of knowledge, contestation of that knowledge is avoided. How can one argue with something that just is? The recipients of the knowledge passively consume it; they are not given a role in helping to develop it. However, contemporary educational theorists largely agree that there is a social element to knowledge (Price, 2005a in Vol.2, Chap). Knowledge is not something to be found and disseminated.
- Thirdly, the author/s avoid epistemological uncertainty with strong modality. When a text is written with such epistemological confidence, it makes it hard to argue with it; it must be right if it is so sure of itself. However, much contemporary philosophy has put into question our ability to arrive at an absolute certain truth. Post-positivist, contemporary researchers generally admit that knowledge is fallible (Cf. Vol.1, Chap. 3.5.1).

5.3.2.4 *Evidence of the author/s political orientation*

The military, civil engineering and mechanical metaphors are typical of a business orientation (Cf. Vol.1, Chap. 2.6.1), as are the structure of the text (well defined headings and bullet points), the strong modality and the re-description of things of value as products and educational processes as marketing strategies (Cf. Vol.1, Chap. 7.3.2).

The application of the idea that marketing strategies should be employed to create a market for sustainable agriculture products is particularly provocative as it implies that the authors are employing the later generation of business strategies where demand for a product is created, through marketing, where it was previously absent

(Cf. Vol.1, Chap. 2.6), resulting in the net increase in agricultural production, already suspected.

This business orientation-style would perhaps provide a precondition for the 'naturalness' of the assumption that production and consumption must increase, not decrease. The military metaphors also perhaps provide a precondition for it to seem natural that decision-makers should use aggressive power$_2$ strategies to achieve their aims, for the military consists of a well-defined hierarchy whereby the soldiers on the ground (the consumers, youth, elderly, local entrepreneurs?) carry out the orders made by the officers (high-level decision-makers?). The civil engineering and mechanical metaphors perhaps provide the precondition for it to seem natural that we can solve the problems of the Earth's floundering ecology (a machine?) with training in expert-devised case studies and strategies (technical know-how). It perhaps makes it seem simply logical that we can treat people like machines too: we can build their capacity (as we would an engine's capacity); integrate sustainable consumption and production into their survival strategies (as we might integrate a new program into our computer network); and engage them (as we might engage gears).

Whilst these metaphors achieve the strategic aim of maintaining power$_2$ centrally, with the decision-makers, it seems unlikely that they are appropriate for dealing with the Earth's ecological complexity. It also seems unlikely that they provide preconditions for the free flourishing of all human beings, since they assume that a majority of humans are significantly dispossessed of agency and structurally determined, that is., they are the 'machines' that the decision-makers 'manipulate'.

5.7.2.5 *Relatively concealed challenges to the status quo*

Some of the absences mentioned above might indicate challenges to the *status quo*, such as the absence of reference to dissent and the avoidance of controversial issues. The author/s might be ignoring these things because to admit them would be to put the legitimacy of the whole document into question. That is, ignoring them might be a precondition for avoiding them.

The presence of the words ‘consumption and production’ in the heading and their frequent use in the text in a way which does not mean their reduction, is perhaps best explained as a strategy to provide a precondition to deal with the challenge to world economics posed by critics calling for decreased ‘consumption’ and ‘production’ (Shiva, 1997; Sachs, 1999; Levett, 15 may 2006). The use of these words has the effect of implying (unjustified) solidarity with those people who would seek to challenge world economics by suggesting reduced production and consumption. The use of a watered-down interpretation of the words ‘sustainable production and consumption’ is perhaps an attempt to defuse that challenge but is at the same time an indication of the presence of that challenge.

Fairclough (2003:103) refers to the concept of the “dialectic of colonisation and appropriation”. Using this concept, we could say that the discourse of ‘sustainable consumption and production’, initiated in circles antagonistic to the general ethos of business, has colonised the discourse of business. But business has neutralised the transformative potential of this colonisation by appropriating the (challenging) language to its own purposes. Thus, the Monterrey recommendations exhibit a “texturing” of discourses related to a dialectic of colonisation and appropriation (Fairclough 2003:126).

Charges made of business and industry, that they are not socially and environmentally responsible, may explain (provide the preconditions for) the presence on the agenda of the SCP8 of environmental/social responsibility, triple bottom line reporting, poverty reduction, partnerships between multinationals and developing countries, youth, elderly, local entrepreneurs and greening the supply chain. Therefore, the very presence of these items is perhaps evidence of challenges to business and industry. Like the texturing mentioned in the previous paragraph, the presence of these items is evidence of intertextuality, “(…) linking this text to an ill-defined penumbra of other texts (and thus) to what has been said or at least thought elsewhere” (Fairclough, 2003:17).

5.4 CONCLUSION

In this chapter, I described the key textual characteristics of the recommendations from the 8th International High Level Seminar on Production and Consumption (my entry text) and developed the argument that certain of these characteristics perhaps form preconditions which:

- allow the reproduction of constraints on our ability to live sustainably on the Earth, and
- allow the reproduction of social relations that disallow the free flourishing of all humans.

In the next chapter, I complete Step 8 of my methodology and attempt to explain (give a social analysis of) the characteristics of the entry text.

CHAPTER 6: EXPLANATION (SOCIAL ANALYSIS) OF THE ENTRY TEXT

6.1 INTRODUCTION

In this chapter, I am responding to the question: What are the characteristics of environmental/social practice that perhaps *inter alia* form the preconditions for the language characteristics identified in Vol.1, Chap. 5? I mentioned previously that an important activity preceding explanation is the grounding of the text in the social processes within which it is embedded as an active participant. Much of this work was achieved in Vol.1, Chap. 2, where I looked particularly at the real and actual (world event) levels of reality surrounding the writing of the document. Therefore, in this section, I will make frequent cross references to Vol.1, Chap. 2. Since the local and personal levels are specific only to the Monterrey text, I did not include them in Vol.1, Chap. 2. Instead, the local context is reported in Vol.1, Chap. 5.5 and the personal context is addressed below only as fiction. As I have mentioned earlier, one of the criticisms of CDA is that there is too much context needed for the explanation (Myers, 2006). I dealt with this problem by reducing my engagement of the context to what I perceived to be the most important, using my findings from the text as a lead toward these. However, I realise that I will have left out many preconditions which have contributed to the explanation of the text. I have tried to maintain reference to this fact by frequently using the term *inter alia*, or “amongst other things”. Where I have not used the term *inter alia*, it is nevertheless assumed. Table 6.1 below illustrates the structure of the explanation as it pertains to the real and actual levels of reality.

TABLE 6.1 The real and actual aspects of the explanation

Ontological level	Focus of analysis
Real (6.1)	Causally aefficacious[41] philosophical mistakes, relating mainly to theories of structure/agency and theories of epistemology, relevant to the writing of the text. These mistakes exist in society, even if they are not actualised, hence their categorisation as 'real'. The explanation at the level of the real is achieved through the logic of retroduction.
Actual (6.2)	Prior and current events relevant to the production of the text, at international, regional, local and personal levels. The explanation at the level of the actual is achieved through the logic of retrodiction[42].

Before I explain the text in terms of dominant (but, I argue, mistaken) philosophical commitments to structure/agency and epistemology, I would like to give some background to these commitments. I structure this background around two concepts introduced by Hodge and Kress (1988) called the ideological complex and the logonomic system. These two concepts, along with their relationship to social theory and theories of epistemology, lead into a discussion of social modality (who can say what, when, how and where) in which I make special reference to the environmental educational methodology evident in the Monterrey recommendations. In this section I assume, as does Bhaskar (2000:59), that a discussion of philosophy can provide important diagnostic clues to the character of social, or more generally human, reality.

6.1.1 **Background to the dominant philosophical commitments to structure and agency: the dominant ideological complex of the business world and its companion logonomic system**

This background assumes that the ideological complex and its need for a logonomic system provides the explanation (offers possible preconditions) for the dominant philosophical commitments to structure/agency and epistemology which in turn provide the explanation (offer possible preconditions) for the textual characteristics of

[41] Bhaskar has made up the term *aefficacious* to insist that any entities participating in a relationship experience the effects of the other and also affect the other (Bhaskar, 2000:3) (see also Vol 1, Chap 6.3.5.2).
[42] The difference between retroduction and retrodiction is explained in Vol.2, Chap. 7, note 31.

the Monterrey recommendations. This background is therefore an explanation of the explanation.

6.1.1.1 *The dominant ideological complex of business and industry*

I use the term 'ideological complex' in the manner suggested by Hodge and Kress (1988: 2). In contemporary capitalist societies there are inequalities in the distribution of power and other goods. For example, there is a societal habit (Bourdieu, 1998), that 'high level' decision makers get together to make decisions in such a way that low-level people are effectively excluded. It is simply just, 'how things are'. Bhaskar (1994:168) refers to this as, "(…) the naturalization, and thence eternalization, of the *status quo*". This inequality is a key motivation of the ideological complex which exists to sustain relationships of both $power_2$ and solidarity. The ideological complex thus represents the social order as simultaneously serving the interests of the dominant and the subordinate. The actual *opposition* of interests creates the necessity for contradiction within the complex. In other words, as Marx showed, what is good for the ruling class is not what is good for the proletariat, who are exploited whilst simultaneously being told (and often believing) that they are not.

The ideological complex therefore views ideology as a kind of false consciousness. It represents the world 'upside down' in inverted form. But it also displays an image of the world as it ought to be, as seen from the vantage point of the dominant, or as it is, from the vantage point of the dominated group. The ideological complex is therefore a functionally related set of contradictory versions of the world, coercively imposed on one group of people by another (Hodge and Kress, 1988:3). There seem to be similarities between this concept of the ideological complex and Derrida's concept of the autoimmune condition of modernity and its globalisation processes (Cf. Vol.1, Chap. 2.3.2) in which that which is supposed to protect the organism in fact acts against it.

Some discourse analysts such as Hasan (in Chouliaraki and Fairclough, 1999:150) deny the existence of false consciousness, but Chouliaraki and Fairclough (1999:150, 151) disagree. They think it is important to link ideology to its effects and thus have a relational view of it, thus allowing them to maintain the idea of false consciousness whilst avoiding the absolutism of some interpretations of it. Like Chouliaraki and Fairclough, I also disagree with Hasan, but unlike them I do not suggest irrealist vulgar pragmatism, demonstrated by their reference to their concern with the 'effects' of ideology, as an alternative to absolutism.

I prefer to follow Bhaskar (2000:56) who talks about ideology as "lived illusion"; the illusion is lived as an ingrained habitual disposition or disposition complex. In the Monterrey recommendations, this lived illusion might be that green technology and finance mechanisms are adequate to achieve environmental stability. Bhaskar also calls this lived illusion "demi-reality". As far as I understand it, Bhaskar uses this term to indicate that just because this "demi-reality" is an illusion, it is nevertheless real in the sense that it is causally aefficacious. However, as an illusion it requires non illusion even to exist. The existence of the non illusion, or alethia, underlying the illusion can be demonstrated by the existence of performance contradictions (theory/practice inconsistencies), for example, the contradiction that knowledge is absolute and simply 'found' (for example, in the Monterrey recommendations knowledge was simply reported, replicated and packaged) is contradicted by demonstrable evidence that knowledge has a social element and is fallible. And indeed, researchers have demonstrated that the work of self identified positivist scientists nevertheless includes components that are not positivistic. In contradiction to their theory, they cannot but involve elements of social construction in their research (Latour, 1999). When one lives in demi-reality, one's life must reflect performance contradictions. For example, idealists, for whom the mind makes reality, nevertheless must leave a room via a door; they simply cannot think themselves a new reality.

I would argue that there is evidence in the Monterrey recommendation for the existence of an ideological complex (or lived illusion). On the one hand, the document claims to be providing a world view which, if Klaus Toepfer is to be believed, would protect and ensure the survival of all of the world's citizens. Recall his words above, "We need to create the 'space' for a better quality of life for *all*" (my italics). Here we see the part of the document which attempts to sustain solidarity with all of the world's citizens, especially the poor.

On the other hand, the document, in contradiction to this message of solidarity, suggests activities and a modus operandi which there is reason to believe maintains the market system *status quo* and offers arguably little towards protecting the interests of the non-dominant and their environment[43]. Thus,the main message suggested by the business ideological complex, which the Monterrey recommendations reflect, is that the environment will be protected provided we produce and consume adequately to maintain the world economy, that is, sustain the interests of the dominant class. The dominant ideology in business of "profit maximization in the short and medium term" (Welford in Welford and Starkey, 1996:216) remains unthreatened, even bolstered, by the world view (ideological complex) that portrays, contradictorily, that what is good for those in charge of the economy as also what is good for the environment, and thus the Earth's people in general. As Beder suggests (2005:14):

> *Gone is the cultural critique of modern society for its excess consumption and limitless economic growth. In its place are solutions promoted by economists from corporate-funded think-tanks which 'harness the power of the market' to protect the environment. These economists claim that if we put a price on the environment then profit will motivate businesses to protect it rather than exploit it.*

What are the preconditions that allow this contradiction to exist without us noticing it or at least, making it seem so natural that it is difficult to spot? Hodge and Kress (1988) provide a possible answer with what they term the logonomic system.

6.1.1.2 *The logonomic system of the business ideological complex*

The logonomic system is a second level of messages which regulates the functioning of the ideological complex. It is directly concerned with the production and reception of meanings (Hodge and Kress, 1988:4). It was so named because *logos* is Greek for thought or a system of thought and *nomos* is Greek for a control or ordering mechanism.

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[43] There is statistical evidence that the dominant globalising ideology of the free market does not result in fair distribution of wealth, and is not in the best interests of the non-dominant sections of society in that the gap between the rich and the poor seems to be widening in countries, such as the USA, who are most influenced by this ideology (Flavens, 2001; Martens, 2005). Furthermore, the USA's indicators of social health such as infant mortality are relatively high given their overall Gross Domestic Product, with the highest figures being recorded amongst the lowest income groups (Goza *et al*, 2006). Cuba has a better infant mortality rate than the USA (Que Viva, 3 January 2007).

Each producer of a message relies on its recipients for it to function as it was intended. Thus,the message producer needs the recipients to respond to a second level of messages; messages which tell them how to read the original message. For example, a statement which might at face value be offensive to the recipient may be given with other, second order, messages that tell the recipient to interpret it is a joke. The recipient may not understand those second order messages, as in a cross-cultural exchange, or may choose to reject the second order messages, as when a person from a racial minority chooses to be offended by a racial 'joke'. Often, the response from the producer is that the people who are not laughing at the 'joke' have no sense of humour. A stark example of the functioning of the logonomic system relevant to the oppression of women is the movie *North Country*, starring Charlize Theron, where women were expected to treat as jokes, or a bit of fun, highly offensive and abusive language and behaviour.

A logonomic system is therefore a set of rules which prescribes who can produce/communicate messages, who can know (receive, understand) messages about what topics, under what circumstances and with what modalities (how, when, why). Logonomic systems cannot be invisible as they would not work. They are highly visible, such as politeness conventions, etiquette, industrial relations, professionalism and legislation. Logonomic systems prescribe semiotic behaviour at the point of production and reception, so that we can distinguish between:

- Production regimes – rules constraining production
- Reception regimes – rules constraining reception

Logonomic systems are a result of contestation over long periods of time, but ultimately derive from the ideas of the ruling class. In terms of the TMSA we could say that dominant and non-dominant groups have been working together but differently to transform and reproduce the logonomic system (Cf. Vol.1, Chap. 2.6.3). Therefore, it would be incorrect to say that the logonomic is entirely constructed and imposed upon the non-dominant groups by the dominant. Rather, it is a result of their interaction and mutual co-construction. This is an important point because it means that there are always opportunities for transformation of the logonomic system. The logonomic system is thus, like all 'things', never static, but always a process, always coming from somewhere (having a history) and never finished (Bhaskar 1993). A logonomic system implies a theory of society and an epistemology, both of which suggest a theory of social modalities. Typically, the overall structure of logonomic systems consists of general rules (expressing the dominant of the dominant) and alternatives or exceptions (acknowledging though circumscribing the opposition of the subordinate).

6.2 PHILOSOPHICAL ERROR PRESENT IN THE DOMINANT IDEOLOGICAL COMPLEX AND LOGONOMIC SYSTEM OF BUSINESS AND INDUSTRY

In terms of the Monterrey recommendations, the logonomic system of contemporary capitalism provides a plausible explanation for many of the textual characteristics of the document. In the following sections I will therefore demonstrate how certain aspects of the Monterrey recommendations can be explained in terms of the logonomic rules which reflect the ruling class's (high level decision makers') preferred ideas about social theory, and their preferred ideas about epistemology. In other words, I suggest that the existence of the ideological complex and the logonomic system provide the preconditions for the assumptions of social theory and epistemology which form the preconditions of the textual characteristics of the Monterrey recommendations. In taking this deeper look, I will also attempt to link the above to environmental education in industry.

6.2.1 **Assumptions of social theory present in the ideological complex and logonomic system of business and industry**

The assumption of structure/agency present in the dominant ideological complex is characteristically the illicit dialectic in which sometimes individuals (voluntaristically) determine structure and sometimes structure determines individuals. Initially, individuals (the decision-makers) determine the structures (organisations, policies, etc). This is voluntarism in its form as decisionism (Bhaskar, 1994:168). Then these structures determine the individuals (the consumers, youth, elderly, and the local entrepreneurs). This is determinism. Thus,we have an example of the illicit dialect, one which demonstrates the strategic benefit to the decision makers, who are able to maintain $power_2$ over non-decision makers. By assuming the illicit dialectic theory of society, the ideological complex insists on the natural rightness of the *status quo*; it can claim that it merely reflects the way society works.

The assumption of the illicit dialectic within the ideological complex perhaps explains the language that evokes images of the military, civil engineering and mechanics. Since the choice of metaphor often presents a choice of follow up action (Fairclough, 1989:120), it seems likely that the use of metaphors which evoke hierarchy and malleability of society (like the malleability of building materials) follow through to actions (carried out by those allocated agency, namely, the dominant) which involve hierarchy and the moulding/building of the non-dominant and societal structure, as was evident in the Monterrey recommendations. Thus, the dominant decision-makers (via voluntaristic decisionism) simply build the organisations, policies, legislation and various social structures which then manipulate the behaviour of the passive non-dominant, whose role is that of non human, malleable materials (determinism). Underlying this unspoken assumption is the companion assumption that this natural way of things is best for all concerned, both those in dominant and non-dominant roles (ideological complex).

The illicit dialect of structure and agency assumed by the ideological complex may also explain why governments throughout the world largely insist on a voluntary basis for environmental management (Levett, 1996:265). In the Monterrey recommendations, the voluntary nature of business environmental activity is indicated even in the use of the word “recommendations” (2) in the document title. The ideological complex is here at work; the underlying assumption is that whatever is good for business (a section of society) will automatically be good for all of society and the environment. Therefore, only a voluntary basis for action is needed. The actual effect is that business remains free to carry on business as usual.

To hide the fact that the decision-makers are ensuring their interests at the expense of the interests of the non-dominant, the illicit dialectic is required by the ideological complex to make it seem natural that when it suits the dominant interests, agency is allocated to the high-level decision-makers, and at other times, again when it suits the dominant interests, agency is allocated to the structures controlled by those decision-makers. According to Bhaskar (1994:80), a bad dialectic is one, "…generating multiple opportunities for ideological pliability (so that, for example, the same ensemble can legitimate almost any activity)." This is what we see in the preferred social theory dialectic of the current capitalist system. In Britain, the commitment to this illicit dialectic was transparent in that the most influential social theorist, an advisor to the government, was Giddens. Giddens exemplifies social theory is an example of this illicit dialectic. For Giddens, a tendential voluntarism "prevents him from undertaking the negative generalisation that dislocates structure from agency" (Bhaskar, 1994:154). This is not surprising, since Giddens was influenced by the strong social constructionists, Berger and Luckman, whose theory of structure/agency is used by Bhaskar (1989) as a classic example of the illicit dialectic (Cf. Vol.1, Chap. 2.3.6).

To return to the idea that what is good for business is good for the Earth and its people, this is not to deny that there are opportunities for action that both save money and protect the environment (are good for business and the environment, and therefore society). However, there are limits beyond which further environmental improvements cost money (Levett, 1996:264). Given these limits, continual voluntary improvement seems unlikely to lead to actual improvements unless business jeopardise their ability to produce at competitive prices. However, if governments abandoned their voluntary action approach, based on the ideological complex of the free-market[44], and insisted on achievement of set performance, then all companies would be in the same situation and goods prices would have to rise to accommodate extra environmental expenditure, thereby levelling the playing field Levett (1996:264).

The ideological assumption that the best way to govern is via the free-market, bolstered by a commitment to an illicit dialectic of structure/agency, therefore provides a possible precondition for the fact that businesses are willing only to agree to 'continual improvement' (134), rather than to the achievement of high performance

[44] The classic text in support of free market environmentalism is by Anderson and Leal (1991).

standards, and that there is little incentive to make significant progress towards high performance standards (Levett, 1996:264).

6.2.2 Assumptions of epistemology present in the dominant ideological complex and logonomic system of business and industry

The characteristic epistemological assumption of the dominant ideological complex in business and industry is positivistic and empiricist. Typically, such an approach to knowledge results in the assumption that valid knowledge can only be found by specialised, highly trained 'scientists' and/or highly qualified experts in their field who are able to report their experiences. The socially constructed nature of knowledge is unacknowledged; scientists are assumed to be unemotional and rational in their scientific endeavours, they are "modest witnesses" (Haraway, 1997:3). By assuming the nature of epistemology is such that the knowledge makers are disinterested, merely mechanical, tools of discovery, allows the ideological complex to insist that knowledge which serves their interests is presented as unbiased: it just *is* the truth.

That business and industry make use of this aspect of science (its supposed lack of bias) is documented elsewhere. For example, Rampton and Stauber (2002) provide a thoughtful discussion of the way that industry manipulates industry. They refer to the way that industrial public relations rely for their credibility on the power that science wields in society to produce reliable knowledge, whilst in practice public relations is more appropriately labelled "spin" and "truth has no bearing on the issue" (p331). Rampton and Stauber consider several cases where industry used funding to manipulate the results of science, and demonstrate that these examples are not isolated incidents but are unfortunately common-place. They also demonstrate (p332) how some scientists naively do not realise where their funding actually comes from, or the way in which their results are manipulated. That we might say that 'most' scientists are funded by industries with vested interests in the outcomes of the research is perhaps not an exaggeration. As Logan (27 February 2007) explains, the administration of the University of California is loath to succumb to pressure to refuse funding from tobacco companies because this might set a precedent, such that all such potentially 'biased' funding should be refused (including, for example funding from pharmaceutical companies and oil industries), yet these are the University's main sources of funding.

Reflecting a commitment to positivism and empiricism, which deny pluralistic, fallible, interpretations, professional documents maintain a logonomic rule that insists they avoid hints of uncertainty. Truth is supposed to be absolute and writers trained in this mode are largely forbidden markers indicating weak modality (recall the dominance of strong markers of modality in the Monterrey recommendations) (Cf. Vol.1, Chap. 5.2.3). This hides contestation and thus the ideological complex can exist without its contradictions becoming overly evident. This epistemology functions to make the message of the Monterrey recommendations seem to represent universal, rather than sectional interests, since it suggests that there can be only one possible, absolute, truth, which happens to be that of the dominant sector of society.

Similarly, professionalism dictates that there should be no personal or emotional beliefs in the text, which should be an impersonal description, or report, on how things simply 'are'. Indeed 'emotional' could be used as an antonym of 'professional'. A frequently used grammatical technique which allows this distance is the use of passive sentences, for example, rather than write "I consider it important that…" one would write "It is considered important that…". Other typical grammatical structures which can induce authorial distance, and which are characteristic of professional texts, include processes being given to inanimate agents and nominalizations (Fairclough, 1989:124, 125). This allows the existence of the contradiction that what is portrayed as a universal interest, is in fact a sectional interest, because it implies that the author is unbiased, merely presenting an uncontested version of the way the world simply *is*. If the author's personal investment in the document were clear, this might uncover the contradiction. The requirement of the ideological complex that contradictions be hidden (justified by a commitment to positivism and empiricism for which a statement either is or is not true) thus might help explain, form a precondition for, the grammatical structures associated with professional writing which distance the author and which are insisted upon by the dominant logonomic system (more commonly known as the rules of professional writing).

Another, less visible epistemology perhaps functioning within the ideological complex and its logonomic system is one whereby what is true is considered to be what is aesthetic. As Bourdieu points out (1998), the *habitus* in which we are participant often determines what we find attractive. Just as a person from one class will often find a person from another class somehow unattractive, so people immersed in the business culture might find the Monterrey document 'elegant' and the documents written by non-business people somehow disdainful. Perhaps, if the document had not followed the usual business format and language and had been written by, say, Third World women with children suffering from lead poisoning from industrial waste, businesspersons would have found it unaesthetic. They would perhaps have been illogically repelled by it (as opposed to attracted to it); for example they may have felt anger, indignation or experienced a disdainful reaction towards it. However, although motivated by this epistemological 'truth finding' aesthetic, the businesspersons would know better to justify their dislike of the document in terms of it. Instead, they would be able to critique the document, in terms of the logonomic system, as unprofessional, over-emotional and poorly informed. In much the same way, a person from the upper class might describe a person from the lower class as ill mannered, undisciplined and poorly educated, whilst motivated by secret emotions such as anger or a disdainful reaction to them.

Therefore, an epistemology of aesthetics might also form a precondition for the textual characteristics of the Monterrey recommendations. More than this, it might form a psychological constraint on social transformation; it could provide a precondition for the difficulty of changing the characteristics of this genre. This is because that which is intuited as aesthetic is often assumed to be unquestionable since it is assumed to be innate and personal. It just *is* 'truth' (for the person involved)[45]. Interestingly, postmodernism lends support to the idea that what is true is what is aesthetic (Usher and Edwards, 1994; Cherryholmes, 1988, 1999).

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[45] The cultural aesthetic associated with what makes a woman beautiful in contemporary capitalist society perhaps can illustrate this point. Women are deemed beautiful if they are too slim to be healthy and have removed their markers of adult power$_1$, namely they should be hairless, and look prepubescent and under-nourished (the waif look). Despite evidence that this concept of beauty is a social construct, one with unhealthy consequences, and one that maintains the status quo in which men dominate women, it is difficult for most people to break out of the habit of it (Blonsky, 1985: XXXV). Similarly, the aesthetic of what looks good in a professional document may be a significant factor in sustaining current practice, one which is not easily over-turned, even in the face of evidence of its dysfunction.

Bhaskar (1994:81) argues that in terms of axiological choice, the suggestion that we use custom, tradition or routine, Bourdieu's *habitus*, as an epistemology to answer the question of which is the 'true' or 'correct' way to act (in this case, 'act' refers to how we write about the environment), is:

> *(…) neither a good, nor a relevant, answer. For, whatever the virtues of routine (and routine is in general necessary for the cultivation of virtues), unless it is both accountable and accounted for, it is always liable to the Sartrian charge of 'bad faith'.*

6.2.3 Consequences for social modality of the social theory and epistemological assumptions of the dominant ideological complex, with special reference to environmental education in business and industry

Social modality, I have already mentioned, refers to rules about who can say what, when and how (Kress and Hodge, 1988:4). Educational praxis necessarily involves a social modality, as educators have assumptions about who teaches, what they teach, when they teach and how they teach. As has already been described (Cf. Vol.1, Chap. 5.3.2), the dominant educational social modality of business and industry is one in which the high-level individuals decide on curriculum (decisionism, illicit dialectical social theory) based on the advice of the so-called unbiased experts (deductive-nomological science). Therefore, we can surmise that the need for the ideological complex to hide its contradictions explains its characteristic investment in social theory that reflects the illicit dialectic, and epistemology that is based on deductive-nomological science. Both of these function to allow the dominant group to make self-serving decisions, whilst simultaneously claiming that those decisions serve universal interests and merely reflect management processes based on unbiased information from the experts.

In terms of education/management, the investment in a social theory that reflects the illicit dialectic and a deductive-nomologically-based epistemology, acts to construct trainers/teachers/lecturers into transmitters of information found by the experts. The learners passively receive the information. Therefore, the dominant view of truth and education in business is typically the behaviourist one, namely, that knowledge is a static object to be found, then developed into a package that can then be disseminated and adopted. The knowledge is found (one assumes using the deductive-nomological methodology) by:

- experts - something is true because experts have found it to be so, e.g. collecting lessons learned (77); and
- respected individuals representing social convention - something is true because it is generally agreed by that it is true, e.g. the Monterrey recommendations are justified as 'truth' by reference to the WSSD and the Marrakech process (6,9).

Any involvement of the learner in the process of knowledge development could upset the *status quo* and allow the contradictions of the ideological complex to surface. Thus, according to the dominant logonomic system, learners may not question what the experts say. Their task is to soak up the knowledge, or better, buy it as a package. The 'who' (can teach) of the logonomic system is ruled to be the experts (or respected individuals' standing for conventional wisdom), represented by the teachers. The 'what', is the knowledge provided by the experts or by convention. The 'when and where' are strictly controlled moments of allowable transmission, providing transparent logonomic markers as to how the information should be read (e.g. in a professional international document, which limits possible alternative readings, or in a training session where there are strict rules about teacher/student interactions). Recall the language that the Monterrey recommendations used to evoke environmental education practice, in which knowledge needs merely to be integrated into curricula (156, 184), applied (78, 88), developed into "packages" as "total solutions" (62), transferred (140), showcased (130), shared and replicated (203), communicated (147, 159, 166), transmitted (157) and made available (207).

Thus, the socially constructed view of education remains marginalized in business and educational discourse and even those business people who are familiar with the critique of behaviourist education and Tylerist management practice, based on a critique of positivist/empiricist epistemology, may nevertheless adhere to behaviourism in a cynical or even Machiavellian way, especially if they are influenced by strong social constructivism which tends towards irrealism and its attendant lack of agency. For these people, if one is to avoid nihilism, there is no alternative but to cynically play the power_2 game (Cf. Vol. 1, Chap. 2.7.3.2).

Behaviourist education provides a useful source of language for the dominant logonomic system, whereby people play the power_2 game and manage the contradictions inherent in the ideological complex. They can maintain that their version of truth is *the* truth, by insisting it is simply and without bias *found*, that is, it just *is*. They can also use the behaviourist education-based logonomic system to insist on particular power_2 social relations and prevent or at least neutralise challenges to the *status quo*, by enforcing a strict code of who can say what, when and where.

Thus I argue that the educational language of the Monterrey recommendations, which functions to maintain the *status quo*, can be explained in terms of the dominant ideological complex of business and industry and its commitments to social theory and epistemology. To put this into the terms of the original questions for this analysis, the dominant ideological complex and its commitments to social theory and epistemology, required for the functioning of its logonomic system, perhaps form a precondition for the environmental education language of the Monterrey recommendations.

6.3 EVENTS, TRENDS AND WORLD AFFAIRS RELEVANT TO THE PRODUCTION OF THE TEXT

This is the history and context influencing the writing of the text. It includes global and perhaps regional events and trends (6.2.1). It also includes events at the local and personal levels, that is, it includes what was happening around the writer/s as they wrote the text (6.2.2). Since I must use my Member's Resources (MR)(Cf. Vol. 1, Chap.1.5) to guess some of the local and personal context, I present this component of the analysis as a fictional story in which I use my empathy to explain the process of writing the Monterrey recommendations. Nevertheless, I try to base this story on as much historical and textual evidence as possible; this may be a fictional story but it has to fit (complement) the data.

It could be argued that every event that has ever happened has made a contribution to the text, for example, perhaps without the French revolution, World War 1, and Taylorite management principles, the Monterrrey recommendations would not exist. However, in this section I choose merely a sample of significant events and trends which I consider of particular importance to this discussion, namely:

- The growing evidence for climate change, linked to the growing strength of the call for business and industry to address environmental issues;
- The trend towards globalisation and increasing of dominance of 'the market system';
- The disaffectation of developing countries from global politics in general, and their specific absence from global environmental initiatives;
- The trend towards not naming marginalized groups; and
- The personality/ies of the author/s of the Monterrey recommendations, influenced by past and current personal life events.

The textual characteristics of the recommendations serve to reproduce these trends and events (here I include the synchronous manifestation of a personality as an event), whilst they are at the same time the *raison d'etre* for them (Maton, thesis).

6.3.1 The growing evidence for climate change linked to the growing strength of the call for business and industry to address environmental issues

According to Hodge and Kress (1988:8), the ideological complex attempts to pre-empt opposition by incorporating contradictory images into its coercive forms. However, these images, whilst perhaps diverting attention, all the same exist as evidence that silently declares the limits of dominant power$_2$ (Hodge and Kress, 1988:8). I would argue that the Monterrey recommendations are an indication that business and industry are being forced to look at environmental issues, in the light of the evidence of climate change and the growing call for improved environmental performance (Cf. Vol.1, Chap. 2). Toepfer (2004:3) opened the 8th High-Level seminar which resulted in the Monterrey recommendations with these words:

> *The world is facing burgeoning problems – poverty, hunger, disease and environmental degradation. Mandates for action (the most recent being the plan of implementation from the World Summit on Sustainable Development, and the UN Millennium Goals) are there.*

Nevertheless, whilst the Monterrey recommendations claim to address environmental issues, and some ground is gained in this respect (Cf. Vol.1, Chap. 5.3.1), it is questionable that the recommendations go far enough and, almost certainly, they are little threat to the current *status quo* which arguably is the underlying precondition for the environmental crisis in the first place.

6.3.2 *The trend towards globalisation and the 'free market economy'*

The global trend towards a free market economy, and its characteristic assumption that increased production and consumption are the corner stone of business, is perhaps the most significant trend to explain the characteristics of the Monterrey recommendations. The philosophy behind the lived illusion (ideological complex) of this trend is explored above, but here I note how world events and circumstances, underlain by the dominance of the free market ideological complex, might explain some of the key characteristics of the Monterrey recommendations.

Most significantly, the absence from the Monterrey document of issues related to reducing carbon emissions is perhaps explained by the world controversy over the matter of carbon emissions and global warming. The refusal of the USA, a powerful proponent of the free-market economy, to sign the Kyoto Protocol which would commit the country to reduction of carbon emissions is an important aspect of this controversy. Another aspect of the controversy was the USA's commitment to the Iraq war, started in 2002, which many commentators claimed was based on the USA's need for foreign oil (for example, The Guardian, November 7, 2005). Bush has admitted that the US is addicted to oil (The Guardian, February 1, 2006).

However, just as controversial, and possibly alienating of many developing countries, would be a call to reduce deforestation in places such as the Amazon Basin, which, it is argued, would equal four-fifths of the emissions reductions gained by implementing the Kyoto Protocol in its first commitment period (Santilli *et al*, 2005). For these countries, such a call seems equivalent to asking them to reduce economic development, based on increased consumption and production. Santilli *et al*, (2005) further warn that to ensure the involvement of these countries in the Kyoto Protocol, they will need to be compensated for their reduction of deforestation. It seems possible that for the Monterrey recommendations to achieve consensus, given the presence of representatives from so many different countries, it had to leave out the topic of carbon emissions and global warming (this topic has been left out of other important international documents too, such as the World Summit on Sustainable Development implementation plan, Sisitka, pers. com).

6.3.3 The disaffectation of developing countries from global politics in general, and their specific absence from global environmental initiatives

One way to describe the Monterrey recommendations is that it seems to be written from the perspective of the developed countries. Developing countries are mentioned, but only as needing help, and in this mention they are not allocated of agency (Cf. Vol.1, Chap. 5.3.2). This approach to the developing countries is surprising given that of the five environmental ministers present at the meeting, all of them were from developing countries, namely, Argentina, Mexico, Nicaragua, Peru, and Tanzania, and that the meeting itself was held in a developing country (Mexico) (UNEP, 2004c).

Perhaps the absence of an active presence of developing countries in the recommendations (Cf. Vol.1, 5.3.2.2) could be explained in terms of their disaffection in terms of world politics. Perhaps it could also be explained in terms of the general omission of developing countries from much of the movement towards sustainable practices, based on the assumption that they need to exploit the Earth at least enough to catch up to the developed countries, which got to where they were by exploiting the Earth. For example, currently, developing countries have no responsibilities towards reducing emissions in terms of the Kyoto Protocol and Santilli *et al*, (2005) have described as “contentious” discussions of their reducing emissions at three of the Conferences of the Parties to Climate Convention (COPS 8, 9 and 10).

Given that the developing countries have a relatively insignificant role, the question that comes to mind is why they were present at the seminar at all? One might speculate on some of the, possibly interlinked, reasons why this should be. Perhaps, their involvement is cosmetic. Perhaps they need to be present at the meetings to insist that they are given special allowance to continue to unsustainably exploit the Earth. Another possibility is that their dependence on aid and poverty discourse is perpetuated in the Monterrey document (recall that they were to be recipients of help).

6.3.4 The trend towards not naming marginalized groups

The absence of mention of marginal groups such as women and racial minorities may be explained by a recent trend in society to avoid talking about the marginalized. Here we are perhaps witnessing the erosion of a previously hard one development (that is, the inclusion of marginal interests in such documents as the Monterrey recommendations). Thus, the *status quo vis a vis* these groups and the dominant groups becomes perhaps further entrenched. In terms of this trend, if reference *is* required for marginal groups, it is as the 'previously marginalized' (Tew, 2004:183).

This trend is based on the epistemological assumption, itself based on the linguistic fallacy, that categories are merely social constructs and not real (Cf. Vol.2, Chap.3). In terms of this assumption, it is argued that, at the very least, constructing 'groups' will merely result in the end in deconstructing them, or putting them back together again, since they are not real anyway (Taylor, pers. com, arguing for the absence of mention of marginalized groups in Rhodes University environmental education materials). In the worst case scenario, it is argued that to separate marginal groups from mainstream society by naming them in fact plays into their oppression by strongly defining them and thus making them an easy target for oppression (Goddard, pers. com.), arguing against the naming of gay people as such). The trend to not name marginalized groups is associated with the questionable assumption that these groups are now fully fledged members of society, without the need for extra attention towards empowerment; and the acknowledgment of the danger of reverse oppression, in which the oppressed become persecutors of their oppressors (Tew, 1994). An influential text documenting the reversal of oppression and placing the blame for it on the doorstep of the naming of different groups in society, is Mamdani (2001).

Nevertheless, I have argued elsewhere, that whilst reverse oppression based on simplistic dichotomies of 'them and us' is a real threat, the solution is not to stop categorising, since the categories exist and these people are suffering real oppression (Price, 2006a in Vol.2, Chap 8). Rather, the solution is to evoke a theory of identity that is not based on the mistake of analytic reasoning, such that things (in this case human categories) are deemed to be fixed and extractable from their environment. Instead, a more appropriate theory of identity would be a dialectical position in which things are deemed to be constituted by their geohistories and by the totality of their relations with other things (Bhaskar, 2000:62).

6.3.5 **Stratified personality as textual precondition: a fictional account**

In this section, I attempt to show the preconditions for the Monterrey recommendations at the level of the stratified personality, suggested by Bhaskar (1993). For Bhaskar, the following are some of the rhythmics in which an agent may engage (1993:163, 164):

1. the narrative of her life, her biography;
2. the lagged causal efficacy of her unconscious, her unwritten biography;
3. her life cycle as an organism (a human being) and specifically as a woman;
4. the flow of her daily praxis (engaged in a variety of social practices with rhythmics of their own) as tracked by her space-time routes through the cities, dwellings, worksites, landscapes in which she lives;
5. the *longue durée* of differentially sedimented structural institutions and the social relations upon which they depend;
6. the development of specifically civilized geo-history in the context of human geo-history, inserted in the rhythmics of species, genera and kinds, located in a geo-physical development of a solar system, embedded in the entropy of an expanding universe.

The above points are largely structural, but switching perspectives and talking instead in terms of agency, Bhaskar (1993:164) demonstrates the existential intransitivity of intentionality and the distinction between real reasons for action (which may be more or less unconscious/ and to a greater or lesser extent ideologically formed) and mere pre-rehearsed rationalizations. He also argues that actions are accountable, even if they are routinized or habitual, and even if their reason lies in custom or convention. It is real reasons for action which comprise the existential agent's intentional causality, and without this concept structure would float free, in a noumenal or virtual cloud, of agency. For Bhaskar (1993), it is embodied intentionality which earths social life (see also Figure 6.1).

In Vol 1, Chap 6.3.5.1, I attempt to tell a story of *informed* (or misinformed) *desire*, propelled by absence, as it might power transformative praxis or negation. In this case this is the transformative praxis of an (imaginary) free market environmentalist as he writes the Monterrey recommendations, propelled by the absence of a healthy world environment and the desire for this absence to be absented. I include the first five rhythmics mentioned by Bhaskar above (missing out the sixth rhythmic 'geo-history', assuming that an account of the geo-history of Monterrey, and indeed the Earth, was perhaps not necessary).

In Vol 1, Chap 6.3.5.2, I reword this story and tell it from a critical realist perspective. As Shipway (2002:304) states:

> *The CR concept of reasons as causes means that agents' actions and personalities are causally efficacious, reproducing and transforming educational structures and mechanisms, and producing intended and unintended consequences.*

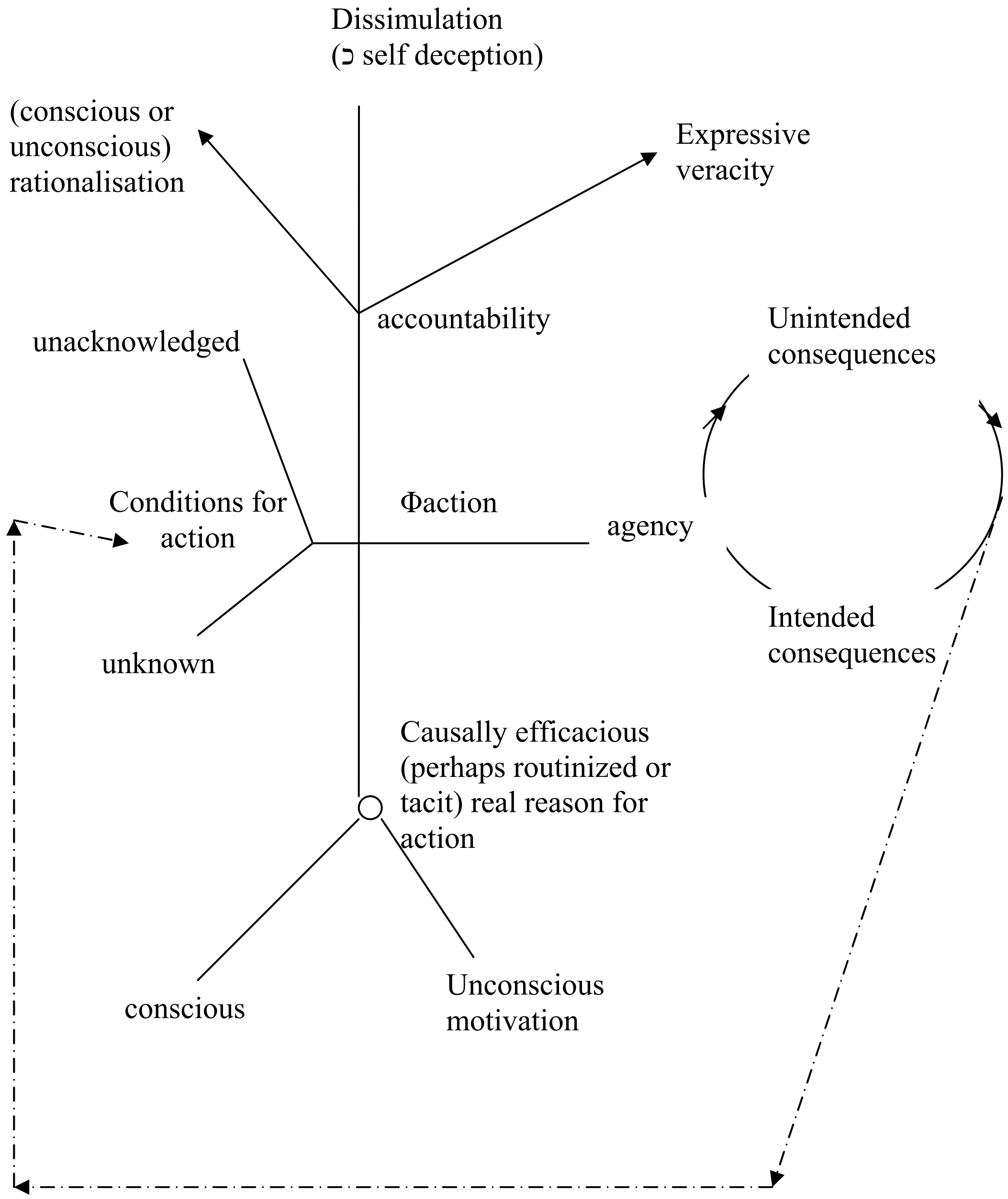

FIGURE 6.1: The stratification of action (reproduced from Bhaskar, 1993: 165)

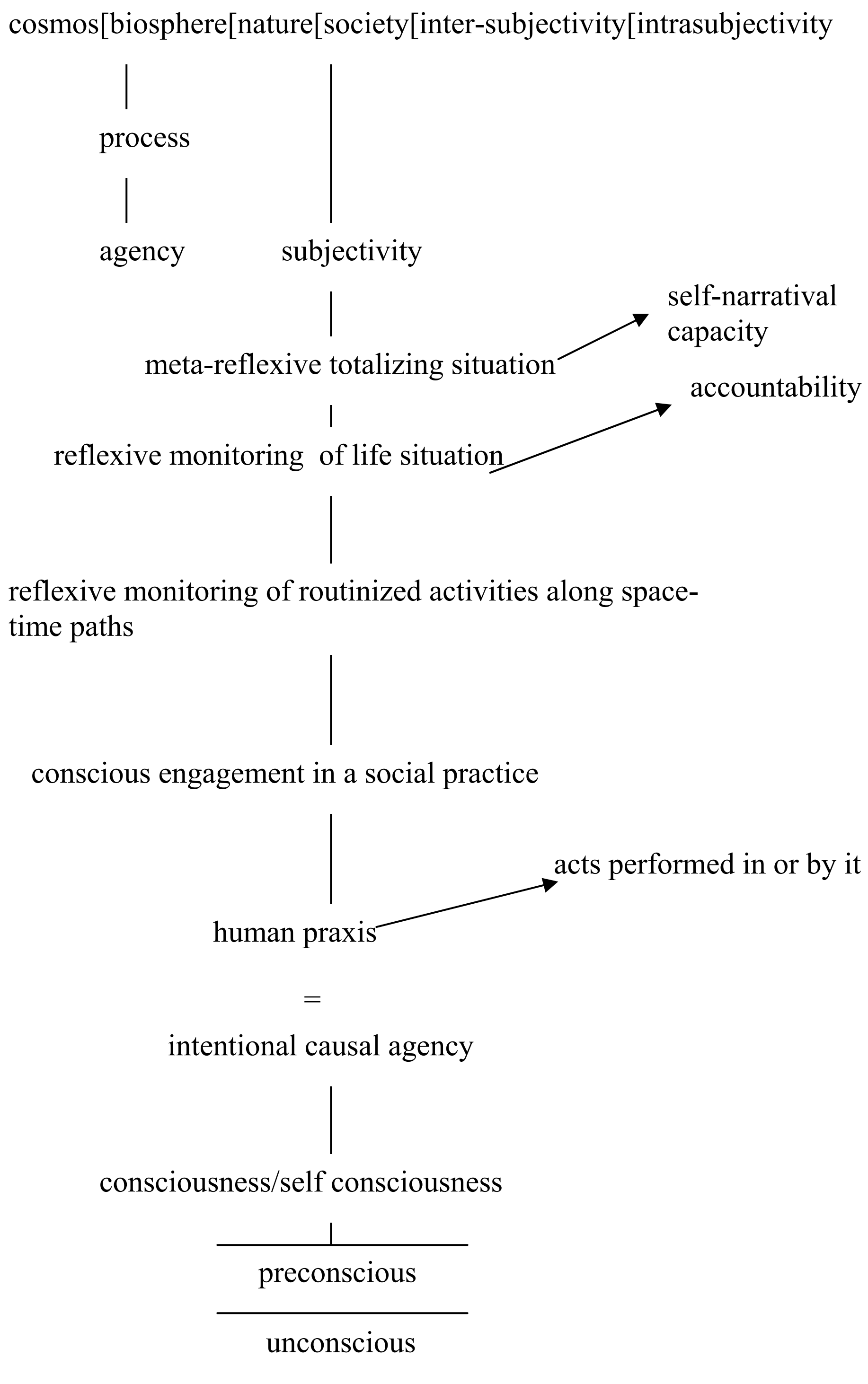

FIGURE 6.2: Stratification of action in terms of a moment a person's life (reproduced from Bhaskar, 1993:167)

6.3.5.1 *A sometimes cynical, always hard-working, environmental hero*

It was late[46]. Our hero, Sanchez[47], an earnest, kind-hearted, pragmatic man, about 37 years old, was attempting to write the second half of a document that would make 230 very different kinds of people happy (another colleague had been given the first half to do). Sanchez was suffering from heartburn and a headache, due to the weight of the responsibility. However, he felt that if ever the stress left him, it would be because he didn't care anymore, which would be a sign that he needed to get out of the business of protecting the environment. Nevertheless, the strain of the job was affecting his life. He had lost weight and his wife was complaining that she never saw him.

Sanchez's thoughts slipped for a moment to his wife and their two-year-old child, sleeping in another city, and to the football match he had missed earlier in the evening because he had this deadline to meet. He had followed the game's score on the internet, and his team had won. "Thank God for that," he thought, and then he turned his attention the computer in front of him.

He shook the mouse to disable the screen saver. On the screen appeared the incomplete recommendations for sustainable management of the environment, to be endorsed by the representatives attending the 8th High-Level seminar on sustainable production and consumption the following day. Sanchez was known for his ability to put things across diplomatically and thus he had been given the job to write a two-page document that 'even the Americans' would agree with, but which would nevertheless be a substantial step towards protecting the environment.

Sanchez considered it his professional duty to keep his personal beliefs out of the process of his writing. His most significant belief that he was keeping to himself was that there should be something in the document about carbon emissions reductions (although he agreed with the pragmatic necessity of avoiding mention of carbon

[46] At the Monterrey conference, the recommendations were presented to the participants on the afternoon of the last day (UNEP, 2004b). Unless they had been prepared before hand, this seems to imply that certain conference staff must have worked after hours to prepare them.
[47] I gave the hero a non –white name because it seems likely, since the conference was being held in Monterrey, that it would have had Spanish organisers.

emissions reductions, to keep the Americans on-board[48]). He therefore considered his role to be simply performing the objective service of putting together all the ideas and thoughts that had been debated and agreed earlier. The important outcomes of all the relevant meetings were made available by the rapporteurs to Sanchez in both hard and soft copy. It was Sanchez's task to do was condense them. However, the work could not have been given to a secretary because the document had to be carefully worded[49]. This was where Sanchez's own involvement in the seminar and his position as a high-level decision maker himself was useful. It was therefore not hard for him to imagine the sort of recommendations that would satisfy the seminar participants, at least partly because he was one of them.

Well, maybe that was not quite true. Sanchez had connections with people in high places, and he could call on favours from those people. He enjoyed holidays with them and was invited to their weddings. But his income could not match the expenditure he needed to facilitate the appearance of wealth necessary to make his 'connections' comfortable around him. Unlike many of the independently wealthy attendees of this invitation-only seminar, Sanchez needed this job. He felt comfortable with the wealthy and the high-level decision-makers, but he was nevertheless a newcomer and not really one of them. Without their approval, he realised, he could lose everything he had. Sanchez was saving hard to out together a down payment on an investment property (he already owned his own home) because it was clear to him that the only way to move from his current position and into the social bracket of the wealthier people around him, was to become a player in the investment markets.

However, despite Sanchez's social ambitions and social environment, where poverty was spoken about but rarely encountered, he tried to keep in touch with reality. He kept close his memories of the poverty of the home in which he grew up, the poverty of the people he had met on his international travels, and the smell of the polluted

[48] There is a complex interaction between Sanchez's personal beliefs, what he feel is pragmatically possible, what his organisation thinks is important or thinks is pragmatic, as well as the influence of conference participants, who are themselves a diverse groups, although the participants seemed united in their acceptance of the market as the most important aspect of the environmental crisis (UNEP 2004c).

[49] Note the performance contradiction…if Sanchez' role was simply as an objective reporter, the writing task could be allocated to anyone. His involvement, as representative of the organisational administration, is evidence that there are politics and power-play at work, thus his role cannot be considered 'objective', in the sense of politically neutral.

rivers he had seen during his time when he had worked as an environmental industrial design engineer. As a teenager, he had been particularly affected by a visit he had made to Minamata, where he had met some of the child victims of mercury poisoning, and their elderly parents who were still looking after them.

Sanchez was cynical about his lifestyle and those around him: the frequent air miles earned, the expensive hotels and the cost to the environment[50]. Something did not add up, but he could not see an alternative. If he wanted to make a difference, he had to play the game; to do some things right he had to not do other things right. "All the air travel and hotel living has lead to the writing of these recommendations, which may result in huge advantages to the environment," he reassured himself, "The cost, surely, is worth it?".

Recently, Sanchez's conviction in the ability of the market system to protect the environment wavered when a friend showed him evidence indicating the inability of the world to sustain continuous economic growth, even if more environmentally friendly energy and processing methods were to be employed[51]. Also, statistics indicated that the gap between the rich and the poor tended to be larger in the most liberal market economies and that the USA had a poorer record of safe births than Cuba[52].

However, Sanchez could not accept that a majority in the developed world, and all his lecturers at MBA school might be wrong. He decided instead that the statistics were based on poor methodology. Historically, the precedent was that the world's resources continued infinitely to allow growth and he believed we have no reason to think things will be different in the future[53].

The market system was, he remained convinced, the only way forward. It ensured the rights of people to produce and consume freely, and a well-established free flowing market, demanding environmentally friendly products, would result in a clean, healthy

[50] In the conference evaluation, some participants critiqued the conference organisers for the extravagance of the conference surroundings and the cost to the environment of the air travel (UNEP, 2004c).
[51] For example, Hertwich (2005), Taylor (2005) and Levett (5 May 2006).
[52] For example, Martens, J. (2006) and Que Viva (3 January 2007).
[53] Position held by free-market advocate, Len Brewster (Pers. Com).

environment. The more people consumed, the better it was for the economy, resulting in reduced poverty, and poverty was the major factor in environmental degradation[54]. Empowered, non-poverty-stricken people would be discerning consumers, and would create markets for environmentally friendly goods. Sanchez was sometimes certain that his consumption was therefore beneficial to the environment, although this conviction conflicted with his thoughts at other times that he and his colleagues consumed too much. He decided that the solution to the conflict was that he needed to work to ensure that the world's production and consumption was sustainable.

Dismissing these thoughts, Sanchez set his hands to his keyboard again and began to type vigorously. He was writing sections of the document, following the key headings decided on earlier in the evening at a meeting of the seminar organisers after dinner, then checking his work against the conference reports, adding bits he had left out and sometimes changing the wording to be more diplomatic. The rapporteur's notes lent support to what was intuitively obvious to Sanchez. However, although many of the speakers had mentioned carbon emissions, and demand-side approaches to reduce energy consumption[55], Sanchez systematically avoided these things[56]. This had been a decision made earlier by the conference organisers (reluctantly) since there would be no way to get a consensus if the document mentioned them. Sanchez also avoided suggestions with feminist[57] or marginal group over-tones[58]. Unlike the carbon emissions, Sanchez was not aware he was doing this. If he had been questioned about it, he would have answered that their absence was simply because women and other marginal groups were considered to be equal already; there was no need to separate them out. If he had been pressed further, he may have become slightly annoyed, but would have referred to a course he did in philosophy for his Masters in Business Administration (MBA) where he had learned that categories were fictional anyway, merely social constructs. To encourage such fictional writing was to encourage the

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[54] This position was held by Toepfer (2004:3), Executive Director of UNEP. UNEP organised the8th International High-Level Seminar on Sustainable Consumption and Production in Monterrey.

[55] Lester Brown mentioned these in the speech he delivered at the Monterrey seminar. This speech (Brown, 2004) was published in the same 'Industry and Environment' publication (Volume 27, number 4) that published the Monterrey 'Recommendations'.

[56] Cf. Vol.1, Chap. 5.3.2.1 for a description of the absences of demand side solutions to resource use from the Monterrey recommendations.

[57] In the conference evaluation, some participants mentioned the lack of gender equity at the conference (UNEP 2004c).

[58] Cf. Vol.1, Chap. 5.3.2.1 for a description of the absences gender and marginal group issues from the Monterrey recommendations.

construction of the categories. If these categories were not made, they could not be singled out for oppression[59].

What he would not mention except perhaps to his closest male friends, was his conviction that women were not physiologically designed for equality with men. The feminist movement was, in his (secret) opinion, misguided. However, what his therapist had not yet told him, was that underneath his secret assumption of the superiority of men, was his unconscious anger towards women, resulting in a subconscious misogyny, relating back to his difficult and painful relationship with his mother. But none of this information was in Sanchez's thoughts at all, or even, in this present time, could be (since they were beneath his consciousness). Nevertheless, these unconscious aspects of his personality were directly influencing his avoidance of the issue of gender in the Monterrey recommendations.

Sanchez's philosophy course in his Masters of Business Administration (MBA) had taught him that markets can be constructed where none previously existed. It had also suggested that in the end, power (and its circulation through language) was the only reality and thus a Machiavellian strategic marketing was the only possibility for business, since it explicitly fore grounded power play[60].

With this in mind, Sanchez added the importance of constructing markets for environmental goods, using aggressive advertising strategies, although he later diplomatically deleted 'aggressive' from the text. He also added some text to the section on agriculture, about "realistic and practical, on the ground action"[61]; his thoughts about Machiavelli had reminded him to include this, for he remembered the Machiavellian-inspired maxim at MBA school about the importance of setting aside idealism to work with the world as it really was. He had noticed worrying talk

[59] This position was suggested by Tew (2004).
[60] Cf. Vol.1, Chap. 2.6 for an outline of trends in strategic management. Machiavelli's *The Prince* is considered an important part of the reading of MBA students at Harvard University (Lagace, 25 June 2001) and in Australian universities (Marx, 2 October 2006). The Marx paper included this quote: "The Bank of Queensland chief executive devoured Machiavelli's *The Prince* as part an executive Master of Business Administration course at Macquarie University 16 years ago. Mr Liddy, who charged through the gruelling 18-month program courtesy of his then-employer Westpac, believes the treatise remains 'the best management text book' ever written".
[61] Monterrey recommendations, line 128.

recently about ‘adoption of best-practice’ at the expense of realistic continual improvement.

Sanchez noticed that some of the conference participants had mentioned the importance of the youth and the elderly, which matched his personal feelings that these two groups needed special attention. He realised that the idea to focus on the youth would be well matched with the idea to construct a market for environmental goods. The biggest consumers and the most susceptible to suggestion were the youth[62]. If they were included in youth exchange programmes, such as the UNEP-UNESCO youthXchange one[63], they would not only benefit personally, but also contribute overall to protecting the environment. The UNEP high level administrators had already made it clear that they wanted a link to the UNESCO youth programme, so Sanchez was more than happy to include this point. He recalled his younger brother who wanted to look ‘cool’ and to act like his sports heroes. “It would be important to appeal to the youngsters at this level,” he said to himself, and so added this into the text as an environmental education consideration. As for the elderly, if they were included in promotion campaigns, not only would they personally benefit from being contributing citizens, thus being able to feel valued, but also their wisdom could be shared[64].

After adding the point about the youth and the elderly, Sanchez’s work for the night was finished; indeed, this was his last responsibility in terms of his role as one of the conference administrators. He was now looking forward to getting home. All he needed to do was to pass the document on to his colleague who would present it the next day. She would look it over and do some last minute editing, then distribute it to the other conference organisers for their final approval/last minute changes (in a breakfast meeting) before she presented it. Warm thoughts of his wife occupied Sanchez’s mind as he clicked on ‘send’ and propelled the document through cyber-space to the next-door hotel room.

[62] The susceptibility of youth to advertising is a well-documented and well-exploited phenomenon (e.g. Kunkel, *et al*, 2004).)
[63] Monterrey recommendations, line 163, 164
[64] The social theorist Archer (2003) has explored agents’ ‘internal conversation’. She suggests (p15) that human reflexivity or the ‘internal conversation’ is central to the mediation of structure and agency.

6.3.5.2 *The environmental hero: a dialectical critical realist perspective*

Sanchez is what Bhaskar might call an unhappy consciousness (Bhaskar, 1993:406). Based on the psychological distinctions given by Hegel, Bhaskar describes an unhappy consciousness is a sceptic, able to see the contradictions of his life's philosophy, but who nevertheless feels there is no alternative but to reproduce the contradictions. Sanchez sceptically wants to accept the world as it 'really is', but the world to which he is referring is causally efficacious demi-reality, underlain by alethia. Bhaskar might argue that demi-reality is not the only option; we can absent demi-reality to allow the full realisation of alethia. Hegel mentions the 'beautiful soul' who, seeing the contradictions, will not reconcile herself to the norms of, and so is alienated from, her society (Bhaskar 1993:168). Sanchez's refusal to tread the path of the beautiful soul, based perhaps on a more or less conscious awareness of the potential of this path to lead to alienation at the level of the community, has resulted instead in a split from:

- *His own production*
  He is not paid the full value of what he produces.
- *Others in his community*
  Despite a superficial friendliness, his immediate work mates, who make up the majority of his social milieu, are subordinates, competitors or bosses. His professional success requires that he puts in long hours at work, which has resulted in the fact that he spends little time with his wife and child.
- *The nexus of social relations*
  Despite his 'connections' with his superiors, he senses a limit to how much they will let him in to their ranks and due to his alienation from this nexus, he personally has little power$_1$ to effect changes in his social world. In cynical moments, he has likened his situation to that of the family lawyer in a wealthy dynasty, who gets invited to family functions but nevertheless remains an employee.
- *Himself*
  He must be duplicitous even to himself, depending on Derridean 'supplementarity', also described by Freud as 'compromise formation', to allow his contradictions to coexist in himself (Bhaskar, 1993:11). For

example, to allow his commitment to the market system as a solution to all the world's inequalities, even in the face of contrary evidence, he must find ways to explain away that evidence (he questions its validity).

In terms of power$_2$ relations, the unhappy consciousness seeks refuge in introjective identification with the master's ideology and/or projective absorption in a fantasy world made for slaves (Bhaskar, 1993:154). Thus, Sanchez has identified with the ideological complex of the dominant section of the system that exploits him. In terms of Marx's wage-labour exchange, he is paid a salary based on the cost to maintain him. However, what this salary buys is the value of his labour. Sanchez has worked out that he would be better off financially if he could enter the world of the capital-owing classes, which is why he wants to buy an investment property. Sanchez also finds sanctuary in football; it is a fantasy world that allows him to distract himself from some of the uncomfortable feelings aroused by his daily encounter with performance contradictions.

A key formative event for Sanchez was the time he spent at MBA school. I have mentioned the Machiavellian focus of many MBA courses (Cf. Vol.1, Chap. 2.7.3.3). A lecturer from Harvard MBA, perhaps demonstrating a determinist reification of structure stated that Machiavelli teaches students that they have to live in the real world, and work with what they have, not in an ideal world (Lagrace, 2001). We could say that the MBA focus on Machiavelli as a role model is an excellent example of the trend in business towards the cynical TINA compromise. This compromise is a defence mechanism required for the existence of performance contradictions inherent in the ideological complex, such that they do not result in the implosion of the complex upon itself (Bhaskar, 1993:116 and 361).

A major performance contradiction protected by TINA compromises is the contradictory co-existence of reification with irrealist voluntarism (Bhaskar, 1993:362). We see Sanchez's reification when, for example, he treats certain social structures, such as financial institutions, or the market system, as absolutes (the market system is such a given for him that he does not even need to mention it) and when he writes about "realistic and practical, on the ground action" (line 128 in the actual Monterrey recommendations), indicating some sort of pure ground-state of reality, untouched by humans, that merely imposes constraints on us, rather than being co-constructed with us.

We see Sanchez's voluntarism in his belief in 'decisionism'; namely, that the world can be 'decided' by recommendations such as the ones he wrote in Monterrey. According to Bhaskar (1993:366), "(…) decisionism is the ethics of the slaves of masters who are themselves masters of slaves". Sanchez, who by the definition of this thesis is an educator (the Monterrey recommendations are suggestive of a curriculum), is in the company of many educators who become over-worked because of their voluntaristically-based conviction that we can create the world they want through the right decisions entrenched in recommendations, policy, legislation, teaching materials or curricula. If something is not right, it is the educators' fault (and that of the others around them) for not doing/acting/working enough to effect the right decisions, since (social) reality is merely the effect of individual acts, preceded by decisions to act.

Voluntarism does not allow the possibility of the existence of external, non-human, constraints, leading to a more humane relationship to one's teaching or activism such that we can only do what we can do with the resources that we have (Bhaskar, 2002:46). Whilst on the surface this may appear similar to the Harvard lecturer's call that we live in 'the real world', there is a subtle but important difference. In the determinist/voluntarist oscillation, there is a sense that people create and make the world, *ex nihilio*, contrasted contradictorily with a sense that the structures that determine them are rigid (e.g. the law that the people work from a place of greed 'just is', has no socially-constructed component and simply, deterministically, affects the way humans function economically). In the TMSA version, agents never 'create' from nothing (*ex nihlio*), but transform or reproduce what 'is'. Constraints to our freedom are variably malleable, some, such as the laws of gravity, are relatively intractable, whereas others, such as the social laws of professionalism, are less so. To bring attention to the non voluntaristic, non deterministic, relationship between structures and individuals, Bhaskar has made up a word: "aeffect". Therefore greed *aeffects* human economic function; it is a two way relationship. When Bhaskar suggests that we remember we can only do what we can do with the resources we have, he is countering the voluntaristic tendency in current social theory. However, he is not suggesting we submit to a cynical determinism in its place.

As Shipway has indicated (2002:305), voluntarism leads to 'burn-out'. To return to the explanation of Sanchez's text, his voluntarism, combined with his need to earn a living (keep his masters satisfied with his work), results in his loss of connection to his family and possibly even his reduced weight; some voluntaristically-based, unhappy consciousnesses, living in irrealism, also take refuge in asceticism, denying the physicality of the body (Bhaskar, 1993:406).

Related to the question of voluntarism and determinism, many writers like Sanchez who prepare policy documents hold the opinion that they are mere instruments, reflecting the consensus opinion. Anecdotally, I have come across cases where the writers deny that their personal characteristics would have anything to do with their professional writing[65]. I will cede that the document would probably have been similar, given a different author, but mainly this would be because only an author like Sanchez, steeped in the dominant ideology, would be given the job (imagine the chances of the document being given to an Arundhati Roy-type of person to write).

Whilst it is true that documents are written in a way that reflects the social milieu/contextual constraints of the author (the concept of 'the death of the author', in, for example, Stronach and Maclure, 1997:163), it does not follow that the author/s in no way determine the writing. The Monterrey recommendations would have been different if another writer (or other writers) had written it. These differences may have been trivial; but it is also possible that the differences would have been significant. Furthermore, it is possible that Sanchez's psychological characteristics (see below) would be similar to others in the arena, given that his particular issues (e.g. of misogyny) are commonly associated with male dysfunction in a patriarchal world, and there is evidence (UNEP, 2004c), that the seminar had a patriarchal flavour[66].

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[65] The relationship between writing and the unconscious is explored by Freud (1960).

[66] Direct evidence of the patriarchal flavour is provided by the participant evaluation for the event (UNEP, 2004c) which reported complaints that there were too few female speakers. However, my claim for the patriarchal flavour of the meeting is also based on the professionalism of the meeting, which feminists associate with patriarchal contexts (Witz, 1992). Thus the absolutist, positivist epistemological assumptions critiqued in this thesis, which characterised the Monterrey document, are themselves evidence of patriarchal thinking.

Therefore, it is likely that the majority of influential people at the seminar (who we know from the supporting documents were mainly male) would not have noticed anything strange about Sanchez's approach to poor people or women and if he had not written the document, someone similar to him would likely have taken his place.

Likewise, I suspect many women will identify with my personal psychological characteristics, which I report later, and which affect my professional writing, since those issues are in part a result of growing up as women in a patriarchal world. However, and notwithstanding, it remains true that no two women or men will have the same psychological profile[67]; hence, as well as for other reasons, it would be impossible for two documents to be the same when written by different people. The relationship between the individual and the broad social processes around the event of writing (resulting in the empirical text) is best seen, along the lines of the TMSA, as mutually constitutive, rather than either socially determined or individually determined.

Continuing with psychology, Bhaskar has insisted that agents may offer reasons for their actions which merely reflect pre-rehearsed rationalisations. The causally efficacious (perhaps routinized or tacit) real reasons for action may be conscious or unconscious (Bhaskar, 1993:164, 165). Thus, Sanchez's stated reasons for not including gender issues were pre-rehearsed rationalisations; the real reasons were both conscious (women were inferior and should not be equal to men) and unconscious (Sanchez's angry misogyny, related to his relationship with his mother).

Sanchez's personality is characterised by his need to protect vulnerable groups, such as children, the elderly, and animals (though he does not often confess to the latter). This personality trait in part explains his need to look after the Earth, as a way to take care of these other vulnerable groups. A flip side of this personality trait is Sanchez's lack of sympathy towards individuals who he perceives to be capable of taking care of themselves, but who do not do so, for example, healthy adult men who succumb to

[67] Kristeva (2004:85) suggests a similar position, mirroring the TMSA, when she writes that the relationship between the physical and the mental is dialectical and that women are each unique (singular) despite belonging to a common 'feminine continent'.

poverty. Again related to Sanchez's voluntaristic base, Sanchez cannot understand why these people cannot use their guile and wit and strength to overcome their problems and rise above them (recall the words of Thatcher Cf. Vol.1, Chap. 2.6.1). Sanchez's recommendations do not mention 'poor' people as a group needing help because Sanchez despises the categorisation altogether. If questioned on the matter he would comment that those people who are capable of helping themselves, should help themselves. Adult unemployed men, sitting around depressed, make him angry; his gut reaction is to shake them and give them a shove towards action.

However, the actual reason for Sanchez's personality traits with regard to vulnerable individuals is linked to his unconscious repression[68] of his own vulnerability. Taking care of weaker individuals makes him feel strong and protects against his own feelings of vulnerability. Healthy men who exhibit signs of vulnerability or 'weakness' (in his eyes) are transformed into representatives of his own 'weak' self. He is unsympathetic towards these men in the same way that he is unsympathetic towards his own 'weakness' (which he denies exists). This idea, of textual transformations occurring at the level of the unconscious, originated in the work of Freud and is used in discourse analysis by Hodge and Kress (1988:206-208). Freud, according to Hodge and Kress (1988:14, 15), was one of the founding fathers of discourse analysis.

In spite of Sanchez's irrealism, reification, voluntarism, decisionism, alienation, duplicity and TINA compromise formations, he is nevertheless part of the world; these (false) things depend on his (alethic) relationship with the Earth and its people[69]. Sanchez may be largely alienated from his wife and child, but he still has a relationship with them that, despite its dysfunction, sustains him. He may not eat enough, but he eats enough to live. He may have a personal philosophy which denies the existence, at times, of reality, and disallows his connection with it, but that reality still forces its way in and insists on its connection with him. It 'speaks' to him such

[68] Note: I am using insights from psychoanalysis to give Sanchez his psychological characteristics.
[69] One of my supervisors thought I was being too harsh with Sanchez here. My aim was not to vilify him but to show him to be similar to all of us. I hoped that, in having some identification with him, readers would not be completely antagonistic towards him. In different ways, I suspect most (all?) of us have aspects of our praxis which exhibit some or all of the list I attributed to Sanchez, namely, irrealism, reification, voluntarism, decisionism, alienation, duplicity and TINA compromise formations.

that he feels strongly for the Earth and its suffering people, for example, it 'spoke' through the Minamata disease sufferers, through the statistics about poverty, and through the evidence of his and his peers excessive consumption. Sanchez's interpretation of the information the world gives him may be malformed through his unconscious dysfunctions' interplay with the social and philosophical dysfunctions of the world, but nevertheless, that information in its intransitive form is truthful, so that his compassion for the Earth and its people is not entirely untruthful. The Earth and its peoples may not flourish within the constraints of Sanchez's personality as it is aeffected by the world's dominant ideological complex, eventually leading to documents such as the Monterrey recommendations, but their demise may well be slowed down.

Ironically, Sanchez's impossible-to-sever relationship to the Earth (he is part of it), mediated through his irrealist decisionism (his, perhaps even unacknowledged, assumption that the Earth's survival is constructed by the right decisions), sustains his 'stress' as it places a huge responsibility on his shoulders. Furthermore, even the hidden, unconscious, truths about himself sometimes 'speak', or indicate their existence, for example, through his sometimes out of control anger (he is seeing a psychotherapist) and his (overly reactive) annoyance with regard to poverty-stricken men and women's empowerment issues. Sanchez is not a mind separated from a body. However, just as he may require the specialist services of environmental scientists to report to him the evidence for the environmental crisis, he may need the specialist services of psychotherapists (or at least gain specialist training himself in self-therapy techniques) to gain access to the evidence for his unconscious motivations.

6.4 CONCLUSION

In this chapter, I first used retroductive logic to explain, muse about, or guess, how the (real) ideological complex of the business world and its complementary logonomic system provide preconditions for much of the language and discourse of the Monterrey recommendations. Based on this retroductively-achieved theory, I then used retrodictive logic to speculate about which (actual) world events formed the preconditions for the Monterrey recommendations to be as they were. Finally, I used retrodiction again, but this time based on a fictional story, to suggestively imagine an account of the (actual) characteristics of the writer, as a stratified embodied personality, at the time of writing, which perhaps explains certain textual (empirical) characteristics.

The relationships amongst the components of my explanation of the features of the Monterrey text can be illustrated as in Figure 6.3, below. In the next chapter, I complete Steps 9 and 10 of my methodology. I look at other texts in my corpus to validate my explanation of the entry text. In the process, I expand the explanation, moving between the macro-level and the micro-level (namely the context with which I am most familiar, South Africa and Zimbabwe). In the next chapter, I also use self-reflexivity to interrogate my analysis.

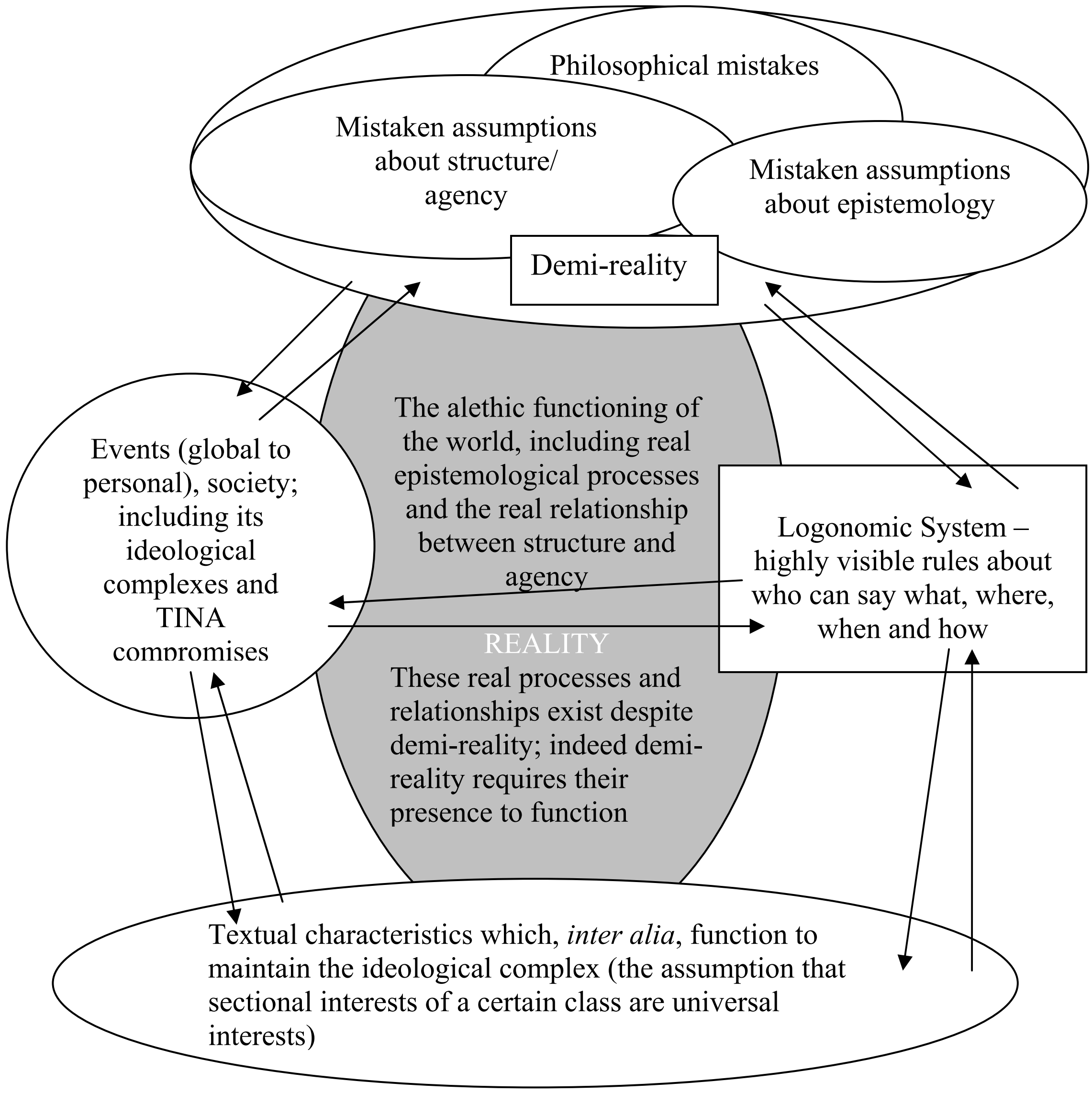

FIGURE 6.3: Illustration of Bhaskar's 'demi-reality' as part of the explanation of the textual characteristics of the Monterrey recommendations

CHAPTER 7: RECONSIDERING THE INITIAL FINDINGS: VERIFICATION AND EXPANSION

Or

“Placing My Words Into The Crossword”

7.1 INTRODUCTION

This chapter constitutes Step nine and ten of my methodological framework. To explain the function of this chapter further, it is worth considering Bhaskar’s (1993) perspective on the scientific (knowledge making) enterprise. For Bhaskar, researchers are able to choose between better and worse interpretations/ explanations of phenomena, known as judgemental rationality (1993:9). Therefore, theoretical science is a process of description (of the phenomena), retroduction (which will result in perhaps several theories of the phenomena) and elimination (the process of choosing amongst competing theories). It includes the moment of identification (of the chosen theory) and then correction, as the theory is tested in practice. He thus talks about the DREI(C) process of theoretical science (1993:109,110). The different, retroductively-achieved, theories are developed in different research programmes. In this chapter, I have moved to the correction phase; I am assuming my theory is the best we have and I am testing it by applying it to different textual situations. However, I am aware that people reading this research are likely to be doing so as part of the process of elimination; comparing my theory to competing theories. Therefore, some of what appears in this chapter, and perhaps through out this thesis, is my argument against anticipated competing theories. Furthermore, part of this process of verification requires that I ask the self-reflexive question: to what degree is my analysis an artefact of my own ideological commitments? (Step ten of my methodology)

In this chapter I will discuss the explanation developed in Vol.1, Chap. 6 in the light of other texts, such as South African and Zimbabwean company reports, the safety, health and environment meeting minutes from a company in Zimbabwe, training materials for environmental education courses in industry in South Africa and Zimbabwe and documents associated with the Monterrey recommendations, amongst others. This discussion will also allow me to comment on those actual components of reality that were relevant to the different contexts, thus providing preconditions for the uniqueness of each text. It will also allow me to comment on any further evidence of the working of the ideological complex and the logonomic system. Finally, I will discuss my assertions in the light of other authors' research. Therefore, my activity in this chapter could be seen as the reference to further primary sources (more research texts) and to secondary sources (other people's research). However, I will not attempt to keep the contributions of primary and secondary sources separate to reduce fragmentation of the different stories.

One of the criticisms of CDA is that it is not an "operationalising theory" (Myers, 2006), meaning that it does not result in empirically testable knowledge. Critical realists counter this criticism by referring to the stratified nature of reality, such that some things may exist (such as tendencies) which are nevertheless neither actualised nor empirical. Therefore, validity for a critical realist is often more concerned with *explanation* than with measurement (Fleetwood and Hesketh, 2006). Nevertheless, explanation does allow some heavily qualified predictions to be made but these are what Fleetwood and Hesketh (2006:249) refer to as "tendential predictions".

This chapter is therefore my attempt to explore how well my theory acts to *explain* the characteristics of a wide variety of environmental education texts participating in the business arena and thus it is an attempt at validating the theory. However, in the process, it has deepened my analysis, as my explanation has become more refined in the light of further evidence.

Since this chapter is my attempt to check my earlier claims, it may be useful to revisit these claims briefly. They can be summarised as suggesting that the following components of a stratified reality form, *inter alia,* important preconditions for the Monterrey text:

- Causally aefficacious philosophical mistakes relating mainly to theories of structure/agency and theories of epistemology, relevant to the writing of the text; and

- Causally aefficacious events/trends at international, regional, local and personal levels, relevant to the writing of texts

To validate the explanation introduced in Vol.1, Chap. 6 and outlined in Figure 6.1, I should be able to show how it explains even relatively small features of the texts in my corpus. I will therefore apply my explanation to selected textual characteristics. I will not attempt to explain every textual characteristic, as this would be both unnecessary and practically impossible.

I was particularly careful to address occasions where textual characteristics seemed to contradict my initial explanation. Looking for the contradictions as a helpful way to proceed is suggested by Bhaskar (1993:378) who stated that, "A logical (or other) contradiction is not something to fear and/or to seek to disguise, cover up or isolate. Rather it should be taken as a sign that the existing conceptual field is incomplete in some relevant respect".

7.2 CAUSALLY AEFFICACIOUS PHILOSOPHICAL MISTAKES, RELATING TO THEORIES OF STRUCTURE/AGENCY AND EPISTEMOLOGY

Perhaps it is also useful to note that there is a connection between my explanation in Vol.1, Chap. 6 and my assertion, in Vol.1, Chap. 3, that epistemological choices can be based on "playing dirty", in other words, that they can be based the precondition of the necessity of dominance, or of imposing individual/community will against the masses. Although I did not at the outset of this research intend it to be, my explanation in Vol.1, Chap. 6, of the textual characteristics of the Monterrey recommendations (in terms of the real) is an applied elaboration of the "playing dirty" assertion in Vol.1, Chap. 3. What follows are further instances where theories of epistemology open opportunities to "play dirty".

7.2.1 Explaining the absence of responsible agents and lack of emotion in environmental education-related texts in business and industry: the case of a Zimbabwean agriculture business

In this section, I draw from an analysis that was carried out on the minutes of a safety, health and environment committee meeting in a Zimbabwean company. This analysis focused on just one set of minutes (although we did substantiate our findings by reference to other sets of minutes). I carried out the analysis with the assistance of a group of middle management businesspersons, including one manager who had been present at the meeting in question. The people participating in the process of constructing these minutes (that is, the people present at the meeting) included the secretary, a representative from the workers committee and the managers, usually technical personnel, who incidentally were all male. See the Appendix 1 for the actual minutes analysed (names and distinguishing features have been removed). Nevertheless, the strategies that these textual producers used were remarkably similar to those used by the writers of policy and company annual reports. The group analysis of these meeting minutes has in large part been published in Price and Sathiagnanan (2004). I would also like to acknowledge the insightful contributions of all the unnamed managers who generously contributed to the discussion. To begin with, we gave a brief description of the meeting minutes, as follows. We then followed this with interpretation and explanation. In this section, I have only included those aspects of the analysis that are relevant to the question I am testing here, namely, that epistemological assumptions and assumptions of structure and agency can explain an absence of agency and emotion.

7.2.1.1 *Relevant description of the meeting minutes*

The minutes were characterised by passive language, nominalisations and abbreviations For example:

- "Water hyacinth… spraying is in progress" (nominalisation of verb 'to spray')
- "Boreholes… Next sampling scheduled for August" (nominalisation of verb 'to sample')

- "Due to financial constraints, work will be deferred to 2005" (passive sentence)
- "Property Damage…Several meetings have been held. In progress. To finalise." (passive sentence and abbreviated sentences)

The minutes were in a typical business format in which much information was summarised. The manager present at the meeting also told us that dissention and emotion had been hidden. One such hidden occurrence involved angry emotions around some pollution incidents. The minutes assumed that readers would be familiar with the abbreviations used. For example, the safety statistics (Lost Time…) were reported as a lost time figure, with no details of what happened: "LTIFR for the directorate was 0.38". Points were numbered. From the discussion around safety, it appeared a worker had died due to falling off the back of a truck with no tailgate. This death was mentioned in passing: "BJB to follow up with DW with regard to outsourcing in view of fatality" Several questionable environmental activities were minuted without comment, e.g. spraying of water hyacinth, spraying of Lantana camara with Roundup, cutting firewood. One statement was not typical of professional language, namely: "Two pollution incidents occurred this week!!" Exclamation marks, and especially two exclamation marks, are not unknown in professional documents but are not generally encouraged.

7.2.1.2 *Relevant interpretation of the meeting minutes*

Reading with the text, we might say that these minutes were efficient. They did not reflect all that was said but they reflected what was important and ensured that allocated tasks were appropriately recorded to ensure accountability with regard to the completion of those tasks.

Reading against the text, we might say that the use of passive sentences, nominalisations and abbreviations was able to hide responsibility, for example, "Two pollution incidents happened this week!!" allowed the responsible people to be protected. Since most of the passive use of language, nominalisations and abbreviations was innocuous and merely efficient, and conformed to standard grammatical practice, it was all the more difficult to spot strategic use of these grammatical characteristics. Should the avoidance of responsibility be pointed out to a writer, s/he could claim this was not purposeful but merely compliant to the norms of professional writing. The efficiency of the minutes allowed things to be hidden that might be controversial or confrontational.

7.2.1.3 *Relevant explanation of the meeting minutes*

In this example, the logonomic system which makes passive language, nominalisations and a lack of emotion the 'norm' in business writing is able to serve the interests of the responsible individuals to avoid accusations of poor environmental practice. The epistemological assumption, upon which these logonomic rules are based, is that truth requires Sayer's (1999:58) 'Objectivity$_1$' (which is objectivity that is value-neutral, indifferent or value free). One example of this commitment to objectivity$_1$ is the document's failure to report the angry comments by the environmental manager. In practice, the concealment of the emotion served to reduce the challenge to the company. The epistemological assumption that there is only one truth (with no transitive component to truth) could be a precondition for language of these minutes that hides the identity of the text producer; in such an epistemology, identity of the writer of the 'truth' is largely superfluous.

The assumption of structure and agency present in the minutes can perhaps be best described as 'instrumentalism'. Instrumentalism is associated with classic economic theory. It is a vulgar pragmatic option based on the assumption that what is important is simply what 'works'. Bhaskar (1989) has described instrumental rationality as similar to putting antifreeze in the radiator if you want to stop it bursting in winter. This kind of instrumentalism is associated with an empiricist epistemology (Archer *et al,* 1998).

For example, in the minutes there was a comment with regard to the harvest knife bags: "Harvest Knife Bags (Minute 3.3.5) Sample shown – implement it." The decision, with regard to the bags, was made by those at the meeting and all that was left was to implement that decision. However, what was not accounted for was the culture surrounding the use of the harvest knife bags (or the lack of them). Other examples of an instrumental approach to structure/agency included the issue of directives such as the "return to tail-gates", the use of paraffin to prevent the breeding of mosquitoes, and the adoption "by all" of new "loader legs". In each of these examples, there was no room for non-management opinions or for careful, more democratic, implementation.

The management can explain this instrumentalism by arguing that this way of managing is simply efficient and practical. They can also claim that it best protects all their interests (management and workers) as the workers are not educated (ideological complex). Therefore, the managers are the experts and know what is best. The activities instigated by the managers may or may not be good for the workers or the environment, but what is fairly certain is that the option for these activities to be altered or vetoed by the non-expert people (or the environment) most affected by them does not exist. It is also questionable that paraffin, and "spraying" is good for the people and the environment. Furthermore, what did the workers think of the tail-gates, loader legs and harvest knife bags? If a less instrumental approach had been used (based on a more sound approach to structure/agency), which took into account the interplay of culture, and the physical constraints of the real world, interpreted from the worker's perspective, would the tail gates have been fitted *before* the necessity of them became obvious through the death of a worker?

It has been noted that this top-down decisionism can be resisted by workers, for example by Thomas (1998) and it has also resulted in some significant mistakes, most famously in the introduction of energy saving technology into rural areas (Mannan, 1996), although even just in the example above, the tail-gate death is perhaps illustrative. A different relationship to structure/agency might involve greater engagement with the other stakeholders, more time for trial and error, and more consideration of socio-cultural components of the new technology.

Ironically, use of passive language, nominalisations and abbreviations was forgiving of the misdemeanours of the non-dominant, as well as the dominant. For example, if blame had been allocated to employed individuals responsible for the pollution, they would need to be reprimanded and perhaps lose their jobs. The lack of allocation of agency had therefore protected *both* the company and the non-dominant employed individuals. However, if the company had a trouble maker that they wanted to fire, or if the pollution had attracted so much attention that they company needed to find a scapegoat, they could have used different grammar to identify the perpetrators and justify the termination of their employment. In this way, people who were a threat to the dominant ideology could be removed, apparently because of their own failures, whilst people who were no threat would be protected against their misdemeanours. This freedom to sometimes choose when to name perpetrators and when not to name them is one of the ways that the logonomic system allows the contradictions inherent in the ideological complex to remain without appearing to be contradictory. It is illustrative of Latour's (1993:38) suggestion, originally made by the Native American's that, "(…) white people talk with forked tongue".

7.2.2 Explaining the presence of challenges to the *status quo*: the case of the Zimbabwean agriculture business continued

Passive language, nominalisations and abbreviations can be used by subversive elements to relatively safely challenge the *status quo*. For example, we can return to the following statement in the SHE minutes:

> *Two pollution incidents occurred this week!! Both due to negligence, and both were avoidable, however, Agric to be commended on containment procedures.*

The two exclamation marks were all that remained of the fact that the environmental manager was angry about the pollution incidents. The environmental officer (a trained environmental educator and an activist for the environment) was in a way 'speaking for' the environment with his angry outburst. As an accusation that not enough care and diligence was being given to environmental issues, this anger was perhaps a threat or challenge to the *status quo*. However, the concealment of information may not have only benefited the *status quo* by defusing the potential challenge; it may also have benefited those who were challenging the *status quo*. For example, if the environmental manager had felt that his angry outburst would be captured fully in the minutes, he might have withheld his emotions. Thus, the way in which the minutes hide things could be seen as both a way of maintaining the *status quo*, but it could also be a strategic possibility for bringing in alternative ideas and allowing more freedom of expression. Therefore, this environmental manager was able to challenge the *status quo*, although it could be argued that the challenge was effectively contained by the professional ban against emotional outbursts.

Ironically, the same epistemological commitments of the logonomic system which protect the dominant groups can be used by the non-dominant groups as part of their strategic destabilisation of the *status quo*.

7.2.3 Explaining the trend towards the use of the language of 'participation' in business and industry environmental education

In Vol.1, Chap. 2, I gave a description of the participatory trend (less authoritarian, supposedly more democratic) which runs counter to the 'marketisation' trend and is paralleled by similar trends in management and development. There is some evidence for this participatory trend in the Monterrey recommendations (Cf. Vol.1, Chap. 5.3.1). Levy *et al*, (2001) referred to this as the processual trend, and included in it such popular management thinkers as Brown and Eisenhart (1999 in Levy *et al,* 2001) and Senge *et al,* (1994). In education and development fields, the work of Chambers (1989) falls into this category. Lotz (1999) described this trend, which she labelled as the convergence of education and training. Shaw and Dingle (1998) noticed this trend, which they described as the convergence of the ideas of the "Learning Organisation" with the ideas of education. Lotz suggested that this convergence of education and training was linked to the similarity between trends favoured by contemporary environmental educators and those favoured by contemporary managers. Fairclough (2003a: 102-103) has analysed the textured character of discourse in the business arena as the two discourses, of old-style top-down management and the new style bottom-up approaches are mixed together.

However, in both education and management fields there are critics of this participation trend, since contrary to the claim of proponents, there is growing evidence that it fails to produce real changes in the *status quo* (Levy, et al, 2001; Cooke and Kothari, 2001; Rahnema, 1992). Furthermore, other commentators such as Gough (1994:28), more sceptical than Lotz (1999), recognised that there were serious difficulties faced by the integration of environmental education into business and management training due to the participatory, critical and action-oriented approaches required to solve environmental issues and risks which contradicted the hierarchical management structures of business. He also felt that the individualism present in business would be severely challenged by the environmental crisis.

I would like to illustrate how the idea of an ideological complex and its logonomic system, committed to particular, questionable concepts of structure and agency and epistemology, can explain the persistence of textual markers inferring 'participation' and 'power sharing', whilst little evidence of actual change with regard to the *status quo* can be demonstrated.

Illustrative of this is a document that I wrote some years ago whilst working for The Hard Hat Company (not their real name), outlining their environmental education programme, which had been strongly influenced by an approach called The Natural Step (TNS)(2003). The first two pages of this document are provided as Appendix 2. In this document I used language that evoked the old style behaviourist epistemology and assumptions of structure and agency, such as, "To provide knowledge and skills to the employees and residents", and "Unskilled workers will be exposed to environmental awareness-raising through drama and through the usual channels of information transfer within the company". However, I also included the new "participatory" language that I had learned from engagement with educational literature and the Education Department at Rhodes University. For example, I wrote that a condition for the achievement of sustainable solutions was the existence of, "Participatory environmental education, by which we mean that workshops will include discussion, debate and shared speculation around issues of sustainability and that everyone, no matter their level, will be encouraged to offer ideas to management and will be involved in taking appropriate action."

I was aware that in writing this definition of participation I was not using the word in the sense that I would have liked to use it, namely, I would have liked it to mean that the workers had power to make decisions and determine resource use. Instead, according to the typology of participation suggested by Pretty *et al*, (1995) and Pretty (1997), I used the term to indicate *participation by consultation*, whereby people participate by being consulted or by answering questions. I hoped that in the end my 'participation' would not become *functional participation* whereby participation is used by external agencies to achieve their project goals with least expense or even *manipulative participation* whereby participation is simply a pretence in which unelected, disempowered 'people's' representatives are placed on official boards.

Given my personal commitment to the concept of participation as giving people the power to make decisions about their lives, why did I choose a different, less politically empowering, meaning? At the time, I simply thought that there was no alternative (the TINA compromise). I knew that suggesting real power for the workers was out of the question (I had watched a colleague of mine be fired for attempting to achieve too much in terms of social justice), so I decided to cut my losses and go for the lesser prize. Thus, I downsized my ambitions and aimed simply to get the workers involved in discussion and consultation, which I saw as a significant improvement over the prevailing situation in which there was little to no communication upwards. Fairclough (2003a: 99) explains that the TINA compromise is, "(…) typical of many policy documents in a variety of social domains, which portray particular policies as made inevitable by the way the world is now."

I do not know whether my plan worked to allow greater upward communication for The Hard Hat Company as my contract ended soon afterwards. However, in other companies where I have been involved in environmental education processes, I have watched significant improvements in this regard. One example was in a glass company where the management were having trouble persuading workers to separate the different coloured glass off-cuts to facilitate recycling. After consulting with the workers, they discovered the problem; the glass bins were too far from the worker's workstations. Placing the bins under the workstations, a suggestion made by a worker, solved the problem in a way that benefited everyone (the workers did not have to keep leaving their stations; the managers obtained separated glass). Furthermore, in this same company, workers were able to negotiate that the sales of the glass for recycling be used to subsidise their canteen lunches.

The example of my own experience in industry, whereby I was not able to gain my actual aims, but nevertheless gained some lesser ones, is illustrative of Hodge and Kress's (1988) assertion that processes of struggle and resistance are not always constrained entirely by the dominant. They state, "Attention to the details of semiosic process reveals countless instances of contestation, where smaller-level shifts in power have significant effects, leading to modification in the structures of domination" (p7). I also agree with Hodge and Kress (p8) when they state that:

> *We do not assume that resistance is always successful or potent: but nor do we take it for granted, as many theorists of social meaning seem to do, that resistance is always effortlessly incorporated and rendered non-significant.*

Fairclough (1999) similarly describes this complex of resistance and submission, when he describes an illegal black labourer's appropriation of the discourse of the capitalism system, in a way which the labourer found empowering, even though he was being exploited by that system with wages below the minimum and poor job security. Likewise, in the instance of my experience in the Hard Hat Company, I also appropriated some of the language of the business discourse in order to achieve my goals (recall for example my behaviourist education language). Nevertheless, I also managed to colonise the company's discourse space with some of my language. Thus, the colonisation/appropriation dialectic works in two directions and dominant discourses also appropriate/are colonised by the discourses which seek to challenge it. Derrida noted this when he said that everywhere that globalisation takes place, it is for better and for worse. In the words of Fairclough (1999, no pagination):

> *The example shows that people are not simply colonized by such discourses, they also appropriate them and work them in particular ways. Textually-mediated social life cuts both ways - it opens up unprecedented resources for people to shape their lives in new ways drawing upon knowledges, perspectives and discourses which are generated all over the world. But in so doing it opens up new areas of their lives to the play of power. There is a colonisation-appropriation dialectic at work. Whether on balance people gain or lose depends on where they are positioned in social life - the fact that new possibilities are opened up does not mean people are unconditionally free to take them.*

There are innumerable examples of the colonisation/appropriation dialectic, linked perhaps to the TINA compromise formation of demi-reality. The appropriation of the term 'consumption and production' (in the Monterrey recommendations) is an illustrative example. Another example, is the appropriation of the word 'sustainability' (cf. Vol.2, Chap.2). Hodge and Kress (1988:8) described the colonisation/appropriation dialectic, in terms of the process occurring in a way that is beneficial to the dominant groups, in this way:

> *The ideological complex…attempts to pre-empt opposition by incorporating contradictory images into its coercive forms; even so, they continue to exist there, silently declaring the limits of dominant power.*

Returning to my example of The Hard Hat Company, the question remains as to why the company would be enthusiastic (which they were) about including 'participation' in their management strategies? Recall that the ideological complex has two conflicting aims: to maintain dominance of a particular class; and to maintain solidarity between this class and the people it rules. The subtle slippage of the meaning (Fairclough, 2000:152) of the idea of 'participation' is an ideal vehicle for the cloaking of this contradiction, since it implies a reduction of the $power_2$ imbalance whilst at the same time insisting on it. Relatedly, Fairclough (1989:33,34) explained how those who have $power_2$ must exercise it either through coercion or consent, "but any ruling class finds it less costly and less risky to rule if possible by consent." He also (p37) described the increasing reliance on control through consent as at the root of a discourse tendency towards, "simulated egalitarianism and the removal of surface markers of authority and power". The company's favourable attitude towards participation could be explained, in Fairclough's terms, by their desire to rule by consent rather than coercion. Peters *et al*, (2000:10) call this the trend towards the "doctrine of self-management".

From my discussions with managers, their stated motivation underlying their embrace of participation was:

- it would allow better 'buy in' to the company's ideas if the workers thought they (the workers) came up with the ideas themselves; and
- it would improve the worker/management relations if communications between workers and management were improved.

Note that both of these strategies are related to the ideological complex's need to maintain solidarity with the dominated. Neither of these strategies included a commitment to greater worker autonomy, since the managers identified with the ideological complex's assertion that what was best for the all-powerful management was also what was best for the workers. This belief was maintained in the face of powerful evidence to the contrary, especially in Zimbabwe, where the life-style difference between a manager and a worker is, to say the least, dramatic. An indication that managers uncritically identified with the ideological assumption that what was best for the company, would be best for the workers, was the assumption that, if given a chance, the workers would arrive at the same conclusions as the managers. In other words, the best ways forward were assumed to be ‘commonsensical’ ones that any right minded person would arrive at, yet the commonsense way of doing things is usually an effect of power, an ideological effect (Fairclough, 1989:99).

Nevertheless, I would also like to suggest that not all slippage of meaning with regard to participation is consciously strategic, although it will nevertheless possibly function strategically. Below I give some examples, reminiscent of Fairclough’s (2003a:102-103) example of the texturing of the new management discourse with the old, taken from my industry environmental education students’ work (please note that English is not the students’ first language):

> *The poster can then be hanged out at breaktime and be used to stimulate debate as participants take a keener closer look at the fine print. The presenter can then pounce on this opportunity and further buttress or clarify certain pertinent points (sic).*

Note how, in the above example, the presenter waits for the initiative to come from the participants, but this is a cloaking technique, for the presenter then uses the opportunity to expound his/her position. “Pouncing” and “Buttressing” (the presenter’s position) indicates a commitment to an epistemology in which the expert’s position must dominate non expert positions. The tone of the presenter’s attitude indicates he/she was not interested in listening to alternative positions. Another example is:

> *The programme is participatory. The teaching methods employed are transmission and experiential learning (sic)*

In this example, there is a contradictory conflation of participation with top-down transmission teaching. Given the recent introduction of these learners to ‘participatory’ teaching methodology, I would guess that their conscious experience was simply one of being confused as they tried to find their way through the complexities of the clash between the two discourses.

Finally, I would like to draw attention to an occasion where the term ‘participation’ was used in its sense of *actually giving power$_1$* to the participants. For example, here is a quote from an assignment written by one of my learners:

> *In order for the proposed approach to meet its objective, participants will have to be treated as peers and given an opportunity to make their own knowledge part of the learning experience*

From my discussions with this author, I was convinced that he was not using gratuitous rhetoric. Neither was he idealistically using participatory rhetoric, only to be faced with a harsh reality, which would refuse such idealism, when he returned to his workplace. It seemed to me he really would be able to allow each participant to be empowered to act with autonomy and make decisions. In fact, this author could not understand why I thought there might be difficulty in achieving this aim.

Perhaps the reason for the seeming contradiction between this author’s experience, compared to my own and others’ experiences of teaching environmental education in industry, lies in his teaching context. Firstly, capitalists did not employ him; rather, he was a capitalist. Secondly, he was designing his training course for other business owners such as himself. I would argue that it was possible for him to use the term ‘participation’ in its most radical sense because it was not radical in his context. Business owners by default are likely to treat each other as peers and largely expect to make their own decisions, within limits (imposed by for example by legislation or finance), with regard to their businesses.

From the examples given above of my own writing in the field, and that of some of my students’, the inclusion of participatory rhetoric, without necessarily the achievement of the promised equality, can be explained by the idea of the ideological complex and logonomic system, with its attendant reliance of TINA compromises.

7.3 CAUSALLY AEFFICACIOUS EVENTS/TRENDS, AT THE LEVEL OF THE ACTUAL

The key events/trends suggested in Vol.1, Chap. 6 were:

- The growing evidence for climate change, linked to the growing strength of the challenge to business and industry to address environmental issues
- The global trend towards a 'the market system', typified by the USA's refusal to sign the Kyoto Protocol and the developing countries interpretation of development in terms of production and consumption
- The disaffectation of developing countries from global politics in general, and their specific absence from global environmental initiatives
- The trend towards not naming marginalized groups
- Stratified personalities of key players in the production of texts.

The rest of this chapter will use these theorised causal mechanisms to explain certain textual characteristics of the corpus documents.

7.3.1 **The influence of growing evidence for climate change, linked to the the challenge to business and industry to address environmental issues**

In this section, I will draw again on the company reports and the meeting minutes to illustrate how my theory can account for textual characteristics that could be interpreted as evidence of challenges to the *status quo* (from environmental activists, and perhaps from the evidence from the environment itself). I continue with Fairclough's (2003) idea of the colonisation/appropriation dialectic and his concern with intertextuality. This section thus assumes that power and ideology are not entirely top-down (Foucault, 1982; Kress and Hodge, 1988; Fairclough, 1992; Thomas, 1998). Just as in the above section, dominant discourses were colonised/appropriated by the language of the participatory discourses that presented challenges to it; so, in this section, environmental discourse is colonised/ appropriated by dominant texts, and not always in ways that render the challenge ineffectual.

7.3.1.1 *Explaining the (possibly strategically motivated) presence of environmental and social concerns in company reports*

As in the Monterrey recommendations, there was evidence of a 'texturing' of business discourse with environmental discourse in company reports. Thus, we can see the environmentalist discourse both colonising and being appropriated by company documents. In the example of the ESKOM (2000) report, the word 'sustainability' was used liberally in the text, angling for solidarity with readers concerned about the environment (Cf. Vol.2, Chap.2). However, instead of 'sustainability' being used to refer to 'environmental sustainability', it sometimes referred to 'sustainability of the business' or 'financial sustainability' or even 'sustainability of human resources'. This is an example of Fairclough's (2000:152) 'slippage of meaning'. Again, the interplay of the logonomic system and ideological complex is evident, in that logonomic rules of language allow a professional document such as a company report to use language that it does not define. This is based on the epistemology of the transparentness of language, such that there is a simple correspondence between words and their meanings. In such an epistemology, it is inconceivable that the word 'sustainability' has different meanings depending on context; all one needs to understand the meanings of words is a dictionary (although contradictorily, sometimes great emphasis is given to defining things, since it is vital to the integrity of this epistemology that the things described really 'are' what is pointed to by the word used, a position known as hypostatisation). The ideological contradiction is as follows:

- using the word 'sustainability' says that ESKOM is environmentally aware and thus creates solidarity with environmentalists; but;
- ESKOM is more concerned with sustainability of its business profit than with environmental sustainability.

The logonomic rule, which allows professional documents to assume language transparency, effectively cloaks this contradiction.

Almost all of the company reports in my corpus, where they did refer to issues of 'sustainability', demonstrated slippage of meaning in its regard. However, whereas in earlier texts, the slippage was covert, in more recent texts, there was an overt assumption that the word had changed its meaning to include all aspects of sustainability. Therefore, in ESKOM's (2006) company report, sustainability was defined as "Ensuring continued delivery on economic, environmental and social outcomes" (p4). This contrasts with earlier reports in which "sustainability" was not defined but the heading "sustainability projects" simply introduced a list of projects, which included projects, related to business sustainability. The slippage was thus subtler and a definition was not given. At that time, one would be forgiven if one assumed that 'sustainability projects' would refer to projects since in the early 2000's, 'sustainability' still largely meant 'environmental sustainability'. Therefore, in 2000, the report's inclusion of the Pebble Bed Modular Reactor (PBMR) project as a sustainability project seemed incongruous. However, by 2006, the appropriation of the word 'sustainability' was more or less complete such that it no longer seemed odd that it related to all aspects of the company's sustainability.

Other company reports, if they referred to environmental concerns at all (and many did not) demonstrated a similar pattern of slippage of meaning with regard to the use of particular terms. For example, the South African oil, fuel and chemical company SASOL's (2005) annual report included a heading of "Sustainable Development", under which it gave thirteen aims, relating to issues of health and safety, legislation, HIV, skills, black economic empowerment. Only one of these aims was related to environmental sustainability. Another stated aim, under the heading of 'sustainability' was to: " (add) economic value to the coal, crude oil, natural gas and chemical feedstocks we beneficiate". This aim could be interpreted as directly in conflict with environmental sustainability, as calls to reduce carbon emissions could also be described as calls to reduce the economic value of coal and crude oil. This links to the reluctance of the writers of the Monterrey recommendations to include demand-side solutions to energy consumption and their avoidance of the issue of carbon emissions.

In the agri-business, SENWES's (2005) annual report, as with many of the South African examples considered, social, environmental and economic considerations were mentioned only briefly in the section on corporate governance. This quote demonstrates their slippage of meaning around the idea of resource use: "Compliance with (the King II Report)[70] promotes accountability and responsibility as well as successful utilization of resources (…)". Here the idea of successful utilization of resources means economic, social and environmental resources. Thus, the challenge posed by a discourse calling for environmental sustainable use of resources has colonised this document but has been rendered harmless by inserting it into a business discourse of the way things have always been done, since good business has always managed its 'resources' carefully. Therefore, environmental resources will be considered as well as other resources. What is lost by the language appropriation is the idea that perhaps things need to be done differently. This sleight of hand is made possible because no information is provided on how, or to what degree, the resources will be carefully managed.

Another example of the colonisation/appropriation dialectic was present in the Anglo American (2005) report whose title was "Anglo-American: A Climate of Change". Their entire document was structured around sustainability such that their introductory chapter was headed "Sustainable development" (p1), followed by the remainder of the document divided by the headings of "Social Capital" (p16), "Natural Capital" (p24), "Human Capital" (p36) and "Manufactured Capital" (p48). These structural commitments were interesting because they evoked the ideology of free market environmentalism, in which natural resources are a capital, but this free market discourse was mixed with a discourse I associate with the sociologist Bourdieu (1998:41), which includes the idea of *inter alia* economic and cultural capital. The Anglo-American report, it seems, was exhibiting an intertextuality that was drawing threads from the discourses of the free market, environmentalism and sociology.

In looking more broadly at these company reports, some textual characteristics seemed to contradict my explanation based on the Monterrey recommendations. For example, one would expect, if my explanation was a good one, that companies would not commit to demand-side solutions to the environmental crisis, which decrease

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[70] The King Report on Corporate Governance (known as King I) was published in 1994 by the King Committee on Corporate Governance, headed by former High Court judge, Mervyn King S.C. King I, incorporating a Code of Corporate Practices and Conduct. It was aimed at promoting the highest standards of corporate governance in South Africa. An up-dated version was published in 2002 called the King Report on Corporate Governance for South Africa, more commonly known as the King II report (Cliffe Dekker, 2006), which included a section on sustainability.

consumption of a resource/product from which they derive economic value[71]. However, ESKOM *did* have a commitment to reducing energy use, including an education programme that teaches the public how to save electricity. This can be perhaps explained by the fact that ESKOM is currently unable to supply enough electricity, which also explains its strong commitment to projects to increase supply, such as the PBMR. Bhaskar insists that tendencies in society can exist, even if they are not expressed. He says (1993:404): “In open systems laws must be analysed as tendencies, which may be possessed without being exercised, and exercised without being actualized”. I suggest (make a tendential prediction) that the tendency to avoid reducing consumption was unexpressed at ESKOM but might become actualised should they become able to produce more electricity than is generally required.

Another example of a contradiction was the (2003-2004) annual report of the Armaments Corporation of South Africa (ARMSCOR). This organisation did not demonstrate the slippage of meaning with respect to ‘sustainability’ common in other company reports. Instead, it contained substantial, separate sections in its report on the environment, referring to ‘environmental responsibility’. The ARMSCOR report also used powerful images of nature. Therefore, whilst the colonisation/appropriation dialectic was present, in the existence of the nature –based pictures colonising/being appropriated in the texts, it was nevertheless not being applied to the term ‘sustainability’.

The question is why ARMSCOR, with arguably one of the most controversial of business activities, was not conflating ‘sustainability’ to mean both environmental and business ‘sustainability’? My guess is that it relates to the nature of their product. ARMSCOR sells arms. To admit to wanting to increase production, or wanting to be ‘sustainable’ (in the sense the other companies use the word) is to admit to wanting to perpetuate and increase armed conflict. ARMSCOR also drew attention away from the fact that they were involved in the sale of weapons by portraying themselves as providing the socially necessary service of ‘defence’. For example, ARMSCOR in its 2005-2006 annual report (p1) stated that its vision was “to be a truly South African

[71] Here I am distinguishing between a) demand-side solutions to the environmental crisis which decrease consumption of a resource/product leading to a corresponding decrease in production, such as making goods that last and can be repaired and b) demand-side solutions which do not affect production, or might increase it, such as introducing technology which will beneficially reduce energy bills.

organisation that is valued locally and globally as a centre of technical excellence for defence acquisition and defence services”.

7.3.1.2 *Explaining the (possibly not strategically motivated) presence of environmental and social concerns in company reports*

On two occasions in my examination of the corpus documents, I discovered instances where the dominant discourse seemed to genuinely take on board issues to protect the interests of the non-dominant people and the environment. There was no disjunction between the discourse and is meaning. In other words, there was no need for the logonomic system to conceal a performance contradiction since the texts had nothing to hide. These examples include:

- the fitting of tail-gates by a Zimbabwean company to protect their workers; and
- the suggestion of the use of nuclear power (in documents from South Africa to the USA) as an answer to the threat of global warming.

Earlier, I discussed the Zimbabwean agribusiness’ decision to return to ‘tail-gates’ (used on trucks involved in harvesting) in the event of a worker’s death, attributable to the company’s removal of the tail-gates (more dangerous but more efficient). The company had been forced to ‘listen’ to the challenge calling for increased safety through the event of this death. Thus, there was a match between what the company was saying it would do, and what it actually did. Fitting tail-gates was without question useful to the workers, even though the tail-gates were costly and slowed harvest times. The cost to the company of not acting to protect the workers, given the possibility of liability, had proven too great.

Likewise, I would argue that some of business and industry’s appropriation of environmental discourse related to the no-longer disputable evidence of global warming. Given recent events such as Hurricane Katrina in the US, and the evidence of increased CO2 levels and warmer temperatures reported world wide (Hansen, 13

July 2006), even the industrialists are worrying, despite some voices who remain sceptical (The Chronicle of Higher Education, 8 September 2005).

Industrialists in the energy business, who believe that there is indeed something to worry about, have responded by using the word ‘sustainability’ honestly. They truly do want to slow down carbon emissions, and some of them have decided that the best way to do this and sustain production is with nuclear energy, despite its risks and the high cost of its production, at least twice conventional costs (Sweet, 2006). Thus, when ESKOM placed its nuclear power plant under the heading of ‘Sustainability’ it was not an ironic move, but a genuine one (although I would argue mistaken), aimed at protecting both the environment and the interests of the company. To consider carbon dioxide reductions in the absence of nuclear power would require significant reductions in the world’s consumption patterns: a concept which seems inconceivable in the functioning of the market system. For these industrialists, immersed ideologically in their assumptions of the necessity of the market system, nuclear power is their genuine answer to the evidence of the effects of global warming.

7.3.2 **The global trend towards a ‘the market system’: explaining ‘marketing’ language in a South African educational text.**

Before marketisation was prominent, the approach to education that favoured the deductive-nomological framework for knowledge acquisition referred to learners as “empty vessels to be filled” (Cairns, 2002:84). More recently, learners have become ‘consumers’ and curriculum development, when combined with participatory trends, has become blurred with market research (Vol.2, Chap. 4). Fairclough (2003) has critiqued the marketisation of knowledge as part of the international trend of globalisation. In South Africa, a critique of the marketisation of the educational arena in South Africa has been provided by Reddy and Schreuder (2004) and Tikkly and Mabogoane (1997). Looking mainly at education in historically segregated non-white schools, Tikkly and Mabogoane (p159) conclude that contrary to the claims of its proponents, marketisation of education in South Africa has neither increased consumer choice nor resulted in a more equitable distribution of educational resources. Instead, they say that it has only increased the choice for whites and a minority of blacks. Their result is compatible with the idea that the achievements of sectional interests at the expense of universal interests is the function of dominant discourse, despite its claims otherwise, this contradiction being cloaked by the logonomic system. Fairclough (2003b), states:

> *Social practices are networked together in particular and shifting ways – for instance, there has recently been a shift in the way in which practices of teaching and research are networked together with practices of management in institutions of higher education, a 'managerialisation' (or more generally 'marketisation') of higher education.*

Fairclough's example is directed at higher learning institutions but is equally pertinent to learning in business settings. In the example below (Text Box 7.1), as in the Monterrey recommendations, this 'marketisation' of education is clearly visible. It is based on deductive-nomological science which protects the interests of the dominant in society by assuming one absolute, empirically-based, natural knowledge untouched by humans.

> The Tree Protection Co-operative Programme (TPCP) provides four main services to its clients in the forestry industry. Firstly, it maintains a diagnostic laboratory… Secondly, the TPCP conducts research on diseases of pine, eucalyptus and wattle trees. Thirdly, it monitors disease development in plantations…fourthly, the TPCP runs an extension service through which field foresters are informed about strategies for reducing the impact of diseases, and forestry students are educated about tree pathology.
>
> Pretoria University derives considerable benefits from this network in the form of the training of post-graduate students and the publication of cutting-edge research in internationally accredited journals. In Forestry and Agricultural Biotechnology Institute's (FABI's) products, then, are new knowledge and its application on one hand, and trained scientists on the other. The two meet in a conception of education as the main output – knowledge being produced by and purveyed through FABI's students and staff.

Text Box 7.1: Excerpt from a book entitled "Working partnerships in higher education, industry and innovation: creating knowledge networks". (Klerck, in Kruss, 2006)

The scientistic assumption of business education is demonstrated in the first paragraph of Text Box 7.1 where there is no mention the social components of disease control. After the knowledge is found, foresters and student foresters are simply 'informed' and 'educated' about the tree pathology. The marketisation of business education is demonstrated in the second paragraph which textures together educational and business discourse, describing knowledge as a ‘product’, something to be ‘purveyed’ and education as a ‘output’, evoking images of a production line.

An example of how the marketisation approach to knowledge might serve the interests of the dominant, rather than the non- dominant (and thus is explained by the idea of the ideological complex and its attendant logonomic system), is the way that questions of environmental effects and health effects of chemicals used in the control of pathogens can be side-lined. Anecdotally, one environmental educator in industry (source to remain anonymous) confessed that his company had an unspoken policy of not telling their pesticide sprayers of the possible side effects of the sprays. The company felt they had already taken into account health considerations (masks) and did not want their staff to be alarmed. The staff trusted the company not to expose them to risk; however, the same manager who told of his company’s policy agreed that he would probably refuse to be exposed to the sorts of pesticides to which his staff were routinely exposed. Furthermore he agreed that perhaps the sprayers would be more likely to use their masks if they were fully aware of the risks.

This is not to say that all companies conduct themselves in this manner, but merely to say that the epistemology assumed by the logonomic system of business model of education lends itself to this use. Staff trained in pesticide use become mere receptors of knowledge and any challenge, should there one, is simply not given a place to be voiced, since it would be contrary to the epistemology that reifies the experts. Only the experts interpreted by the managers have the logonomic authority to decide what important knowledge is. In the above example, perhaps health problems resulting from exposure to pesticides would be reduced if the people applying or coming into contact with the pesticides were participants in knowledge production around the issue.

7.3.3 The disaffection of developing countries from global politics in general, and their specific absence from global environmental initiatives

In Vol.1, Chap. 6, I suggested that developing countries are to some extent excluded from activities related to environmental protection, on the basis of the premise that their economies are still developing and they need to be able to freely exploit their natural resources, as the developed countries did, in order to achieved 'developed' status. In this section I will explore how the disaffection of developing countries from global politics and their specific exclusion from environmental activities plays out at a more micro level by examining how this assertion can perhaps explain certain characteristics of textual production in South African and Zimbabwean business and industry environmental education texts.

I will look specifically at the following texts:

- South African and Zimbabwean company reports in general
- The ESKOM (2000) environmental report

7.3.3.1 *Explaining the relative absence of a concern for environmental issues in many Zimbabwean and South African company reports, and contradictorily, some companies' significant involvement in environmental issues.*

In the Monterrey recommendations, the absence of developing countries from the responsibility for protecting the environment was noticeable and was linked, I theorised, to the perception of developing countries as needing to exploit their resources to 'catch up' to the developed countries.

In this section I ask if this assertion, namely that developing countries are assumed to need to 'catch up', can explain the trend towards the relative absence of environmental concerns in texts in Zimbabwe and South Africa. That there *is* a relative absence of concern for environmental issues in developing countries' textual production has been noted by other researchers, for example by Swiderska (2002), who described the lack of a commitment to sustainability issues, especially with regard to biodiversity, in several developing countries including South Africa. This is particularly interesting given that these countries generally have good environmental policy. As my theory might predict, in Zimbabwe and South Africa, company annual reports do not generally include significant information on environmental activities

(Ribnick, pers. com; Meyer, pers.com). In South Africa, Coleman (1997) explained that few (small and medium) enterprise respect environmental legislation, which is perceived to be complicated and weakly enforced. Furthermore, business owners were resistant to any measure which would increase production costs. Tolba (2005, no pagination) has explained that developing countries viewed with suspicion the call by developed countries to reduce their environmental impacts, seeing it as an "attempt to stop the development of their industries" and "a weapon to block their exports to the developed world". Some examples of South African and Zimbabwean company reports which contain little or no reference to the environment include: for South Africa, Thubilisha (2002/3), Alexkor (2004), SENWES (2004) company reports; and for Zimbabwe, the National Food Holdings (2002) company report.

However, there is an important exception. Some companies, such as ESKOM in South Africa or British American Tobacco (Zimbabwe), have an interest in gaining international investment, because they, or their parent organisation, are linked to the Financial Times Stock Exchange index (FTSE) or the Johannesburg Stock Exchange (JSE) index. These companies have annual reports that give extensive coverage to the environment, possibly because both the FTSE and the JSE have an index which allow companies to be rated for their social and environmental responsibility. Relatedly, in Zimbabwe, those middle managers attending the course that I run on environmental education have, to date, only come from companies whose parent bodies were listed on the FTSE. Many of these companies had ISO 14001[72] certification or were in the process of obtaining it. The only exception to this was the individual mentioned earlier, who owned his own company, a relatively small enterprise, and who was determined to increase support for the environment amongst his peers. Furthermore, the Zimbabwe Stock Exchange (ZSE) has been relatively slow in its acceptance of environmental indicators as an important investment consideration (Ribnick, pers. com). That the JSE has an indice for economic and social performance is perhaps due to South Africa's status which lies somewhere in between 'developed' and 'developing'.

[72] ISO 14001 is the International Standards Organisation's (ISO's) standard for environmental management systems. Certification to ISO 14001 is entirely voluntary.

From the above analysis, my theory that developing countries tend to not perceive environmental concerns as a priority because of a need to place development issues first is largely supported. This support comes in the form of evidence that in South Africa and Zimbabwe, companies tend to display a lack of involvement in environment protection issues unless there are links to developed countries, whether for markets or for shareholder support. Additionally, whilst environmental legislation does exist, it tends to be poorly policed (Coleman,1997). This does not prove my theory, but merely supports it. It is also relevant that the absence of developing countries from the responsibility for protecting the environment is exhibited in terms of low environmental protection in businesses, as well as low international involvement (as we saw in the Monterrey recommendations).

7.3.3.2 *Explaining the discourse of Black Economic Empowerment: the case of ESKOM's 2001 annual report*

The disaffection of developing countries from world politics, and behind this a long history of colonisation of the developing countries, perhaps explains the existence of discourse which is characteristic of many South African and Zimbabwean companies, namely the discourse of Black Economic Empowerment (BEE) (South Africa) or indigenisation (Zimbabwe). This BEE discourse could be seen as a subversive response to colonisation and its current global manifestations which result in developing countries being relatively sidelined from important global power networks (Volume2, Chap.2). Hodge and Kress (1988:3) have described ideological complexes as functionally related sets of contradictory versions of the world, coercively imposed by one group by another on behalf of its own distinctive interests, or subversively offered by another group in attempts at resistance in its own interests. I maintain that the discourse associated with the language of BEE is a 'subversive' ideological complex[73], with its contradictions defused by a logonomic system, in the same way that the dominant discourse is an ideological complex with its own (different) logonomic system. Bhaskar (in Naess 2006: 215) suggests that a set of ideas can be described as ideological if the set of ideas is false but nevertheless contingently

[73] Analysts might be dissuaded that BEE is subversive in the light of its appropriation of much of the dominant globalisation 'marketisation'. However, as Fairclough (2003b) has demonstrated, subversive discourses often appropriate the dominant language for their own purposes.

necessary. The BEE discourse is thus ideological since its contradictions (falsity) can be demonstrated[74], yet it is necessary to partake of this ideology and its associated discourse in order to function in South African society.

The fact that an ideological complex is subversive or previously marginalized does not automatically mean that it is true, despite some stand-point theorists who argue this is the case, and that marginalized discourses have epistemological privilege (such as Harding in Haack, 1998).

One of the most striking examples of the BEE discourse, although it was not, as yet, being called this, was provided by ESKOM's 2001 annual report, reported in Price (2002, in Vol.2, Chap.2). At the time of publishing the earlier ESKOM (2000) environmental report, the September 11 attack on the New York Twin Towers, the economic and political strife in Zimbabwe, and its effects on the economies of the region, had not yet happened and the New Partnerships for African Development (NEPAD), with its rhetoric of the African renaissance, was not yet in existence.

However, by 2001, the world context was different and perhaps as a result the ESKOM (2001) annual report looked significantly different from the ESKOM (2000) environment report. As I reported in Price (2002 in Vol.2, Chap.2) the change in international focus away from environment, towards issues of immediate economic and national security and patriotism, meant that the environmental focus had been dropped. Instead of being contained within a separate environmental report, environmental issues were reduced to a section within the annual report. The new focus was one of the 'African renaissance', and in the ESKOM's 2001 annual report, this was characterised by the use of the dominance and control rhetoric borrowed from colonialist discourses. For example, there is a focus on large-scale projects which allow the less developed regions to imitate the example of the more developed regions. The following excerpt from the 2001 ESKOM annual report is illustrative. In referring to the design of projects in South Africa the Chairman states:

[74] That there are contradictions within the ideological complex epitomised by the discourse of South Africa's "Black Economic Empowerment" and Zimbabwe's "Indigenisation" include the fact that, despite the rhetoric, the status of the majority of Zimbabwean's has declined dramatically since independence, whilst a black elite has become fantastically rich (Belk, 2000). The life expectancy for women in Zimbabwe is 33 years (UNICEF, 24 January 2007). In South Africa, disparities are also evident, and increasing, between the poor and the rich (BBC, 27 July 2000).

This would be a global legacy that ensures that specific projects are implemented across Africa and are able to be replicated in all developing countries.
(Khoza, 2001: 22)

Here, a characteristic pattern of colonialist strategies, that there is 'one big answer' to everyone's problems, is suggested. The possibility of local, significantly different projects, which fit into a larger, global trend towards sustainable development, is overlooked. It is this assumption of 'grand plans' that leads to ambitious schemes in which small communities have few rights. These strategies have been severely questioned (e.g. Bauman, 2000). Bhaskar (1993:169) had this to say on the matter:

…there is no reason why a single criterion or formula applicable to every situation should be forthcoming, and that the whole point of dialectical practice is that it requires the meta-ethical virtue of phronesis, demanding skilful application case by case.

Another assumption present in the ESKOM (2001) document was of 'knowing better' and wanting to 'help' and be of service, which also lay beneath colonialist strategies of the past. For example E.D. Alvord, an American Mormon missionary was a strong critic of African agriculture but "wanted to help Africans profit from their 'aspirations and longings for the better things which the white man has to give them'" (Page and Page, 1991: 7). Nevertheless, in ESKOM's model of development we see the same desire to be of help, which also assumes their superiority. For example, the ESKOM Chairman made the following statement in their 2001 annual report:

In a very real sense, ESKOM is a partner with other African utilities on the continent improving economies and advancing socio-economic development. We do this by both literally and metaphorically bringing light and energy to our continent.
(Khoza, 2001: 20)

This is ironic since black South Africans want to redress past effects of colonialism with their patriotic BEE discourse, yet the BEE discourse has many of the same characteristics as colonial discourse, including similar questionable assumptions about epistemology, structure and agency.

Nevertheless, the trend toward maintaining power through consent, rather than coercion, is becoming evident in more recent versions of the BEE discourse. For example, the ESKOM (2006) company report has dropped its overt colonial 'power-over, but we are helping' sort of style and adopted a style that talks of partnership and building together. It therefore seems to be following contemporary trends and has appropriated the participatory language of power-sharing.

In terms of the significance for this chapter as testing the explanation in Vol.1, Chap. 6, the case of ESKOM's colonising rhetoric is explainable by the tendency towards marginalisation of developing countries. However, marginalisation affects discourse differently depending on the context. Thus,this trend results in the exclusion of developed countries and their people in one context (e.g. the Monterrey recommendations), but it results in those excluded people reacting powerfully in another context and developing a subversive ideological complex and companion logonomic system to resist their marginalisation. Nevertheless, the characteristics of the subversive ideological complex continue to exhibit performance contradictions, in much the same way as the original colonising discourse.

7.3.4 **The trend towards not naming marginalized groups: explaning the absence of gender and marginal groups in environmental education texts in South Africa and Zimbabwe**

In Vol.1, Chap. 6, I put forward the theory that a global trend to not name marginalized groups was evident and I used this theoretical assertion to explain the lack of named marginal groups in the Monterrey recommendation. I offered a depth explanation of this trend at the level of causally efficacious philosophical mistakes (namely the linguistic turn) which tend to deny the validity of categories, and thus tend towards 'not naming' or 'not dichotomising'.

In this section I use the idea of the existence of a trend to deny the existence of marginalized groups as real categories to explain the absence of gender and race in environmental education texts in South Africa and Zimbabwe. This trend was noticed by Australian environmental educators Gough and Gough (2004) who drew attention to the fact that "issues around environmental racism have not, to date, been addressed to any great extent in southern Africa" (p417). They also described the absence of gender and racism as a "blind spot" in environmental education in southern Africa (p418). This was particularly mystifying for the Goughs since the pressing need for consciousness-raising around these issues was evident in the strong presence of visible and viscous racism, sexism, patriarchy, homophobia, class and language biases and ethnic nationalism (p415).

In Vol.1, Chap. 6, I suggested that a precondition, *inter alia*, for the contemporary trend towards not naming marginal categories, exhibited so clearly in the South African context, is the linguistic turn. One of the strongest pieces of evidence for this suggestion is my own experience as a student of environmental education in South Africa. As I described in Vol.1, Chap. 3, I was consistently steered away from naming marginal groups (in my case, non-dominant groups in business and industry) on the basis of a poststructural scepticism with regard to what my supervisors termed 'oppositionalising'.

Thus, the taboo against oppositionalising was a likely component of the explanation of the absence of critical engagement with issues of discrimination in the South African environmental education context. This lack of engagement was perhaps further enabled by the relative absence of academic interest in southern African environmental education with regard to issues of gender and race anyway (perhaps because of the relative social acceptance of these discriminations).

However, there was one issue of marginalisation that was considered an imperative by most South Africans; namely, the issue of 'indigenous knowledge'. The question therefore arose as to how environmental educators should talk about indigenous knowledge without oppositionalising it and the racial groups associated with it. O'Donoghue and Neluvhalani (2002) attempted to avoid their stated aim of setting up the categories (oppositionals) of indigenous/non indigenous and Western/African scientific knowledge, by suggesting a knowledge-in-context perspective in which indigenous knowledge was merely a form of 'situated' knowledge. They thus demonstrated a mixture of poststructural and 'process sociology' perspectives. Masuku Van Damme and Neluvhalani (2004:364) stated that, "Process sociology reminds us of 'flux' which allows us to see the conceptual mobility that phenomena are robbed of through reification". In grappling with this issue, they came close to the critical realist perspective advanced in this thesis, as we can see in their reliance of the concept of process and ‘flux’ (recall the liquid metaphors of stream and flow that I advocated as being useful for CR).

7.3.5 The stratified personalities of the human events (persons) who produced the texts

Referring back to the Bhaskar’s description of action (Figures 6.1 and 6.2), the production of texts (an action) is influenced, amongst other things, by the author’s stratified personality, including her conscious being (providing her with routine or tacit reasons for her actions) and her unconscious being (actually causing her action, but without her knowledge).

In this section, I use the concept of the stratified personality to provide a deeper explanation for:

- the denial of marginal categories in South African environmental education texts; and
- the presence of performance contradictions in environmental education texts that I had produced for industry

7.3.5.1 *Deepening the explanation of the denial of marginal categories in the South African environmental education texts*

In 1998, a connection was made, through the Australian South African Institutional Links Programme (Auslinks), between the Environmental Education departments of Deakin University (Australia) and Rhodes University (South Africa). What followed was a fruitful relationship of co-authorship of papers and student supervision and an exchange of ideas. However, despite both departments being strongly influenced by the linguistic turn in research and education, there was one striking difference; namely, that the Australian contingent considered it important to refer to marginal categories, whilst the South African contingent were strongly against talking in terms of categories. Technically, the South African’s were more correct in this stance, within the ideas of the linguistic turn, although, as demonstrated above (Cf. Vol.1, Chap. 7.3.4) , when they were forced to use categories, they supported their position by process sociology. The Australians had to justify their contradictory position (of poststructuralists who categorise) by calling for an uncritical combination of critical and poststructural positions (Gough, 1997: 64). This allowed them to pragmatically refer to marginalized groups in order to achieve political goals of emancipation.

The differences between Australian environmental education and South African environmental education from this era can perhaps be explained by the fact that South Africa had recently ended a highly abusive system of Apartheid, which was based on rigid definitions of categories of peoples. Thus, the South Africans could see the potential dangers in categorising.

However, this must be only part of the explanation because, I will it argue, it was significant that the writers of the Goldfield course belonged to the general racial category 'non black'. At this time, Apartheid had not been dismantled long enough for there to be many black members of staff in the South African universities. Those black environmental educators who were present did not show the same aversion to categorisation of marginal groups, and indeed, many of them chose to focus on indigenous knowledge, although, in my experience, they were discouraged by the senior (white) members of the department from attaching the concept of indigenous knowledge to a specific racial group. Black indigenous educators from elsewhere in southern Africa, like the Australians, seemed comfortable with emancipatory post-colonial orientations and used marginal categories with little qualification. For example, Mokuku, (2002:145) commented that, "The telling of stories of those who are marginalized (…) is the beginning of the journey of emancipation, a first step towards sustainable development".

A recurring theme of this thesis is the way that commitments to epistemology can be used strategically to achieve political goals. I would argue that a conscious or unconscious motivation for the senior non black academic's stance on indigenous knowledge was, in part, related to political considerations. Apart from a genuine commitment to the linguistic turn (which also acted to hide the political motivation), the refusal to accept racial categories and the insistence that indigenous knowledge was a process, and thus dynamic not static, was a question of survival for the white members of staff. Remaining with racial categories in the new South Africa was likely to result in discrimination of the non black people, since historically it has been the case that when those peoples previously marginalized gain power they turn negative attention to their previous oppressors, often in the name of 'redress' (Mamdani, 2001). Freire (1970:29, 30) puts it thus: "But almost always, during the initial stage of the struggle, the oppressed, instead of striving for liberation, tend themselves to become oppressors, or 'sub-oppressors' (…). Their ideal is to be men; but for them, to be men is to be oppressors". Assuming that indigenous knowledge could not change (knowledge was not a process) was to insist on a kind of racial purity of knowledge which would make discrimination between races easier, since the lines between white and black would be clearly defined.

Indeed, maintaining racial categorisations in South Africa *has* resulted in reverse oppression. Currently, to be a non black, especially male, person in South African is to be subject to state sanctioned discrimination which ensures that black people are preferred jobs. Young white males are leaving the country in significant numbers because they are unable to find jobs and make a living. Whilst, officially, Black Economic Empowerment (BEE) is merely a pragmatic tool to redress past imbalances (Geldenhuys, 2006), a common interpretation of BEE is that it must be used to 'get rid of the whites'. For example, a black member of staff from the South African National Parks stated that if he were promoted to a senior position he would rid the entire department of white people. Despite the presence of white members of staff at that meeting, his words were greeted with much jubilation and cheering (anonymous pers. com.).

Therefore, to more fully explain the characteristic absence of marginal groups from environmental education materials written in South Africa in the last two decades is to understand that they were written by personalities with conscious or perhaps unconscious political motivation towards personal survival, and the survival of their families. It should be noted that this assertion is made in part from a self-reflexive standpoint since I am one of those non black environmental educators who has been writing materials, and therefore I can understand the motivation. However, I suspect that I was less committed to the position of 'not naming' marginal groups, because I also belonged to a marginalized group in Zimbabwe, that is, I occupied both the position of an historical oppressor and a currently oppressed.

The Australians, although non black, were not in the same position which risked their jobs and livelihoods if categories were to be maintained. They were still in the position of trying to fight for the marginalized indigenous groups, which was the position of the South African academics before the end of Apartheid, and which required naming of those marginal groups. It should be noted that the white academics of Rhodes university, and particularly the education department, were renowned for their role in fighting for the right of the black students during Apartheid, to the point of even defying the Apartheid regime's rules (Euvrard, pers. com).

7.3.5.2 *Deepening the explanation of the presence of performance contradictions in environmental education texts that I had produced for industry*

In Vol.1, Chap.7.3.1.3, I indicated that some of the characteristics of my writing which exhibited performance contradictions was due to my intuition that I needed to use strategy to achieve at least some of my aims for emancipation of the participants and environmental protection, whilst simultaneously sacrificing other aims. I assumed that there was simply no alternative (the TINA compromise).

In this section I look at my psychological make-up and suggest how this provided preconditions for my acceptance of the TINA compromise. This section is perhaps more tentative than most of this thesis (all of which is tentative) and is included because of my commitment to my methodology which demands self-reflexivity.

My guess is that the reason I could not accept the path of the 'beautiful soul', the person who accepts alienation rather than performance contradiction (Cf. Vol.1, Chap. 3.4.1.2 and 6.3.5.2) was *inter alia* because of my unresolved existential fears. Here I draw from existential psychology (May, e.g. 1967 and Maddi, e.g. 2004), although I do not agree with its tendency, in the final analysis, towards individualism and cynicism. Existential psychology suggests that most if not all psychological conflict stems from four existentially-related fears, namely:

- the fear of death, sickness, danger;

- the fear of taking control of one's life;
- the fear of ultimate loneliness; and
- the fear that there is a lack of meaning in one's life.

By accepting the TINA compromise, I effectively addressed each of my existential fears. I would keep my job and therefore I would earn enough to provide for my survival and that of my family. I need not take responsibility for my actions since I accepted that my actions were determined by the situation (that is, there was no alternative). I did not risk alienation or loneliness but would remain accepted by my peers. I could also argue that my life had meaning since my strategic actions had effected some good in the lives of the workers, and I been able to help protect the Earth. It is likely that I would not have been able to effect this 'good' if I had not compromised my principles, since this might have caused me to be excluded from the system and to forfeit what little social leverage I did possess. According to Maddi (2004), a dysfunctional relationship with existential questions results in a conformist personality characterised by materialism and pragmatism. A healthy relationship with existential questions results in courage to break with social roles and to make decisions and act outside of the 'known', even as one understands that one might be wrong. Ironically, by attraction to the idea of 'participation' as an alternative to top-down curriculum development might also be explained by my existential fears, especially the fear of having to take control of my life and make decisions. By abdicating responsibility for curriculum content to the 'participants', I was able to avoid taking any responsibility for that content (see also Vol.2, Chaps. 4 and 9).

However, in essentially a critique of existential psychology, Bhaskar (2002:84) might argue that I misidentified the cause of my suffering (death, loneliness, consequences for my actions, and lack of life's meaning) and its cure (keeping my job, my social acceptance and my small amount of social leverage). For him the reason for this misidentification would be the real truth that we are indeed embodied personalities, spatio-temporally separate and qualitatively distinct from all other beings. However, this truth is false when put in the context of a belief that our existence as embodied personalities is not all that we are. For Bhaskar, we are more than our separateness (2002) whereas for existentialists, such as May (1967), the ultimate truth is our separateness. Therefore, Bhaskar assumes that the cause of our suffering is our alienation from ourselves, each other and the Earth, although at another level we can never be disconnected from the totality, and indeed our connection sustains our alienation (Bhaskar, 2002).

There is much debate in psychological circles as to the compatibility between the existential psychologists and the psychologists such as Freud (1960) and Jung (1970) who suggested the existence of an unconscious (which the existentialists largely denied). Having taken the liberty of using certain existential concepts to perhaps provide more or less conscious preconditions for some of the characteristics of my educational materials, I will now look at what might be the unconscious components using a psychoanalytical approach, based mainly on the insights of Jungian psychoanalyst Estés (1998).

Bhaskar's concept of stratified action (Figures 6.1 and 6.2) assumes that there will be more or less unconscious reasons for my textual characteristics. For Jung, "Emotion is the chief source of all becoming conscious" (in Greenspan, 2004:265). In my case, emotional reactions to certain situations give some clues as to what my unconscious motivations might be. For example, my levels of stress increase in the presence of authority, such as the managers that I encounter in my consulting. Perhaps my identification with the marginal groups of society could also be explained by my dysfunctional relationship with authority, formed I would assume, in my early childhood experiences. My preference for the company of marginal groups could be because I am less stressed in their company, given that they are not allocated, and often purposely avoid, markers of social authority.

Furthermore, perhaps my concern to protect the rights of the marginal groups and the environment is in fact my attempt to play out in my life situation, a personal psychological drama. Jung suggested that our personalities are in part a consequence of the battle between ourselves and our anima (repressed female aspect of men) or animus (repressed male aspect of women). Estés (p310) states: "Animus can best be understood as a force that assists women in acting in their own behalf in the outer world (…). Without him, the play is created in one's own imagination, but never written down and never performed". When women have an out of balance animus, they lose their confidence. The animus becomes a menace and which manifests as a harshly critical internal voice as well as a fear of authority. Nevertheless, the authority figure (representing the powerful male assumed absent from themselves) is both feared and envied (desired). Since the animus is largely responsible for the action aspect of our being, such women might oscillate between an inability to act out of the fear of a lack of perfection, and complete action-overload, where they exhaust themselves in trying to achieve an unattainable perfection.

However, the simple answer, which would just be to balance out the female/male aspects of the personality is not easily achieved because the animus aspects which are underdeveloped are such because they were repressed by the woman during childhood. That is, the girl child may have survived childhood by repressing her ‘bad’ sides, such as her ability to stand up for herself or be assertive (in most cultures, women are expected to be submissive), her ability to make her own decisions and know what she wanted/needed (she may have been accused of selfishness). Such women will perhaps accept an external role of victim that mirrors their own inner victim. If a woman begins to strengthen her animus, she is likely to face discouragement from an internal voice from childhood (and perhaps actual discouragement from the significant people in her life who are used to her as a victim). This internal voice reminds her that her survival depends on the repression of the animus. Therefore, the very real threat of losing one’s job mirrors the internal psychological threat derived from past childhood experiences.

The path to become more whole thus becomes blocked by a fear of survival (internally experienced and externally mirrored). It is often at those moments in her life, when the woman is growing in terms of her animus, that she will have powerful dreams (nightmares) in which the animus will appear as the dark male/demon. Estés (1992:310) comments that women with poor animus development tend to have dreams which “may present many images of injured or injuring men.” At the level of her lived experience, she may actually find herself fighting with/being threatened by (probably men, but not necessarily) who resent her new found power (find her to be aggressive, uncompromising, hard-nosed, unprofessional). Therefore, it seems likely that there might be a relationship between the process of a woman[75] becoming more balanced psychologically and her acceptance of the TINA compromise, resulting in her lack of compliance to logonomic rules and lack of identification with the ideological complex. The challenge to face and integrate our repressed anima/animus is considered by psychotherapists to be one of the most difficult but the also most rewarding (Estés, 1998).

This psychoanalytical analysis perhaps helps explain my writing of environmental education materials because it explains why I was writing from the perspective of a victim (I felt that I was powerless to effect change and subscribed to the TINA compromise). Perhaps my role as consultant, requiring confidence and a sense of personal value, clashed with my sense of self as a powerless victim, lacking self confidence and a sense of personal value, and resulted in my stress within situations that required me to interact with those I perceived as authorities. This mirrored my relationship with authority. I oscillated between a fear of it and desire for it, based on my poorly developed animus which prevented me from accepting my personal power but also resulted in my attraction towards (desire for) personal power. Furthermore, my need to protect the rights of the under-dogs might be explained as a projected need to protect my inner victim. The marginalized groups thus represent my own marginalized personality, which is an example of the 'textual transformation' suggested by Hodge and Kress (1988:206-208).

However, as Jungians such as Estés (1998:310-318) suggest, this ambiguity towards authority, which was the external expression of my internal conflict, was part of a process of personal growth towards a more balanced anima and animus. I could have chosen an easier life path in which I avoided all contact with authorities. However, I did not allow myself this easy life because of the psychological need to heal, which Jung suggests propels all people's actions (Jung, 1970). Previously, I had been an activist in organisations that set themselves up against authority. My work as a consultant was the first time that I had chosen to be more 'mainstream'. This was a step in the direction of my accepting my personal power as a respected authority

[75] The male path to wholeness will involve 'finding his feminine side' or his anima. However, some therapists (e.g. Barden, 2005) suggest that the simple dichotomy of anima and animus does not capture the variety of human experience (for example, how does the idea of the anima and animus relate to gays and lesbians?).

(rather than powerful as a subversive element, the invisible victim fighting the oppressors). However, it was not a comfortable place for me.

7.4 SELF-REFLEXIVITY: TO WHAT DEGREE IS MY ANALYSIS AN ARTEFACT OF MY OWN IDEOLOGICAL COMMITMENTS

Since I have embarked on self-reflexivity at a number of points in this thesis so far, this section will be a summary of my self-reflexive process, with some additions.

Early on in my research, my ideological commitments were the result of unreflected acceptance of the (marginal, oppositional) ideology I had embraced and which underpinned my methodological understanding. I therefore made the same epistemological and ontological errors that I have since critiqued, which Sayer (1999) might describe as pomo-flips (see also Vol. 2, Chap. 3). My self-reflexive grappling with the internal contradictions of this position lead me to the methodological stand that now informs this thesis.

It could also be argued that every aspect of this research was informed by self-reflexivity, since, as Fairclough (1989: 167) writes, "The analysis of discourse processes is necessarily an insider's or a member's task". Thus, the analysis of the research texts required my personal experience and understanding of the process of writing. This was particularly visible in my treatment of my fictional character, Sanchez. For example, like Sanchez, I have collected a fair amount of air miles in the course of my environmental work, and at times, I do not take care of myself, or the environment for that matter, because I am too busy trying to make a difference in the world.

My analysis of my own writing for industry was particularly self-reflexive. Here, I identified several ideologically-based performance contradictions in my work. For example, my pragmatism with regard to my TINA compromise in the writing of the environmental education aims and objectives for the Hard Hat Company were a good example of my questionable ideological commitments, which, despite my critique of them, I nevertheless up-held.

However, a more difficult question that I ask in this section is whether this current work exhibits performance contradictions. I suspect that there are many such mistakes, but I have done my best to report any that have occurred to me as I constantly applied self-reflexivity to my own work. Furthermore, this thesis can represent only part of the process of the research. After Step 13 (emancipatory praxis), when I put into practice the ideas from Step 12 (suggestions for better praxis as an environmental educator), there will be further opportunities for self-reflexivity as I check performance against theory.

Finally, I must ask of my own work: do I have political motivations? The answer is yes. I have been motivated towards my own equality as well as the equality of all individuals. I trust, however, that this motivation, whilst undoubtedly political, is not beset with the contradictions that would be present if my motivation was advocating only the well being of the group to which I belonged, at the expense of other groups.

7.5 CONCLUSION

In this chapter, I have used the theory that I developed from my discourse analysis of the Monterrey recommendations (Chapters 5 and 6) to explain the characteristics of other texts, namely texts which I had collected within my corpus and which related mainly to environmental education texts in industry and business and Zimbabwe and South Africa. I divided the theory into two sections, the first postulating the existence of causally aefficacious philosophical mistakes relating mainly to theories of structure/agency and theories of epistemology, relevant to the writing of the text; and the second postulating causally aefficacious events/trends at international, regional, local and personal levels, relevant to the writing of texts.

I maintain that in this process of verification of the theory, there was no significant evidence to suggest that it was incorrect. This, however, is not to imply that therefore the theory is certainly correct. Rather, this theory is my best guess as to the tendential causal mechanisms behind the characteristics of the texts in question. Furthermore, in applying the theory to other texts, the theory was deepened because it revealed the contextual (spatio-temporal) effects on the texts.

Some of the ways in which the theory was deepened spatio-temporally in this process include:

- The effect of time on textual characteristics was demonstrated. For example, the ESKOM texts (Vol. 2, Chap. 2)) showed considerable changes over time, moving from a strong environmental discourse to a Black Economic Empowerment (BEE) discourse, and from a dominant, colonising, paternalistic discourse to a discourse of partnership and participation.
- The manner in which texts are often 'textured' because of the contextual circumstances was expanded upon. For example, the South African environmental education texts had different approach to the naming of marginal groups to the Australia texts, because of their context (Cf. Vol. 1, Chaps. 7.3.4 and 7.3.5.1).
- The way in which the same grammatical strategies used in one context by the dominant groups to maintain power are available to non-dominant groups in another context to relatively safely challenge the *status quo* was elaborated. For example, this is illustrated by the way that the silencing of emotion was used by the management of the Zimbabwean agricultural business to silence dissent, but was also used by subversive actors to make strong statements without fear of their personal safety (Cf. Vol.1, Chap. 7.2).

In the next Chapter, I will put forward tentative suggestions for the reduction of the theory/practice inconsistencies identified in the analysis so far. I will therefore move from explanation to a tentative formulation of praxis.

CHAPTER 8 TENTATIVE SUGGESTIONS TOWARDS IMPROVED ENVIRONMENTAL EDUCATION IN BUSINESS AND INDUSTRY, WITH A FOCUS ON LANGUAGE

Or

"An environmental education praxis for business and industry (Written in pencil)"

8.1 INTRODUCTION

The motivation for this research was the problem that the presence of environmental education discourse did not lead to significant improvements in environmental practice. In Chapters 5-7, I developed an explanation for this lack of the fulfilment of the intentions of environmental educators in industry. This explanation provided an idea of what we are currently *doing* as environmental educators in industry as we write environmental policy, recommendations, training materials, annual reports and even meeting minutes, which I have argued are educational texts. It indicated how our actions are, at best, reducing some of the environmental aspects but possibly not to the extent required to prevent our environmental crisis. At worst, our actions are simply acting as a smoke-screen for unhindered environmental damage by business and industry, as well as unhindered unethical treatment of non-dominant groups. This chapter therefore constitutes Step 11 of the research methodology, moving from explanation to a formulation of how we can deal with our problem. I therefore ask what can we *not do* in order to solve the problem? Or, how can we cut the supply lines of the problem? In this chapter, based on the critical realist 3rd Level (Cf. Vol.1, Chap. 4.2.3), I assume that the prohibition against talking rationally about values was wrong. I therefore assume that we can use the findings of research to inform ethical positions (Bhaskar, 1989:104, 105; Bhaskar, 2002:210).

However, as Bhaskar (1993:169) has commented, this is not to imply that I should offer a single formula applicable to every situation. Rather, the whole point of dialectical practice is that it requires the meta-ethical virtue of *phronesis*, demanding skilful application case by case (illustrated to some extend by the effect of spatio-temporality on the actual textual events described and explained in Vol.1, Chap. 7). Moreover, it could be argued that blanket ‘recommendations’ are

> *(…) patronizing and diminishing of the autonomy of the agents to whom they are addressed — that the most one can do is to assert a hypothetical second-person with a possible assertoric imperative embedded within it, along the lines of ‘if I were you and wanted shelter (which you do) then do x’. Every expressively veracious fiduciary remark would then have to take into account the concrete singularity of the agent to which it is addressed (Bhaskar, 1993:169).*

Therefore, perhaps I should add that this chapter is suggesting merely that: if I were you, and indeed we are both environmental educators, and if you want to improve the environment and therefore the quality of life of the Earth’s inhabitants (which you do), then I would suggest that you consider the following…

Additionally writing ‘recommendations’ might also be critiqued on the basis of the existence of perspectival relativism and plurality, which perhaps makes interpretation difficult. Neverthelss, despite the value of such cautions, “it seems unlikely, in the context of counter-hegemonic struggle, that any objective such as emancipation from the constraints$_2$ imposed by, say, the capitalist mode of production could be achieved without (α) a sketch of the principles and mechanisms under which agents would flourish without it, or (β), more generally a plausible strategy for advance in such a direction” (Bhaskar 1993:170).

This chapter is just such a ‘sketch’ and a ‘strategy’ and since it is based on action, I will dedicate the first part of it to an outline of the features of an ethical action provided by Bhaskar (2002:241-242). Perhaps not co-incidentally[76], these (adapted) features of ethical action provide an appropriate framework for the suggestions towards emancipation that have become evident from this research.

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[76]With regard the potential criticism that this chapter merely restates Bhaskar’s work, the fact that the outcomes of this research closely match Bhaskar’s outcomes for ethical action is to be expected given that both Bhaskar and I are explaining and critiquing the same demi-reality. The novel contribution of this thesis is that it explores the way ethical praxis might be framed specifically within the context of environmental education in business and industry. Bhaskar provides a guide to ethical practice in general.

In the second part of this chapter, I take each feature of Bhaskar's ethical action, apply it to the findings of this research, and thus use it to provide concrete recommendations towards improved use of language in environmental education in business and industry. Although these suggestions are largely linguistic, they do not offer an ethical grammar for environmental educators, as grammatical structures are not themselves ethical or unethical. It is their deployment, in context, that determines whether they function ethically. For example, grammatical strategies which hide information are sometimes merely space-saving tactics, but they could also be strategic (Cf. Vol.1, Chap. 5.3.2.3). It is the dualism of the function of grammatical structures that makes them ideal in the maintenance of ideological positions. Whilst the focus is on language, the following suggestions cannot be described as only linguistic, since they are embedded in the world and certain of their characteristics, such as their reflexivity and relationship to praxis, insist on this embeddedness.

At the end of Vol.1, Chap.6, I provided a diagram (Fig 6.3) of the relationship between our current, false, formulation of reality (demi-reality) and (alethic) reality. An ethical approach to environmental education will therefore focus on removing the false reality that occludes, or overlies, alethic reality. In the words of Bhaskar (2002:35):

> *So the vicious world that we have created or sustained depends precisely upon those virtuous qualities and would not exist for a moment without them, which only have to be recognised and released for us to escape from our contemporary crisis, our self-made malaise.*

8.2 BHASKAR'S (ADAPTED) FEATURES OF ETHICAL ACTION

The adapted features of Bhaskar's 'spontaneous right action' (which I call 'ethical action') are as follows:

8.2.1 **Ethical action should exhibit maximal coherence**

I understand this to mean that there should be consistency between theory and practice such that performance contradictions are avoided. In this thesis, several performance contradictions are described in business and industry, for example, their contradictory use of words such as 'sustainability', and the contradictions between their claims of acting in the best interests of all, whilst inequality continues to grow.

The possibility of consistency depends on the agents being embodied and thus able to reflexively identify mismatches in theory and practice as a result of their own experience (they are part of the world) – which Bhaskar (1993:134) calls a 'meta-reflexive totalising situation' or 'meta-critique'. Reflexivity does not always depend on this kind of accountability. For example, we can reflexively assess our praxis by making our actions accountable to social convention. As Bhaskar writes (1993:250) "…it seems intuitively scientifically and philosophically unsatisfying and indeed refutable not to see subjectivity as grounded in *some sense*, or over-reached by objectivity, if only in a meta-reflexive totalizing sitution…" Bhaskar's use of the term "totalizing" depends on the idea that agents are part of the "totality", i.e. it denies the separation of the mind and body.

Bhaskar (1993:134) explains that the concept of totality insists that, despite his warnings about actualism and his stress on the complexity and differentiation of our world, dialectics will always strive to cut across disciplinary boundaries, as phenomena in a mish-mash world do, and to *totalize*, to coherently draw together the intrinsically connected into an internally concrete (= well-rounded) whole.

This first feature of ethical action is therefore not the coherence (to theoretical positions regardless of experience) of analytical philosophy (Haack, 1998:143) and neither is it 'naturalistic coherence', although it has some similarities, because the latter lacks the concepts of alethia and absence (Shipway, 2002:221-251). Rather, this is the kind of coherence that is attainable because we are embodied beings (Gough, 2004) such that our theory and our practice can and should be aligned. This kind of coherence is characterised by the assumption of alethia and a lack of performance contradictions in our praxis. We are held accountable to this coherence by our meta-reflexivity.

8.2.2. **Ethical action must be in the moment**

I understand this to mean, for example, that we should not acting from a fear of survival based on a past, no longer relevant experience (e.g. from childhood) and projected into an (incorrectly anticipated) future as this may not be an adequate base for current actions. In this thesis, both Sanchez (Cf. Vol.1, Chap 6.4) and I (Cf. Vol.1, Chap. 7.3.5.2) at times made the mistake of living according to the past and future. To move beyond this mistake may require that we are aware of our unconscious motivations. Ethical action of this sort would also not be motivated by retribution, since addressing past grievances through revenge will not efficiently take care of current pressing concerns. This is closely related to the next point, which suggests that ethical action is efficient.

8.2.3 **Ethical action must start from where we are**

The opposite of this point is voluntarism. As mentioned already, Bhaskar (2002:277) has stated that, “We can never do better than our best”. This means that we should act with the resources at our disposal, based on a true understanding of our strengths and weaknesses and our own specificities. Hence, what is spontaneously right for one person might not be right for other persons. Ethical action should thus be efficient and steer a middle way between excess and deficiency, based on an appraisal of necessity. This point is illustrated by the Shipway (2002:309) comment that teacher burn-out is unnecessary and questionable from the point of view of a critical realist approach to education.

8.2.4 **Ethical action will be conducted from the standpoint of self-referentiality such that the only thing we can effect is our response to the situation we are in**

This point also requires that we avoid blaming other agents or circumstances, without distorting or underestimating the causal efficacy of those agents or circumstances. Blame is the style of the ‘victim’ and it is disempowering since it hands the responsibility for our circumstances to an ‘other’. In this thesis, the TINA compromise common in business and industry is a good example of this disempowering position. Avoiding blame is not to suggest the voluntaristic alternative that we have entirely created our circumstances, which merely shifts the blame to the victim, but to accept our circumstances as they are and act accordingly.

Some may argue that a praxis which assumes self-referentiality may have limited effect because we are only changing what we do, not what others do. However, this argument is based on a view that agents are disassociated from the totality of our world. To assume that ethical praxis must be based on self-referentiality is not a position of limited transformative value, because as Bhaskar has explained (2002:xxxv), as beings in a stratified reality, "…there is no way in acting that I cannot affect all the other planes of social life".

8.2.5 **Ethical action should be directed towards the abolition of inequalities and master-slave relationships**

Action will therefore be oriented to the idea of that 'the free development of each is seen to be a condition of the free development of all' in which there is no separation between one's own being and the rest of the universe (implicit in any position that denies the mind/body split). This position automatically avoids the contradiction in the ideological complex where sectional interests are set against each other. To act in this way is to act without ideology, which is narrowly defined in this thesis as a functionally related set of contradictory versions of the world, coercively imposed on one group of people by another (Hodge and Kress, 1988:3). This point is therefore closely related to the first point, which insists that action has 'maximal coherence'.

Another way of understanding that the free development of all depends on the free development of each is to remember that the world is an open system, such that we cannot separate ourselves from each other and from the environment. The opposite of this position is the position demonstrated in this thesis, which is held by business and industry's ideological complex and perhaps best illustrated by its celebration of Machiavelli, namely, that we must fight for our own interests at the expense of the interests of others. For example, we may think that wealth can protect us from pollution, but whilst even buying bottled water or pumping clean air into our houses may offer some amelioration of certain symptoms, this relief is available only at the expense of other freedoms. For example, we can no longer benefit from the healthy minerals in natural water and we can only move in spaces where the air has been 'cleaned'. We may think that other people's poverty does not result in our lack of freedom, but this can also be shown to be incorrect. Whilst there remain severe disparities in wealth, the rich will need to protect themselves from increases in crime related to increases in poverty and thus their freedom of movement and their safety will be jeopardised. Some might argue that a pre-condition for the attack on New York's twin towers was the USA's belief that their comfortable lifestyle was possible whilst people in other countries suffered poverty, a position also held by Arundhati Roy (December, 2001) in her article *The Algebra of Infinite Justice*. In a fortunate irony, this conception of ethical action means that when we work towards the well being of others, we are working towards the well being of ourselves.

Acting to remove inequalities, allowing the full realisation of all people, does not mean behaving the same way towards all other people. This is because people differ in terms of what constitutes their realisation, but also because of the differential relationships in which they stands to all other people. Therefore, the 'totality' of which we are all a part is a differentiated one, and indeed its differentiation is the condition for the need for equality, since if there was no differentiation, there could be no inequality (Bhaksar, 2002b).

8.2.6 Ethical action will be carried out by an agent from the position of epistemological humility, rather than from the position of epistemological privilege

This means that the agent will be willing to learn from everything that happens and to see learning as an inevitable part of the process of embracing change and expansion into a greater completeness (e.g. reduced pollution, healthier people, reduced theory/practice contradictions). The opposite of this position is the assumption in business and industry of the absolute rightness of positivist epistemologies which reify expert knowledge. The humility achieved by epistemological relativism allows a plurality of knowledge based on the idea of the transitive component of truth. It is thus possible for two significantly different knowledges to exist, e.g. the poetic understanding of 'love' versus a biochemical understanding of it which are not reducible to each other, but which nevertheless are both true and which add to our understanding of the phenomenon of 'love'. Instances in which knowledges appear to contradict each other are important learning opportunities requiring dialectical synthesis such that one achieves a transcending, more unifying point of view (Bhaskar, 2004:115, 116). Humility is required in dialectical synthesis since it insists that knowledge is fallible and open to change (learning).

8.2.7 Ethical action will be based on the idea of 'shedding'

There are two interpretations of shedding, both of which are required.

a) Action as 'shedding' based on an understanding of the Transformational Model of Social Activity (TMSA).

Unlike the mistaken models of structure and agency that we see in business and industry (such as instrumentalism or the *illicit* dialectic), this action perceives a dialectical relationship between structure and agency such that our individual actions are constantly reproducing structure, and structure is constantly reproducing individuals. Change is therefore not *ex nihilio*, but within a context of the past which is "all pervasive" (Bhaskar, 1993:144). Since we are constantly reproducing our current circumstances, action to effect changes must necessarily be an action of (un) action, which Bhaskar calls 'shedding'. Other, false, approaches to structure/agency are able to exploit internal contradictions to achieve ideological aims (Cf. Vol.1, Chap. 7.2).

b) Action as 'shedding' based on the necessity of (un)knowledge as a requirement of arriving at relatively new knowledge.

In the positivist accounts of knowledge that are common in business and industry, there is no place for absence, since, being unempirical, it is assumed that absences are not real. Bhaskar (2000:55) argues that, "Positively, absence appears in the guise of the space (the gap or the unbounded) out of which there emerges the moment of transcendence and within this moment that moment of creativity (…)". Absences of this sort are therefore a prerequisite for the creative process (action) of explanatory theory development. Related to a dialectical understanding of knowledge, we might say that knowledge is constantly being reproduced by our social activity and indeed, by our 'thinking'. Relatively new knowledge requires that we (un)think what exists already, or that we allow the existence of (un)knowledge. Perhaps similarly, Gough (2001) has suggested the importance of ignorance in environmental education. The moment of transition between one explanation of something and another (or between no explanation and a first explanation) is a moment of absence. Peirce called this creative process 'musement' or 'pure play'. However, it is also known as retroduction or abduction (Peirce, 1901; Eco, 1983; Danermark *et al,* 2002; Bertillison, 2004; Price, 2005b). An aspect of pure play is that it results in new, surprising knowledge (Bergman and Paavola, 2003).

8.3 AN ILLUSTRATED 'SKETCH' OF ETHICAL ENVIRONMENTAL EDUCATION FOR BUSINESS AND INDUSTRY

In the rest of this chapter, I use the above outline of ethical action to guide my discussion of an ethical environmental education specifically for business and industry.

8.3.1 Possible characteristics of ethical environmental education if it were to exhibit maximal coherence: imagining the absence of ideological complexes and the presence of ethical logonomic systems in business and industry

Our philosophical mistakes are, I assume in this thesis, politically motivated. Therefore, the precondition for the remarkable persistence of these mistakes is that they pragmatically 'work' for those groups (dominant, marginal or previously marginal) which have ideological complexes designed to forward their agenda powerfully over the agenda of others. Ideological complexes by definition exhibit performance contradictions because of their need to both up hold the well being of certain sections of society by dominating other sections, whilst at the same time contradictorily claiming that their (sectional) interests are the best interests for all members of society.

Therefore, in environmental education in business and industry, a step towards absenting false philosophies, and thus allowing maximal coherence by giving access to philosophical alethia, is to absent our ideological complexes. This is consistent with the feature of ethical action called 'shedding', explored by Bhaskar (2002b) (see also Vol 1, Chap 8.1.7). It (simply!) means that our stated aims for the achievement of the well being of all, must be matched by theory and action that *actually* effects the well being of all. This matches the already existing fact that, because we are embodied beings and part of the open-system that is our world, what is best for all beings is already what is best for every individual being. Thus, this environmental education will be non ideological (assuming the narrow definition of ideology as 'false consciousness' used in this thesis) and will stop occluding the already existing truth that the well being of each is bound up with the well being of all. This is consistent with the feature of ethical action (8.1.5.) that states that action should be directed towards the abolition of inequalities and master-slave relationships.

As I demonstrated in Vol.1, Chaps. 5 and 6, the performance contradictions inherent in ideological complexes of business and industry are cloaked by the workings of its logonomic systems (with attendant, false, assumptions of structure/agency and epistemology). The logonomic systems provided particular rules about who could say what, when, where and how. If environmental education in business and industry were coherent, that is, lacked performance contradictions, there would be no need for the use of grammatical tactics to hide contradictions and therefore no need for the current logonomic systems.

Therefore, a result of our absenting of the ideological complex (es) is that we must imagine a different kind of logonomic system. Perhaps this logonomic system will be one in which it is assumed that speech (or perhaps communication) is a characteristic of our being-in-the-world, such that all things are signs and thus speech is a constant and significant given. Bhaskar (2002:304) acknowledges that this poststructural/postmodern concept - that "the world is a text" - was an important development in the discourse of modernity. Emotion, in the philosophical sense of the term rather than the psychological sense, will perhaps be assumed to be an important first step in the knowledge making processes (e.g. Peirce, in Eco 2000; Whitehead, suggested by Brewster, pers. com). This logonomic system (or perhaps systems) will also assume that we can speak not only of the empirical and the actual, but also of what is simply ‘potential’. Because it will allow us to imagine ‘potential’, it will allow transformation and thus speech structured by this logonomic system will have a tendency towards being transformative. This logonomic system will not have narrowly defined rules about who can speak. Indeed, it will assume that all beings speak, including the non human environment. The idea of having representatives of the Earth speak for the Earth is explored by Merchant; she calls it a “partnership ethic”. She writes, “Both nature and humans will have voices, and both voices will be heard” (Merchant, 2003:229).

This logonomic system will assume a model of social structure/agency along the lines of the TMSA, such that agency is best described as shedding. This logonomic system will therefore be consistent with all of the features of action outlined above. I would go so far as to say that there would be no difference between this re-imagined logonomic system and the features of ethical action applied to language. What follows in the rest of this chapter is a re-imagined logonomic system for environmental education in business and industry.

Perhaps the most unethical aspect of much contemporary environmental education in industry is that it suggests that the market system, which is dependent on increased growth of production and consumption, is an adequate model for achieving sustainability and social equity. Yet, the evidence in terms of environmental health and social security shows otherwise and indeed the internal logic of the market system can be demonstrated to be flawed (Naess, 2006). This marketisation of environmental education, which was present internationally, as we saw in the Monterrey recommendations, and in Southern Africa, as we saw in every company report examined, violates the principle of maximum coherence. Ethical environmental education will support economic systems that, to the best of the educator’s always-developing knowledge, ensure that each individual is able to flourish in a healthy environment. Almost certainly, ethical environmental education will advocate some kind of reduction in production and consumption, as well as amelioration of the effects of production and consumption.

Another example of unethical semiosis explored in this thesis was the presence of the colonisation/appropriation dialectic, for example, in the appropriation of the terms 'consumption and production' (Cf. Vol.1, Chap. 5.3.2.5) and 'participation' (Cf. Vol.1, Chap. 7.3.1.3) by business and industry. Ethical business language would not need a mechanism to protect sectional interests by appropriating and thus defusing oppositional discourses since it would genuinely be aiming for the flourishing of all. Instead, newly imagined, transformative ideas would be considered to be useful, rather than threatening, and their attendant language would be included in discourses in ways that would be transparent and honest. That this is possible was demonstrated by the way that the manager who really did have the interests of his participants at heart (they were all managers) was able to use the language of participation without contradiction (Cf. Vol.1, Chap.7.3.1.3).

In the case of the agriculture business (Cf. Vol.1, Chap. 7.1.1.3) which experienced the death of one of its workers because they had removed their trucks' tail gates, this would possibly not have happened if non experts and non humans (such as the tail gates themselves and the actual bodies of the workers) had been allowed to speak in non professional ways. Perhaps the managers would have 'heard' the fear (emotion) of the workers as they placed themselves in jeopardy on the trucks. Perhaps the managers would have 'heard' the story being told by the trucks and their relationship with the workers. That the company did eventually re-fit the tailgates is perhaps a good example of how, in the end, it became obvious that the well being of the workers did affect the well being of the management. This simply was the truth, which was already functioning, but which was occluded by an ideological complex of demi-reality which assumed otherwise. The unsettling question suggested by this example, however, is: how many of us will have to die and how much damage must be done to the environment before we stop living in demi-reality?

8.3.2 **Possible characteristics of an ethical environmental education in business and industry if it was 'in the moment'**

The psychological dysfunctions explored in this thesis, related to our educational textual practice in business and industry, which are linked to agents' unresolved pasts and poorly anticipated futures, are relevant here. Therefore, the way to interpret the necessity of being in the moment is to consider it to refer to the necessity for acting according to the demands of the current situation only, and not acting towards our past fears, angers and hurts. For example, Sanchez could not fully accept the evidence of the inconsistencies in the market system because this would threaten his sense of personal identity, which was linked to his sense of his and his family's survival. However, was it actually true that his survival depended on his full identification with the dominant ideological complex or was he exaggerating the danger he would be in if he began to act more coherently? There is no way to say from the outside what the most ethical action would be for Sanchez in this instance, since *phronesis* demands skilful application case by case. However, what we can assume is that his fears, brought with him from the past, and projected into the future, were likely to be clouding his judgement. This was also true in the cases of his less-than-optimal position on gender and poor people. Sanchez's psychological issues were the precondition for this cloudiness. Therefore, it seems appropriate to suggest that environmental educators who are relatively psychologically 'whole' will be better able to use *phronesis* in their assessment of each educational situation in which they find themselves (Bhaskar, 2002:92). For environmental educators to act 'in the moment' it seems we need to absent the absence of psychological health.

8.3.3. **Possible characteristics of an ethical environmental education in business and industry if it 'started from where we are'**

Being able to assess the current features of a situation, without clouding our interpretation with questionable past and future considerations, is perhaps also to 'start from where we are at' and is therefore related to acting 'in the moment'. We can only do what we can do with the resources that we have (Bhaskar, 2002:46). Or as Haraway (1991:192) put it, "All is not to be done from scratch".

However, another way to look at the importance of 'starting from where we are' is perhaps to consider it in the light of the tendency in environmental education in business and industry towards voluntarism (as one aspect of the illicit dialectic, Cf.

Vol.1, Chap.2.6.2), especially in its form of decisionism. This decisionism, I demonstrated in Vol.1, Chap 6.1.2, was reproduced in part by the use of metaphors that evoked images of the military, civil engineering and mechanics, which were also instrumental in reproducing the characteristic of environmental education as hierarchical. Thus, the dominant decision-makers (via voluntaristic decisionism) simply build the organisations, policies, legislation and various social structures which then manipulate the behaviour of the passive non-dominant, whose role is that of non human, malleable materials (determinism). Sisitka and Schudel (2006) have indicated the role of this decisionism in the writing of the South African curriculum, such that the complex interaction of a wide variety of factors are not properly considered, from historical negative associations towards teachers of the very youngest students, through to inadequate assessment of resources available to implement the decisions.

Decisionism, with its attendant determinism, has the potential for a kind of violence to be enacted on the people who are supposed to effect the decisions. This is because the people supposed to effect the decisions are not supported by a concept of the complexity of the situation, such that it will involve appropriate resources. Furthermore, their own role in the process is not acknowledged (they are merely acted on), so that they feel disassociated from the process and their role is not clear to them. When the people supposed to enact the decisions do not manage to do so, an option available to the decision-makers is to force them to do it, perhaps by legislation or other threat of violence, such as evaluations with attendant dismissals. Rather than fail in the face of symbolic violence, people may find themselves having to make up for the lack of general resources by giving up their personal resources, such as by working overtime, paying for further training at their own expense, or perhaps, through corrupt practices (such as bribing the evaluators). Another option might be that they give up the task altogether. Even if no overt symbolic violence is added to the situation, the inability of the actors to effect the decisions can result in a general failure of the enterprise, in itself problematic, but additionally one must assume is psychologically damaging. Essentially, the actors will have been placed in a demoralising, no-win situation.

Perhaps the lesson here for our environmental education writing in business and industry is that we should avoid the current characteristic use of metaphors taken from military and civil engineering sources. Instead, we might rely on metaphors of webs and flow (Cf. Vol.1, Chap.3.5.5). Fairclough (1989:120) mentioned that the choice of metaphor often presents a choice of follow up action. I would suggest that metaphors of webs and flow would insist that we consider historical aspects of any situation and that we consider the complex interlinking of the components of the problem with many other components of reality. Our follow up action would thus tend to take into consideration the mutual co-construction of situations, its history and its place in the broader context. For example, if we see industrialists, environmental educators, the public and the environment as part of Haraway's metaplasm (1991:20), we would see how closely enmeshed they were. Apart from avoiding voluntarism, we would also so see that all the components had agency, which would prevent the tendency towards seeing certain components as simple 'victims' of circumstances, who are merely acted upon.

Ironically, despite the existence of demi-reality, we cannot not act in the moment and neither can we not start from where we are. Ethical action thus involves absenting the constraints that absent the full realisation of the fact that we can only act in the moment and start from where we are.

A constructivist educator who emphasised the importance of starting from the place where the students were, and moving from there by scaffolded learning situations is Vygotsky (e.g. 1962, 1978 or in Webster, 1994). His concept of the Zone of Proximal Development (ZPD) is a good example of a causally efficacious absence, since it is a 'potential'. Vygotsky's work is perhaps consistent with Bhaskar's (2002b:xxx) claim for education that it should be focussed on allowing learners to unfold that which they already potentially know, which is perhaps equivalent to the ZPD. Shipway (2004) has also suggested constructivism as an educational approach consistent with CR.

8.3.4 Possible characteristics of an ethical environmental education in business and industry if it was conducted from the standpoint of self-referentiality such that the only thing we can effect is our response to the situation we are in

People in business and industry, especially those who are familiar with Machiavelli (1961), are likely to be well aware of this point of self-referentiality. Nevertheless, there is a tendency in business and industry for people to take the true premise of the necessity of self-referentiality to arrive at the false conclusion that therefore we are entirely separate from each other and from the world. This mistake (of our severe and total split from the rest of the world) (Cf. Vol.1, Chap. 3), combined with the theory of evolutionary biology (Cf. Vol.1, Chap. 2.7.2.1) and the writings of such writers as Hobbes and the Adam Smith of the "Wealth of Nations" (Wilson and Dixon, 2006) (which insist that our responses are always purely self-interested), results in an assumption that our best responses are those that insist on our well being at the expense of the well being of others. Either one is oppressed, or one oppresses; there is no alternative to the cut-throat character of business.

This confusion in the business and industry understandings of agency is well illustrated by the old 'Das Adam Smith Problem' in which Smith is supposed to have originally suggested that humans are motivated by ethical 'sympathy' in his 'Theory of Moral Sentiments'. Then he (supposedly) changed his mind to say that they are motivated by pure-self interest in his 'Wealth of Nations'. Wilson and Dixon (2006) have shown that this problem is not a problem if we acknowledge that reality is stratified: at the level of the empirical. Only we can act, and we can act only with the resources that we have; but at the level of the non-empirical, the Smithsonian actor somehow enters into the feelings of others – a possibility based on what Smith calls an 'organic connection' between us – your feelings inside of myself and vice versa, a 'man within' so to say. Assuming, as I have done through out this thesis, that humans and non humans are a 'totality', connected in an intimate web of relating, then awareness of this connection, or sympathy, leads to moral sentiments which may be altruistic. This adds to the idea that because the world is an open system, we are necessarily affected by the lack of well being of others (human and non human). However, the empirical level of the reality of action insists that: "What we do in fact sense is right is context-sensitive" (Wilson and Dixon, 2006:272). Thus, Adam Smith was not contradicting himself, he was merely talking about different levels of reality in his two different books.

To put it another way, if we are part of the world, then to take care of oneself, is to take care of the world, but to sacrifice oneself in certain circumstances to ensure the well being of others is still to take care of oneself, since the self is part of that totality. Whether or not the balance falls on using resources for protecting the 'self singularity', or using resources for protecting the whole, out of which the self is an unfolded singularity, is entirely dependent on the empirical circumstances of each different situation, a characteristic already mentioned of *phronesis*. Perhaps it would be useful to distinguish between self-interest$_1$ and self-interest$_2$: the former being consistent with equality and resulting in a coherent, non ideological view of the world economy (the advantages of economic equality are discussed by Wayburn, 2005); the latter resulting in incoherent ideological complexes. Bhaskar (1993:171) sums up this concept by suggesting that the logic of a eudaimonistic society founded on universal human autonomy: "…will be totalizing and oriented to the real needs and interests of the *concrete singularity* of each individual as a condition for the free flourishing of all".

8.3.5 Possible characteristics of an ethical environmental education in business and industry if it was directed towards the abolition of inequalities and master-slave relationships

This point has already been explored to some extent in 8.3.1, which looked at the necessity for coherence. I will not reproduce those arguments here, but will therefore concentrate on some context-specific linguistic characteristics of business and industry which can tendentially be used to construct unequal relations. What follows are therefore some ideas which may assist environmental educators in business and industry to use language to reproduce equality, not inequality. These linguistic characteristics were outlined in Table 4.3 and they include:

- Assumption of mutual knowledge
- Turn taking
- Politeness
- Allocation of agency
- Slippage of meaning

8.3.5.1 *Assumption of mutual knowledge*

It is appropriate to assume mutual knowledge when this mutuality exists, but inequalities are reproduced when business people assume mutual knowledge that is not in fact present. A common use of the assumption of mutual knowledge to insist on maintaining unequal social relations is the manner in which Environmental Impact Assessments (EIAs) are written. The technical language prevents the communities from accessing relevant information that affects their lives, and this gives power$_2$ to the business people to go ahead with their plans, even if these plans are to the detriment of the communities and environment (Barnard, 1997).

Therefore, environmental educators in business and industry will affect a semiotic praxis that will include assessments of knowledge mutuality and will include practices that ameliorate differences, such as providing opportunities for the group lacking knowledge to increase their knowledge, or converting technical knowledge into simpler terms, or employing a mediator who is skilled in interpreting technical language to a non technical audience. Critics who might cynically point out that knowledges are by definition mutually exclusive are moving from the true premise that all knowledge has a phenomenological component (no one can know exactly what it is like to be someone else) to the false conclusion that therefore we can never understand each other. Assuming that there is no mind/body split, and thus allowing the existence of the totality, closes the hermeneutic circle and does make it possible for us to understand each other.

8.3.5.2 *Turn taking*

Monologues may not always be reproductive of unequal power$_2$ relations if the context is appropriate, such as if the person giving the monologue has been invited to give a speech on a particular topic. However, unequal relations *are* often reproduced through the existence of unequal turns to speak. Often, oppressed groups are given no opportunity to speak or speech is allowed (or the opportunity to speak is supposedly provided), but with qualifications (for example, it must be professional, empirical, non emotional). Given the logonomic constraints, there is a tendency for the speakers to merely repeat the language of the experts back to the experts in a non threatening way, or for the speakers fail to take up their ‘opportunity’ to speak at all. For example, in the agriculture business, meetings were held in which decisions were made which effected the workers, but the worker representative at those meetings was largely silent. It is also well documented, that in mixed company, men speak more frequently than women (Spender 1980) and this fact is surprising for many people because, supposedly, anyone is allowed to talk as they wish in conversation. In the Monterrey recommendations (Cf. Vol.1, Chap. 5.3.2.1), despite their presence at the meeting where the recommendations were formulated, the voice of women and people from developing countries was largely absent.

However, it is not only important to give a voice to the different human groups, but also to the non human environment. The absence of the voice of the non human ‘Earth’ was demonstrated in the absence of the mention of the effect of carbon emissions on global warming in the Monterrey documents. Therefore, it should perhaps become common practice in our business environmental and health meetings to have a representative who ‘speaks’ for the environment (Merchant, 2003). We may also need to allocate a trusted member of the group to act as a facilitator whose job is to notice silences and make space in discussions for the usually marginalized people to speak (Price, 2005a in Vol.2, Chap. 8).

8.3.5.3 *Politeness and other markers of unequal power*$_2$

Markers of difference do not necessarily reproduce unequal relations, and indeed, sometimes they are necessary to ensure equality. For example, to be marked as physically challenged can result in discrimination, but it can also result in the person’s special needs being catered for, thus allowing him/her to participate more fully in community activities. Environmental educators should be aware of the potential uses of markers of difference. CR teaches us to celebrate difference and variety, without using this difference for acts of discrimination. The dilemma discussed in this thesis about the tendency towards not naming marginal groups in business and industry (Cf. Vol.1, Chaps. 6.3.4, 7.3.4 and 7.3.5.1), possibly as a response to the potential for discrimination based on differences (e.g. Tew, 2004), can be avoided. Whilst we must move away from the old identity arteriosclerosis, or hardening of the categories (to paraphrase Haraway, 1997:139) this does not mean removing reference to different identities. Rather, as I explained in Price, 2006a (Vol.2, Chap. 8), it means avoiding *absolute* identity categories by invoking a model of identity as contingent and spatio-temporally emergent, whilst nevertheless real. This is illustrated by the following quote by Bhaskar (2000:3):

> *"A radical account of the self emerges. What is normally understood by the self is an (illicit) abstraction from a much deeper and broader totality… (Instead we have a) stratified, rhythmically developing, concretely singularised – and vastly expanded – concept of the self…"*

Bhaskar therefore suggests (1993:279) that "selves-in-solidarity" can forge a "unity-in-diversity" that will "defragment the marginalized majority of the human race".

8.3.5.4 *Allocation of agency*

As we saw in several instances explored in the business and industry semiotic processes described in this thesis, the dominant people or institutions tended be given active roles, whereas excluded persons and the environment are often 'acted upon'. For example, in the Monterrey recommendations (Cf. Vol.1, Chap. 5.3.2.2), the elderly and the youth were given passive roles which, I argued, reflected their lack of power[1]. Furthermore, dominant interests are protected if the people/institutions are given passive roles, implying their lack of culpability, although the non-dominant can equally use this strategy. For example, I explored this use of the lack of agency in my discussion of the meeting minutes of the agricultural business (Cf. Vol.1, Chap. 7.2.1).

Although a lack of agency allocation, in its several guises, may not be reproducing inequalities or hiding a lack of ideological coherence, it nevertheless is available for these uses. Therefore, as a general rule, I would suggest that ethical environmental education in business and industry should use active rather than passive grammatical strategies. Given that the sanction of scientistic epistemology is a precondition for insisting on passive grammar (Cf. Vol.1, Chap.6.1), then insisting on active language would necessarily also entail that we lobby against such scientism.

8.3.5.5 *Slippage of meaning*

The use of words differently, in different contexts, to mean different things, is also a feature of the use of metaphor, which I have maintained is an important component of research (Cf. Vol.1, Chap.1.5). However, when meaning differences occur in context to effect strategic$_2$ manoeuvres that dishonestly imply something which is not meant, such as the strategic$_2$ use of the word 'participation' (Cf. 7.3.1.3), this is unethical and should as a general rule be avoided. Such slippage of meaning plays an important role in the colonisation/appropriation dialectic and plays a significant role in cloaking the performance contradictions of ideological complexes.

8.3.6 **Possible characteristics of an ethical environmental education in business and industry if it was carried out by agents from the position of epistemological humility, rather than epistemological privilege**

In a context of epistemological humility, weak modality would be valued since the transitive dimension of truth insists on knowledge pluralism and since potentials are, by definition, uncertain, especially in the open system that is the world. Modality is the speaker/writer's level of commitment to the truth of what they are saying; therefore to use weak modality is to use grammatical techniques which imply uncertainty. I have used such strategies through-out this thesis, by using such words as 'perhaps', 'potentially', 'possibly', 'may' and 'might' and by suggesting that my text is written in "washable ink" or in "pencil". This is contrasted with the Monterrey recommendations where the author/s wrote with strong modality (Cf. Vol.1, Chap. 5.3.2.3), revealing their assumption of epistemological privilege.

The questionable assumption of epistemological privilege is a characteristic of empiricism and actualism. In this epistemology, re-imagining the *status quo* in business and industry is largely disallowed since it depends on the (denied) acknowledgement of the reality of 'potential' (an uncertain, immeasurable concept). Language based on such certainty thus tends to be conservative, not transformative. An epistemology that allows us to speak (uncertainly, but in a way that is accountable to reality due to meta reflexivity) of non empirical or actual 'potentials' has a tendency towards being transformative.

8.3.7 **Possible characteristics of ethical environmental education in business and industry if it included the idea of 'shedding'**

There are two ways in which I would like to explore the idea of shedding in environmental education in business and industry:

- as a 'shedding' based on an understanding of the TMSA; and,
- as a 'shedding' based on the necessity of (un)knowledge as a requirement of arriving at relatively new knowledge.

8.3.7.1 *Environmental education in business and industry as a 'shedding' based on an understanding of the Transformational Model of Social Activity (TMSA).*

In this thesis, I have demonstrated that business and industry is based on various kinds of incorrect assumptions of structure and agency (Cf. Vol.1, Chap. 6.2). Moving from the critique of business and industry's social theory, towards a suggested way forward, is to suggest the TMSA as the alternative model. Central to the TMSA is the concept that change is more correctly formulated as absenting. One of the most significant breakthroughs of dialectical critical realism is that it allows us to see that we merely need to allow the full realisation of what already exists in an occluded way. This means that we need to absent the absences, or absent the constraints on the full realisation of alethia.

For example, despite overlaying the truth of epistemology with incorrect assumptions of empiricist, actualist monovalency (Figure 6.3), we cannot not find knowledge using true epistemology; indeed, it is the condition of the possibility of the incorrect assumptions. In much the same way, even if I believe that trees are superfluous to the world's ecology, I will continue to breathe in the oxygen made by the trees and they will remain the condition of my existence, and therefore the existence of my incorrect assumptions.

Other examples of this include that, despite being unrealised, it simply *already is the case that*: we must necessarily act in the moment; we must start from where we are;

we can only act from the standpoint of self-referentiality; and the free flourishing of the individual is the condition of the free flourishing of all. The task of the environmental educator is therefore to absent the constraints that absent that which already exists in an occluded way.

To give an example from the agriculture business, although the hierarchy of business is such that the managers did not allow a voice to the workers and the environment, yet the workers and the environment were already ‘speaking’, even if it was in a language that was not speech. They could not *not* speak since a characteristic of our being-in-the-world is that all things are signs (Cf. Vol.1, Chap. 7.3.1.1). Foucault (1967 in Faubion, 1994: 270) remarks on non-human speech, “After all, it could be that nature, the sea, the rustling of trees, animals, faces, masks, crossed swords, all of these speak; perhaps there is language that articulates itself in a manner that is not verbal.”

Therefore, the environmental educator’s task in business and industry is to absent the constraints which absent the full realisation of communication between and amongst all the agents, which already exists actually in an occluded way and potentially in a fully realised way.

8.3.7.2 *Environmental education in business and industry as a ‘shedding’ based on the necessity of (un)knowledge as a requirement of arriving at relatively new knowledge.*

This point is perhaps related to the point that business and industry tend towards markers of strong modality and thus is related to the point made above about epistemological uncertainty. In attempting to imagine how environmental education in business and industry might look if uncertain, creative, musement (retroduction) was valued, it seemed that perhaps we might need to provide time and space for retroductive processes. As Peirce has poetically suggested, musement is best facilitated by the quiet moments of the day, especially at sunset and sunrise (Peirce, 1901). Perhaps it would be wise to create working environments that are conducive to retroductive process. I would guess that organisations would best facilitate creativity if their physical space included comfortable personal ‘musement’ space for individuals, as well as space for social 'group musing' interaction. This idea is not new to business, for example, it is present in the concept of the "learning organisation" (Senge, *et al* 1994). Perhaps the novelty of my suggestion lies in the explicit polyvalent ontology and epistemological assumptions behind it. In designing courses, educators could perhaps allow for such times in the programme. Again, this would be consistent with a Vygotskian (1961, 1978) approach to education, especially in terms of the 'communities of practice' suggested by Lave and Wenger (1990).

CHAPTER 9 THESIS CONCLUSION

9.1 SUMMARY OF THESIS OUTCOMES

My main conclusions are that causally aefficacious philosophical mistakes, relating to theories of structure/agency and theories of epistemology, are an important aspect of the research problem, namely that there is not enough being done to improve the environmental impact of business and industry activities. These philosophical mistakes reinforce ideology and its inherent contradictions, which in turn provide the preconditions for continued inequalities and poor environmental practice in business and industry. The effect of climate change, the trend towards globalisation, the trend towards not naming marginal groups, the 'free market economy' and psychological characteristics of the author, relevant to the problem, provide further preconditions for a lack of adequate engagement with environmental issues, particularly those pertaining to excess production and consumption.

My tentative recommendations for a re-imagined environmental education for business and industry, focussing on language, are as follows and have a (qualified) universal application, despite my focus on texts from South Africa and Zimbabwe.

- there should be consistency between theory and practice such that performance contradictions are avoided;
- we should not act from a fear of survival based on past, no longer relevant experiences (e.g. from childhood) as this is unlikely to be an adequate base for present actions;
- we should avoid voluntarism by acting with the resources at our disposal, based on a true understanding of our strengths and weaknesses and our own specificities;
- we should avoid assuming the stance of the 'victim' by refusing to blame other agents or circumstances, without distorting or underestimating the causal efficacy of those agents or circumstances (related to avoiding voluntarism, whilst nevertheless not resorting to determinism either);

- we should direct our action towards the abolition of inequalities and master-slave relationships (related to the avoidance of performance contradictions);
- we should act from the position of epistemological humility, rather than from the position of epistemological privilege;
- we should consider action as 'shedding' based on an understanding of the Transformational Model of Social Activity (TMSA); and
- we should consider learning to be 'shedding' based on the necessity of (un)knowledge, or ignorance, as a requirement of arriving at relatively new knowledge.

9.2 STRENGTHS AND WEAKNESSES OF THE THESIS

A strength of this thesis is that it that it is an attempt to bridge the gap between the theoretical and practical aspects of critical realism, which is largely lacking in CR. It is also an experimental attempt to bring together a wide variety of disciplines, including CDA, CR, business and management theory, economic theory, ecology, environmental science, psychology, psychoanalysis, feminist theory and sociology.

Another strength of this thesis is that it demonstrates the fecundity of combining CDA techniques with CR and, in critiquing the way that environmental education texts are produced and consumed, it perhaps offers a way to address the problem that there is not enough improvement with regard to current environmental performance in business and industry. In this respect, I would argue that I have, in this thesis, addressed the questions that I initially set out to address.

Furthermore, in this thesis, I have used Bhaskar's explanatory critique, interpreted within a CDA framework, to arrive at a set of tentative recommendations for ethical environmental education praxis in business and industry. In so doing, I hope to have made a contribution to the relational-processual approaches to educational theory that I outlined in Vol.1, Chap. 2.4. Since, as I have argued in this thesis, educational processes and management processes in business and industry are closely related, this work could also be seen as a contribution to management theory (outlined in Vol.1, Chap 2.7).

A weakness of this thesis, amongst others, is related to its strength: its interdisciplinary nature. This is because all of the disciplines were applied by only one researcher (myself) and therefore I ran the risk of being too much of a generalist, and lacking depth of expertise in each discipline. Given unlimited funds, perhaps it would have been advantageous to employ experts from each discipline to address certain aspects of the research problem, although this may have brought with it different problems related to preventing the thesis from being disjointed. In a way, I *have* made use of other experts in the different fields by, at times, relying heavily on individual authors to interpret important areas of knowledge. For example, I relied on Levy *et al,* (2001) to provide the trends in business and management, Davies and Brown (1993) for an sketch of quantum physics and Borradori (2003) to provide an outline of the thinking of Habermas and Derrida on globalisation. Ideally, I should have completed Masters degrees in the fields of sociology, quantum physics, psychology, business management and discourse analysis before embarking on this project. However, this not being possible, instead I risked relying on the work of others.

It should also be noted that this thesis is arguably incomplete because the next step, of praxis, or carrying out the ethical action (Step 12 in Vol.1, Chap. 4.3.12), is yet to be enacted. This would then bring about a further round of reflexivity.

9.3 FINAL WORDS

I would like to end this thesis with a quote, which I have found useful as a guide to my environmental education practice. It sums up much of what I have discovered in the process of writing this thesis and acts as a reminder of the requirement that the recommendations and findings of this thesis are not to be adhered to rigidly. It is especially useful in business and industry settings where there is a tendency towards instrumental 'planning and organisation', based on mistaken assumptions of epistemology and structure/agency.

> *It might be objected that surely we need time and the mind to plan, organise and co-ordinate things. But this neglects the fact that whatever organisation is planned, whatever actually happens, always depends on the spontaneous, intuitive, holistically sychronicitous, timely activity of agents who step in to*

repair, remedy or enact the plan. And planning, organisation and regulation is a process which is inherently unstable and one could say risky. To live and act in the wisdom of uncertainty, located on your ground-state, to be empty and clear as possible, so as to be free, to adjust your plan at a moment's notice, is a far better maxim for action than a rigid conformity to some idea dreamt up in another time or another place.
Bhaskar (2002b:105)

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APPENDICES

APPENDIX 1: The minutes of the Safety, Health and Environment committee meeting analysed in thesis, including their initial analysis

Excerpt from

Price, L. & Sathiagnan (2005c). Writing style: political implications. In: Vermeulen, S. (Ed) (2005). *Power Tools Series.* London: International Institute for Environment and Development. Retrieved from: http://www.iied.org/forestry/tools/ (4 April 2005).

APPENDIX 1A: Meeting minutes analysed in case study

<u>Committee meeting minutes held on Thursday 16th June 2004 at 0800</u>

Present

BJB[77]	Agricultural Director (Chairman)
GC	Agricultural Fields Manager
MM	Estate Manager
LG	Personnel Officer, Estate
TG	Area Supervisor, Estate
MN	Area Manager
HT	Section Manager
TM	Section Manager
LM	Irrigation Systems Manager
CM	Agricultural Training Manager
UM	Agricultural Statistics Clerk
MR	Section Overseer

Apologies

FE	Agricultural Technical Manager
TN	Estate Area Manager
BM	Sustainability Manager
PM	Senior Area Manager 2
WG	Senior Area Manager 1
GK	Loss Control Manager
DN	Agricultural Extension Manager

1. APOLOGIES FOR ABSENCE

2. ADOPTION OF PREVIOUS MINUTES

- The minutes of the Agricultural Committee meeting held on Thursday 24th June 2004 were taken as read.

[77] In the "Present" and "Apologies" sections of the actual minutes, names were given in full. Here we have abbreviated them and the abbreviations do not reflect actual name initials. This is to protect individual identity.

3. SAFETY AND HEALTH

MATTERS ARISING

Driver Selection and Testing (Minute 3.1.1)

Meeting to be scheduled with relevant Management representatives for adoption of policy. To follow up. **BJB**

Agric Division – SHE Action Plan (Minute 3.1.2)

- ***Sustainable Management for the Environment***
  Total Package – GC to give Area Managers copies and BJB to give copy to MM. To respond by 15.08.2004 to EE.
  BJB/GC/MM/A/Mgrs
- ***Property Damage***
  Several meetings have been held. In progress. To finalise. **FE**

Tractor Seat Suspension (Minute 3.1.3)

Numbers completed as follows

Agricultural Technical Department	5/9
Agricultural Fields Department	68/111
Estate	9/19

Loader Seating (Minute 3.1.4 & 3.1.6)

Trial done, continuing **GC**

Dumpers (Minute 3.1.5)

Dumpers fitted with back barriers fitted as follows:

Area 1	5/12
Area 2	7/11
Area 3	4/6
Agric Tech	9/13
Estate	Using chains (tail gates to be fitted)

BJB to follow up with DW with regard to outsourcing in view of HVE fatality. To be done by 31.08.04. **GC**

Estate planning to go back to tail gates. Aiming to have 4 on tail gates and 2 on chains by 31.08.04, currently 5 are on chains and 1 on tail gates.

Personnel Trailers (Minute 3.1.8)

One trailer being tried on Area 3. Report being compiled by MM. **MM**

Drowning Prevention Action Plan (Minute 3.1.9)

a. Walkways
   Rationalised which sections and provided an F2 budget for them. **GC**

b. Canals
   To finish by 31.08.04
   - Audit on the drowning Action Plan by 31.08.04. Report by 31.08.04 to BJB.
     GC

3.1.10 Safety Signs for Water Bodies (Minute 3.3.2)

LG to approach a sign writer for pictorial stencil to fit on the existing boards. **LG**

3.1.11 Loader Legs (Minute 3.3.4)

One done and seems satisfactory. To be adopted by all. **GC/MM**

3.1.12 Harvest Knife Bags (Minute 3.3.5)
Sample shown – implement it. **A/Mgrs**

3.1.13 Malaria (Minute 3.3.9)
To use Paraffin/oil in canal boxes where water will be stagnant for more than 1 week to avoid breeding of mosquitos. **A/Mgrs**

3.1.16 Automated Harvester (Minute 3.3.2)
Machine is back in use. JSA to be revised. GC to finalise. **GC**

3.2 Safety Statistics (May 2004)
LTIFR for the Directorate was 0.38. **GC**

3.3 New Business

3.3.1 Programme Incentive – new policy
Policy not yet out. To pass on once it's ready. **BJB**

4.0 ENVIRONMENT

4.1 MATTERS ARISING FROM PREVIOUS MINUTES

4.1.1 Wilderness Area (Minute 4.1.1)
Area 1 – Ongoing. Summer house repaired.
Area 2 – Hut thatched. Benches being done and toilet under construction.
Area 3 – Paths done naming of trees being done. Water connection on the way.
T/Estate Being fenced. Baseline review not done yet. To look at it. **BM**

4.1.2 Toilets (Minute 4.1.2)
To be progressed. **FE**

4.1.3 Boreholes (Minute 4.1.3)
Next sampling scheduled for August. **DN**

4.1.4 Sirius Dam (Minute 4.1.4)
Due to financial constraints, work will be deferred to 2005. **FE**

4.1.5 Estate – Section 1 Sewerage Ponds (Minute 4.1.6)
Expedite **MM**

4.1.6 Firewood (Minute 4.1.7)
Area 3 cutting at Kugula. Waiting for contractor to ferry. **MM**

4.1.7 Water Hyacinth (Minute 4.1.8)
Spraying is in progress. **(CLOSED)**

4.1.8 Lantana Camara (Minute 4.1.9)
CN asked to revisit sites where Lantana Camara was sprayed with Roundup, to check for regrowth before Sections order the chemical in bulk quantities. **DN**

4.1.9 Sewage Ponds (Minute 4.1.10)
Managers to inform FE of priority with regard to refurbishment. **A/Mgrs**

4.1.14 Liquid Waste (Minute 4.2.4)
Two pollution incidents occurred this week!! Both due to negligence, and both were avoidable, however, Agric to be commended on containment procedures.
MM

5.0 DATE OF NEXT MEETING

The next meeting of the Agricultural Directorate Programme Committee is scheduled for Thursday 26th June 2004 at 1000 hrs in the Committee Room.

APPENDIX 1B.

This is a record of the analysis of the minutes provided above, carried out by environmental managers, including the environmental manager present at the above meeting.

Step 1 Collect examples of text

We collected Annual General Reports from Zimbabwean companies, management magazines, environmental magazines for business, speeches, minutes from relevant meetings (we obtained permission and the minutes were from a company represented in our group), newspaper articles, etc.

Step 2 Choose a text

We chose to analyse a set of meeting minutes from a safety, health and environment committee. The company to whom the minutes belonged had given their permission and their environmental manager was present at the workshop. This company was involved in large-scale agricultural production of a raw material, which it then processed on site. They also packaged their final products (there were more than one) and sold them locally, regionally and internationally.

Step 3 Description of the text

See the Appendix 1Afor the actual minutes analysed (names and distinguishing features have been removed).

The text was characterised by passive language, nominalisations and abbreviations. Some examples were:

"Water hyacinth… spraying is in progress" (nominalisation of verb 'to spray')
"Boreholes… Next sampling scheduled for August" (nominalisation of verb 'to sample')
"Due to financial constraints, work will be deferred to 2005" (passive sentence)
"Property Damage…Several meetings have been held. In progress. To finalise." (passive sentence and abbreviated sentences)

The classic official structure for meeting minutes was used. Information was summarised. The environmental manager present at the meeting from which the minutes were taken commented that much dissention and commentary was absent from the minutes. Emotion had also been removed from the minutes (one of the managers had been angry about a pollution incident but this was largely absent from the minutes). There was much use of abbreviations, without explanation, which assumes the reader will be familiar with the abbreviations. For example, the safety statistics (Lost Time…) are reported as a lost time figure, with no details of what happened: "LTIFR for the directorate was 0.38". Points were numbered.

From the discussion around safety, it appeared a worker had died, mentioned in passing: "BJB to follow up with DW with regard to outsourcing in view of HVE fatality"

Several environmentally related activities were minuted without comment, e.g. spraying of water hyacinth, spraying of *Lantana camara* with Roundup, cutting firewood.

One statement was not typical of professional language, namely, “Two pollution incidents occurred this week!!” Exclamation marks, and especially two exclamation marks, are usually associated with informal writing.

Step 4 Interpretation

Reading with the text

These minutes were efficient. They did not reflect all that was said but they reflected what was important and ensured that allocated tasks were appropriately recorded to ensure accountability with regard to the completion of those tasks.

Reading against the text

Possible strategic concealment of information

The use of passive sentences, nominalisations and abbreviations was able to hide responsibility, for example, “Two pollution incidents happened this week!!” allowed the responsible people to be protected. Since most of the passive use of language, nominalisations and abbreviations was innocuous and merely efficient, and conformed to standard grammatical practice, it all the more difficult to spot strategic use of these grammatical characteristics. This was in itself perhaps strategic. Should the avoidance of responsibility be pointed out to a writer, she could claim this was not purposeful; she was merely being compliant with grammatical norms.

The efficiency of the minutes allowed things to be hidden that might be controversial or confrontational. For example, the two exclamation marks were efficient but they were also all that remained of the fact that the environmental manager was very angry about the pollution incidents. As an accusation that not enough care and diligence was being given to environmental issues, this anger was perhaps a threat or challenge to the status quo.

However, the concealment of information may not have only benefited the status quo; it may also have benefited those who were challenging the status quo. For example, if the environmental manager had felt that his anger outburst would be captured fully in the minutes, he might have withheld his emotions. Thus the way in which the minutes hide things could be seen as both a way of maintaining the status quo, but it could also be a strategic possibility for bringing in alternative ideas and allowing more freedom of expression.

Possible avoidance of discussion/dissent and challenges to the status quo

That the secretary’s name did not appear on the minutes might be a way of making his hand in the writing of the minutes seem invisible, and therefore objective, thus avoiding argument. The professionalism of the minutes also implied objectivity and therefore refused argument or dissent. Having the input of someone who was present at the meeting helped us to understand that a large amount of discussion and dissent was hidden; thus, the minutes presented a unified view of the proceedings, which concealed different opinions.

The professional lack of emotion of the minutes refused comment on the use of environmentally unfriendly substances to control vegetation and the chopping of firewood. It also prevented too much discussion of the accidents that had occurred, by reducing the accidents to a number. An accident may be reported as having lost 10 working days to the company, but the fact that the accident had resulted in a worker losing a finger, and the cost to that worker, is completely hidden by those figures. Emotion is potentially a stimulus for change; it seems likely that avoiding emotion is a way to protect the status quo. The strict format of the minutes, reflecting a strict format for the meeting it recorded, perhaps limited “out-of-the-box” solutions to problems. These might also challenge the status quo.

Use of the word ‘fatality’ rather than ‘death’ seemed to reduce the loss of life to a technical event, and thus perhaps refused some of the impact of that event, which may have been challenging to the status quo.

Possible reproduction of unequal social relations

The use of passive language, nominalisations and abbreviations was forgiving of misdemeanours and minor problems. For example, the company in some way absorbed the blame for the two pollution incidents that occurred. If blame had been allocated to individuals, they would possibly need to be reprimanded and perhaps lose their jobs. However, if management already did not like the perpetrators of the incident, naming them personally in the minutes would be a good way to get them into trouble.

This ambiguity in minutes and meetings leaves room for abuse, since it seems possible that the minutes could be more forgiving of the management insiders than marginalized employees. This would be hard to identify as the minutes give the impression of unbiased objectivity. However, such differential allocation of responsibility was only surmised, and no direct evidence for it was found (we returned to the text for further description to explore this question). It was difficult to find evidence because we did not know enough about the people at the meeting. In addition, the company seemed to have already done a good job of excluding specific social groups; thus there was perhaps little current need for such tactics. For example, there were no women at the meeting.

Some indirect evidence for differential allocation of responsibility may be that, on the one occasion when praise was called for, responsibility was clear: “Agric to be commended on containment procedures”. Nowhere was there an instance of responsibility being indicated if this could lead to blame.

Although there was much technical language and many undefined abbreviations, it seemed unlikely that this deliberately exclusionary to workers, as, according to the employee who participated in the analysis, those who read the minutes would be familiar with the terms and would be able to understand them. However, the technical language and abbreviations, apart from their efficiency functions, perhaps also performed as an in-crowd code language. This perhaps encouraged camaraderie amongst staff members.

Possible indication of ideology

The placement of environmental issues as the last thing on the agenda might indicate that environmental issues tend to be considered less important than other issues.

Possible 'underground' challenge to the status quo

The unusual use of two exclamation marks in the sentence describing the two pollution incidents, which were all that remained of the manager's anger in this regard, could be evidence of a relatively hidden status quo challenge. The manager's outburst had indicated that there was not enough weight being given to environmental issues. Those two exclamation marks were perhaps subtly saying, "This is not good enough!".

Step 5 - Explain your interpretation findings in terms of the social preconditions for them

A precondition for meetings to be run this way is that it is almost impossible to imagine them being run in any other way. This is how it has always been done and it seems there can be no alternative. All over the world, meetings are run in this particular way. In *reading with* the text, we wrote very little. Perhaps this was because the structure and function of meeting minutes seemed so obvious and natural, that it was hard to think of anything to say about them.

Another precondition for these minutes is that everyone involved must somehow understand the subtle rules of 'who' can say 'what', 'when', 'where' and 'how'. For example, the secretary needs to be able to distinguish between what is and is not to be included. To make the most use of the minutes, managers need to feel confident that they can say things which are 'off-the-record'.

A precondition for the sidelining of environmental concerns, compared to safety and health concerns, could be that there are more regulations for safety and health. There is also more accountability with regard to safety and health, with regular checks being made by the safety and health organisations. Furthermore, 'health and safety' have been part of the company culture for longer than 'environment'; people are more comfortable with them. Perhaps another precondition for sidelining the environment is the assumption that we have to place people in opposition to the environment. Short-term safety, health and profit are seen as primary over environmental concerns. The dependence, in the long-term, of safety, health and profit on a healthy environment seems to be overlooked.

A precondition for the 'polite' refusal to allocate responsibility to problems could be that culturally we find it difficult to accept criticism. We tend to expect harsh penalties for misdemeanours to be handed down by authority. It would be easier to be honest if authority was not so hierarchically structured. There seems to be an unspoken rule that if a misdemeanour comes to the attention of authorities, they must punish it to maintain their authority; they must not be seen to be weak. However, if authority was less hierarchical, and less fear based, leaders would not have to use misdemeanours to demonstrate their power, and instead employees could be part of the discussion process to determine how best they can make reparation for mistakes. In other words, if 'management' was more 'co-management', it might be easier to be more honest and this fear of authority may be a precondition for some of the refusal to admit responsibility.

Step 6 - Verify and expand the initial findings

The other minutes we looked at had the same characteristics of efficiency, lack of emotion and agent-less language. Discussion and dissent were to some extent minimised by all the minutes. We noticed, however, that our initial minutes were unusual in that the others did give the name of the secretary who wrote them (this must have been an oversight in our initial example). Also, minutes could be quite different depending on who wrote them, with varying degrees of detail included. In the other minutes we looked at, not only were environmental issues last on the agenda, but also significantly less time was allocated to them, adding weight to the claim that environmental issues were sidelined. Again we did not find much evidence of differential allocation of responsibility depending on status, although, perhaps a larger selection of texts and greater research, which included a way of distinguishing among individuals, might be necessary to fully confirm this intuitive idea.

Case study conclusion

The professionalism of the language of meeting minutes can be used to strategically prevent challenges to the status quo. For example, the use of passive language can hide responsibility and avoid blame, which prevents the organisation having to change. However, there is also potential for the professionalism of minutes to allow relatively safe challenges to the status quo. In this case, a manager became angry about the lack of due care with regard to environmental issues but his outburst was possibly allowed because it would not fully find its way into the minutes.

Minutes might also have the potential to allow relatively hidden unequal treatment of people, for example, by moving strategically between active and passive language. Hypothetically, insiders can be protected by passive language, which removes responsibility from them for misdemeanours, while outsiders can be squarely blamed for their actions, with the use of active language.

The classic minutes structure seems so natural and unquestionable that it is hard to challenge. It is also hard to challenge because of the penalties that might be incurred if people were to resist their format, such as accusations of being unprofessional.

APPENDIX 2:

Hard Hat Ltd
Environmental Education Programme

General

This document presents the structure for Hard Hat's environmental education programme that forms part of the company's sustainability strategy. The education programme's remit covers both employees and their families. This document also presents the way in which the programme will develop and operate, and the roles of the programme team members. Once approved by the Sustainability Action Team (SAT) and the Environmental Management Committee (EMC), it will form an integral part of Hard Hat's Divisional Operation procedures, key performance areas and supporting Administration Procedure, and as such, will be afforded the same management commitment and consideration.

The environmental education will occur both in the classroom and outside it. The classroom-style education on environmental issues (both subject specific and TNS) will be for the executive, managers and skilled/semi-skilled staff. The unskilled staff and village communities will be exposed to environmental awareness-raising through drama and through the usual channels of information transfer within the company. These channels include: meetings at work, meetings with health workers, short discussions at the workface with supervisors, posters, and the Hard Hat newsletter.

The Problem

The human activity on Hard Hat is causing environmental damage at a local and global level.

Programme goal

To provide knowledge and skills to the employees and residents of Hard Hat housing estate which will enable them to meet their needs without jeopardising future generations.

Programme objectives

- To provide all Hard Hat's employees and residents with a basic understanding of how their activities affect the cycles of nature.

- To provide Hard Hat's employees and residents with the skills needed to analyse and discuss environmental and social issues and together arrive at pragmatic, forward-thinking solutions.

- To develop better lines of communication between senior and junior staff and across divisions so that ideas and information about sustainability can be shared more freely

- Establish a culture in which we all feel we are a part of Hard Hat's move towards sustainability.

TNS- Backcasting

The education programme will promote the use of The Natural Step (TNS) system conditions and the backcasting technique:

A: Awareness of the TNS framework and system conditions
B: The present situation
C: Conditions for a sustainable solution
D: Strategy for attaining the sustainable solution

Conditions for the achievement of sustainable solutions

- Adoption of the TNS framework and back casting in the assessment of all decisions affecting the environment.

- Participatory environmental education, by which we mean that workshops will include discussion, debate and shared speculation around issues of sustainability and that everyone, no matter their level, will be encouraged to offer ideas to management and will be involved in taking appropriate action.
- Action-oriented environmental education, by which we mean we will link education to the implementation of on-the-ground projects and there will be a strong relationship between the environmental project teams and the environmental education.
- Comprehensive, consistent flow of technical information from other STTs.

Short-term actions

- Oversee the development and timely implementation of TNS training by Human Resources and by Agricultural Extension

- Supervise and ensure the timely implementation of the subject specific environmental education by the relevant departments

- Supervise the development of the TNS and subject specific training modules

- Supervise the organisation of TNS workshops for teachers who will then be able to carry out TNS training in the schools

- Develop the TNS videos and posters

- Identify strategies to allow environmental ideas/information to flow up the managerial hierarchy, as well as downwards