CONNECTING THEORY AND PRACTICE IN EDUCATION FOR SUSTAINABILITY: Progress and Paradox

John Huckle

Out of the experience of an extraordinary human disaster that lasted too, too long, must be born a society of which all humanity can be proud.

(Nelson Mandela, 1994)

Challenged to present a paper which addresses the conference theme, yet maintains the interest and attention of those who felt that this year's conference sounded 'too theoretical', let me begin by summarising my argument.

South Africa's transformation from a society deeply rooted in injustice to one founded on equality, freedom and sustainability will not be easy. It will depend on the further development of civil society and the extension of civil, political and social citizenship within the context of a radical democracy. Environmental education can play a significant role in this transformation so long as it develops relevant theory and practice. There has been progress in linking environmental education to citizenship education but such progress is now faced with paradoxes which are not entirely resolved.

In presenting this argument I would like to begin with a classroom activity, *Who Decides?*

WHO DECIDES?

Who Decides? can be found in a teaching pack *Our Country Our Future* (Ngcobo, Sabela & Sishi, 1994), written by a group of South African teachers during a study visit to the London Institute of Education in 1993-94. It highlights what these teachers wanted British school students to know and understand about their country at the moment of transition to democracy. Through active learning approaches, the pack shares the experiences and perceptions of those most affected by apartheid. It brings to life their hopes for the future at a time of momentous social change.

Who Decides? is a role play about the pollution caused by the Hudson tannery, which is in the middle of KwaMasiza Township, just outside Durban. The background notes inform us that the tannery was built on an area of freehold land owned by Africans since the 1860's. It was originally built away from the residential area but under apartheid more and more people settled here and the tannery is now in the middle of a heavily populated area. Toxic waste discharged from the tannery causes water and air pollution and leads to health problems for workers and local people. The company donated the land for a school, on which George Elliot High School now stands, and the school's teachers and students have joined with environmental groups, trade unions, the community and others to try to find a solution.

As you will no doubt have imagined, the role play involves putting pupils in six groups, each of which is provided with a briefing sheet. The views of a community representative, a member of 'Better Environment', the managing director of the tannery, a teacher, a trade unionist, a student representative, are discussed at a meeting designed to promote negotiation, compromise and common agreement. The activity aims, amongst other things, to explore ways of fulfilling the vision that South Africans have for the post-apartheid

future, and to examine forms of conflict resolution that are applicable in both personal and public situations. In the follow up discussion teachers are encouraged to pose questions about the effectiveness of the different groups' approaches, their access to power, the alternatives to negotiation, and the relevance of negotiation and compromise to other conflicts in South Africa. It is the sort of activity in which pupils will inevitably discuss issues and ideas relating to human rights, citizenship, and the Reconstruction and Development Programme (RDP).

THE RDP AND EDUCATION FOR CITIZENSHIP

Like all teaching and curriculum development, the writing of *Our Country Our Future* involved putting theory into practice. Teachers articulate their theory to greater or lesser extent and some indication of the authors' theory is provided by the teachers' notes for *Who Decides?* They begin with an extract from the RDP which describes the environmental legacy of apartheid resulting from unequal access to resources, extreme poverty and a lack of environmental regulation and commits the democratic government to ensuring 'that all South African citizens, present and future, have the right to a decent quality of life through sustainable use of resources.' The government will foster such social citizenship by a number of means which include a "participatory decision-making process" around environmental issues, empowering communities to manage their natural environment.

The authors clearly saw *Who Decides?* as a way of developing such decision-making, and of empowering pupils to take part in environmental management and planning. They link environmental education to citizenship education, but the activity contains little which links the dispute over the Hudson Tannery to the realities of social structures and processes within Durban and

Kwazulu Natal (KZN) which will determine whether or not environmental rights, participatory decision-making, and empowered communities, become realities. The theory underpinning the RDP is only partly translated into practice. To further improve practice we need to examine the types of citizenship and citizenship education called for by the Programme and the prospects for realizing these in the current social realities of KZN.

The RDP calls for a people-driven process of reform and reconstruction linked to the democratisation of society:

> Thoroughgoing democratisation of our society is ... absolutely integral to the whole RDP. The RDP requires fundamental changes in the way that policy is made and programmes are implemented. Above all, the people affected must participate in decision making. Democratisation must begin to transform both the state and civil society. Democracy is not confined to periodic elections. It is, rather, an active process enabling everyone to contribute to reconstruction and development.

> Development is not about the delivery of goods to a passive citizenry. It is about active involvement and growing empowerment. In taking this approach we are building on the many forums, peace structures and negotiations that our people are involved in throughout the land (RDP).

Democratic government and consensus building by traditional leaders has a long history in southern Africa and the ANC has been considering an appropriate constitution from at least the time of the Congress of the People, at Kliptown, in 1955. The Interim Constitution reflects ideas from home and abroad and can be seen as an attempt to provide the foundations of a radical or

participatory democracy which provides rights to personal freedoms and access to justice via the courts (civil citizenship); rights to vote in elections (political citizenship); and rights to a minimum standard of welfare and education (social citizenship) in return for such obligations as respect for other people's rights and the authority of the state. Civil and political rights mean little to people deprived of social rights, and a radical democracy requires the 'thorough-going democratisation' of economic, political and cultural life. It is largely dependent on education to develop the knowledge, skills and attitudes which contribute to participatory and critical citizenship, and such education involves a particular kind of pedagogy, or means of relating theory to practice, which is best understood by considering civil society.

CIVIL SOCIETY AND RADICAL DEMOCRACY

The long struggle for freedom and democracy means that the ANC recognises the value of organisations within civil society which seek to defend and extend human rights. Women's groups, trade unions, chambers of commerce, co-operatives and other organisations channel the interests and energies of people outside government, act as a counterbalance to central state power, and make the state more effective and democratic. They defend collective rights against individual property rights and point to a radical or people's democracy in which local and national states are merely the enablers and resource providers for co-ordinated community initiatives.

The Commission on Global Governance (CGG, 1995) reminds us that the size, diversity, and international influence of civil society organisations have grown dramatically since 1945 and that there is now a vigorous global civil society which increases our sense of human solidarity. Not all groups in the NGO sector are democratic, but they do tend to broaden effective representation and have played a significant role at recent global summits. Here they have emphasised people's collective self management of sustainable livelihood development which meets basic needs using appropriate technology. Munslow and Fitzgerald (1994) examine the prospects for such development in South Africa and in many other parts of the world, it is gaining greater attention as a result of the local Agenda 21 process:

This new vigour of civil society in South Africa and elsewhere reflects a large increase in the capacity and will of people to take such control of their own lives and to improve or transform them. Some governments and many social movements have sought to empower people, women, indigenous people, ethnic minorities, and the disabled, and these groups are becoming increasingly vocal. At the same time most governments are losing legitimacy. Many people seek more from democracy than is involved in voting every few years while others feel that conventional politics makes little difference. Some resort to old and new types of fundamentalism, others withdraw from society and politics altogether, while yet others are developing a new kinds of politics linked to participatory and radical democracy.

CIVIL SOCIETY AND SOCIALLY CRITICAL PEDAGOGY

People's disenchantment with 'top down' government and conventional politics has been recognised by both the new Right and the new Left. While the new Right offers empowerment via new freedoms, linked to deregulation, the market and popular authoritarianism, the new Left offers empowerment through new ways of combining representative and participatory democracy in the co-ordination and regulation of social life (Wainwright, 1994). Central to the new Left's attempts to revive

and update a 'third way' to socialism is cultural politics, or a politics of knowledge, which suggests that groups within civil society can create and apply their own socially useful knowledge and that this knowledge is the key to sustainable livelihood development. It is produced in the process of challenging the policies of undemocratic and technocratic institutions and requires a radical democracy for its successful application.

The process through which community groups, environmental groups, and others generate socially useful knowledge is often termed critical or participatory action research (Fals-Borda & Rahman, 1991; Burkey, 1993; Rahman, 1993). It involves people in sharing their practical knowledge and scrutinising theoretical knowledge, while remaining attentive to knowledge from the 'borders' of society where individuals and groups suffer diverse forms of oppression. Community development as participative action research allows ideas from such fields as critical theory, critical realism and postmodernism, to be tested for relevance, but teachers or transformative intellectuals, who seek to introduce such ideas, need to respect people's rights to make their own theory-practice links and reject ideas which appear to have little or no relevance to their perceived needs.

The past twenty years have seen considerable progress in the theory and practice of participatory action research and associated forms of socially critical pedagogy. Helping people to critically reflect and act on their environmental well-being is the prime goal of radical forms of environmental education and critical action research is now seen as a common methodology underpinning the development of classroom teaching, curricula, teachers as professionals, and sustainable communities. All involve bringing the politics of existing knowledge, and theory-practice relationships, into the open and developing more socially useful

alternatives which point to new kinds of society and citizenship. We will see that new technologies and sensibilities increase the appeal of critical pedagogy and can support forms of social transformation which lead towards radical democracy. First we need to examine the theory-practice link in radical environmental education in a little more detail.

WHAT WE CONSUME

Progress in social, development, environmental, and other forms of education in recent years has all drawn on socially critical theory and pedagogy. My own work on the *What We Consume* module of World Wide Fund for Nature United Kingdom's *Global Environmental Education Programme* (Huckle, 1988) encourages teachers and older pupils to reflect and act on critical ideas drawn from political ecology (see Figure 1) in the context of their lives as consumers of goods and services produced by an increasingly global economy. The classroom activities link them as consumers to economies and societies variously positioned within the world system and enable them to study different forms of development and under-development, recognise the impact which these have on people and the environment, and consider alternatives which may be more sustainable. They employ a wide range of experiential and democratic techniques borrowed from social, moral, political and other adjectival educations, to answer key questions, investigate key ideas and develop the knowledge, skills and attitudes which underpin social literacy and participatory and critical citizenship.

In each of the ten units of *What We Consume* there is some reference to groups that are linking environmental welfare and sustainability to the extension of democracy. This theme is the prime focus of Unit 10, *The Environment and Democracy* (Huckle, 1990) which examines the fortunes of the Chipko movement in India, Solidarity in Poland, and

Figure 1. The key propositions of the political ecology paradigm

* to survive and develop people must work with the human and non-human parts of nature to produce the goods and services they need and reporduce those things which make this production possible (such conditions of production as natural resources and services, human health and education, and urban and rural space). Different forms of economic production and social reproduction (political economy) are more, or less, ecologically sustainable;

* the social relations between people reflect different patterns of ownership and control of the means and conditions of production. These relations govern how production and reproduction take place and the kinds of technology which mediate people's relations with the rest of nature. Democratic relations between people, in the economic, political and cultural spheres of society, are conducive to ensuring that political economy develops in ways which meet the common interest in human well-being and long term survival (sustainablity);

* different societies regulate political economy in different ways using different modes of regulation (institutional and support systems). These modes of regulation are threatened when there are problems in maintaining economic output and/or reproducing the conditions of production;

* contemporary societies are linked together in a system of combined and unequal development shaped by the structures and workings of the capitalist world economy. People's social and environmental welfare are related to their position in a changing global division of labour which is shaped by the rise and fall of successive regimes of capital accumulation;

* much current advocacy of sustainable development and education for sustainablity can be explained in terms of capital's attempts to solve a 'supply side'crisis which emerged at the end of the 'post-war boom.' The shift from organised to disorganised regimes of accumulation (Fordist to Post-Fordists labour processes) in the past twenty years has resulted in growing problems of ecological and social sustainablity. Sustainable development in its weak mode represents an emerging mode of regulation involving a form of techno-managerialism via which capital seeks to ensure a continued supply of the conditions of production on its own terms and to maintain support of majority of voters. Weak sustainability is likely to be of a limited and largely 'imagined' nature, functioning mainly at the ideological level. We can expect education to be used to support it.

* weak sustainability's attempt to 'internalise nature' (to ideologically redefine 'nature' and subsume it within capital as a productive asset henceforth subject to 'rational' management) is compromised at the economic and political levels by the need for capitalists and nation states to compete internationally. Weak sustainability meets oppostion from those seeking strong sustainablity. They support a range of beliefs and programmes with green socialists suggesting that political economies should be democratically planned and regulated to ensure ecological and social sustainability;

* social movement activists on the new Left, including green socialists, have pioneered approaches to strong sustainability based on community development and participatory action research. These encourage people to create their own socially usefull knowledge by sharing their practical knowledge and combining it with scrutinised theoretical knowledge. This involves a form of socially critical pedagogy which values knowledge from the margins or borders of society and challenges those kinds of positivist and instrumental knowledge which sustain technocracy. It challenges the power of the market and state by enlarging a democratic public sphere of discussion and debate. It encourages people to realise that they will only be able to apply their own knowledge to bring about social change when they have effective control over economic, political and cultrual life. The social movement campaigns of the new Left point to new kinds of politics, democracy and citizenship, which are appropriate in an era of disorganised capitalism.

* public (state run) forms of education are an integral part of modes or regualtion and generally produce young workers and citizens with 'appropriate' knowledge, skills, attitudes and values. There is scope for resistance and critical forms of education within schools but teachers seeking strong sustainability should not over-estimate the potential of the formal sector. They should model their curriculum, pedagogy, professional development, and research on participatory action research and thereby continue to work for education, and the power of the cultural industries and popular culture.

municipal socialism in the United Kingdom. This unit challenges teachers and pupils to consider whether the best prospects for sustainable development lie with more decentralised and self managing societies, in which community development from below is co-ordinated and facilitated by government action from above, and it may provide some indication of the kind of environmental education which can contribute to the success of democratisation in South Africa. The writers of *Our Country Our Future* would recognise much that *The Environment and Democracy* contains, but they might be surprised by the amount of background 'theory' provided for the teacher and the way in which s/he is encouraged to relate the prospects for change in one community and locality to wider economic, political and cultural structures, processes and events.

CRITICAL ENVIRONMENTAL EDUCATION IN KWAZULU NATAL

It would be bold indeed for me to suggest the key ideas which should provide the current focus for critical environmental education in KZN. I am however going to risk some suggestions solely in order to support my argument, stimulate your imaginations and provoke your reactions. A recent article by Deborah Ewing (1995) deals with the "rocky road to democracy and development in KwaZulu Natal" and reminds us that four fundamental elements in the creation of a participatory democracy are intended to be inclusive of all citizens: reconstrucion and development, local government, truth and reconciliation, and constitution making. Legislation, white papers, budgets, task forces, and negotiating forums have all been put in place to direct these, but she suggests that a lack of information and continuing social instability remain major obstacles to people's involvement in development and democratisation.

Solely on the basis of Ewing's article, we would expect a critical environmental education in KZN to focus on the following kind of ideas:

* There is an urgent need for sustainable livelihood development in KZN, which has the highest unemployment rate of all the provinces, the fourth lowest income per head of population, one of the highest rates of infant mortality, and the highest incidence of HIV/AIDS infection. Such development would contribute to peace and stability, yet investors and business elites seek peace before development. Rural people and women are poorly represented in economic forums and communities often lack the knowledge and skills to formulate RDP project proposals. Land reform is central to sustainable development, yet less than one per cent of the country's land is to be available for redistribution.

* The prospects for sustainable development in KZN are related to the prospects of a peace agreement between the IFP and ANC. Politically motivated violence continues and many people distrust the police. There is a lack of funding and skilled mediators to promote community peace initiatives. Violence is reported locally in sensationalist terms, with little analysis of causes and little effort to challenge the security services on their handling of it.

* Sustainable development requires democratic provincial and local government to regulate the use and development of the environment in the common interest. IFP-ANC disputes have hindered progress towards such government. Conflict over the location of the capital, allocation of portfolios

and the role of the *amakhosi* (chiefs), has done nothing to generate confidence in government among the most disadvantaged sectors of society. The swallowing up of civic leaders, union activists and others into local authorities will increase representation, but will leave fewer skilled people on the ground to organise others from day to day.

* Sustainable development should draw on the traditional knowledge and customary law of communities. The Interim Constitution and Local Government Transition Act do not confront the issue of how customary law and its practitioners fit into the new system. Provision for a House and a Council of Traditional Leaders and for the inclusion of unelected chiefs in local government, amounts to grafting the traditional system onto democratic government, with the risk that neither will produce results. Ideally chiefs must be part of the process of sustainable development and not alienated from it. There are currently glaring contradictions between the provisions of the Bill of Rights and the regulations of customary law.

* Sustainable development requires tolerant, active and informed citizens who are capable of collectively identifying their needs and voting accordingly. The province's NGO's and civic organisations have worked hard to develop voter and citizenship education but they are not adequately resourced for the task. The Interim Constitution is not widely available in plain English. There is no Zulu version and very little information available about how the consultation process will work. Efforts to promote racial and political harmony, and a culture of human rights and tolerance, have had limited success. Large numbers of people are not yet prepared to accept

other people's freedom of speech, movement and association.

Clearly these ideas could be refined and extended by wider reading, research, experience and discussion. There is also a need to put KZN's development in a wider national and international context and my brief searches produced some literature which would enable teachers to do this (Cock & Koch, 1991; Cole, 1994; Koch, 1995; Muslow & Fitzgerald, 1994; Ransom, 1995). The above illustrates how the framework of political ecology (Figure 1) should be related to the social structures and processes of particular societies through a democratic and participatory pedagogy which mirrors the values of the type of society it seeks to help create. Some of you will be keen to comment on the propositions in Figure 1 and the key ideas about KZN. Some of your comments may highlight the paradoxes associated with such a critical environmental education.

FROM PROGRESS TO PARADOX

During the time that I was writing *What We Consume* in the 1980's I became aware of a growing number of paradoxes:

* While *What We Consume* was based largely on political ecology there were a growing number of 'green' social and political theories competing for attention (Merchant, 1992 & 1994). What was the significance of the ideas being put forward by deep, spiritual and social ecologists, ecofeminists, postmodern scientists, green economists, and others? To what extent were these critical theories? Could they be explained and perhaps subsumed within political ecology or did they require a significant revision of my ideas?

* Social theorists were increasingly focussing their attention on modernity

and its futures   (Hall, Held & McGrew, 1992). They were suggesting that the rise of disorganised capitalism was restructuring economic, political, social and cultural life to such an extent that it was possible to recognise a new emerging form of social organisation, postmodernity, together with a new set of aesthetic, intellectual and cultural styles, postmodernism. Was modernity and postmodernity, modernism and postmodernism, a more secure framework of ideas for a critical environmental education? What was its relationship to political ecology? To what extent could it explain green politics and debates surrounding sustainability?

* Postmodernism maintains that all knowledge is socially constructed and contextual and that there are no forms of representation, meaning or rationality that can claim universal (transcendental and transhistorical) status (Appignanesi & Garratt, 1995; Smart, 1993). It questions the modern notion of the unified rational subject (preferring to see the subject as contradictory and multi-layered). It is sceptical about such modern grand narratives as the emancipation of the rational subject or the pursuit of progress via the application of science and technology to the transformation of the natural world. It also questions modernity's ethnocentric equation of history with the triumphs of European civilisation and its claim that the industrialised Western countries constitute 'a legitimate centre' for viewing world affairs. If postmodernism represented modernity coming to terms with its excesses, and embracing uncertainty and difference, then there was probably a need to rethink critical pedagogy and environmental education (Aronowitz & Giroux, 1993; Usher & Edwards, 1994). To what

extent was the critical pedagogy within *What We Consume* and similar curricula justified in assuming universal yet critical knowledge? To what extent was it based on an illusory grand narrative of liberation? To what extent did it accommodate non-European perspectives and voices? Was it possible to accommodate a postmodern sensitivity to difference and subjectivity, and its rejection of grand narratives, while clinging to a modernist concern for the enlightened subject and its insistence that we link memory, agency and reason to the construction of a democratic public sphere?

* The final paradox relates to the reactions of teachers and pupils to socially critical pedagogy. The fact that *What We Consume* and similar products have not sold in huge numbers and found a place in many classrooms can be explained by the conservative nature of many teachers and schools, particularly in the current political climate. But this is not the whole story. Many teachers and pupils, who one would expect to be receptive, resist socially critical pedagogy which claims to be in their true interests. In-service workshops and classroom lessons can too easily become counter productive and facilitators and teachers are often left feeling that they have not made real contact with teachers' and pupils' concerns. Why does socially critical pedagogy not prove to be as empowering as it claims (Ellsworth, 1989)? What is the real nature of young people's political sensitivities and how should these be tapped and developed in the classroom? What can we learn from the ability of the cultural industries and social movement activism to excite and educate the young?

REFLEXIVE MODERNISATION

My search for answers to these paradoxes continues. I can offer you only tentative resolutions to them and these come mainly from the recent literature on reflexive modernisation and postmodern education (Beck, 1992; Beck, Giddens & Lash, 1994; Giddens, 1991 & 1994). The search begins by returning to political ecology and the nature of disorganised capitalism.

Lash and Urry (1994) suggest that capitalism has embarked on a new phase of development in order to solve its supply-side problems. The organised capitalism of mass production, mass consumption and social democracy (simple modernity) has characterised the period between 1945 and 1975. This has given way to disorganised capitalism (reflexive modernity) with more flexible forms of production and consumption based on new information technologies. These technologies have been introduced along with the deregulation of labour and financial markets. This has resulted in rapid and disorientating change in many people's lives. Disorganised capitalism manufactures risk and uncertainty and this means that modernisation has become reflexive of its own theme. To understand the nature of this change we need to consider the nature of production and consumption in disorganised capitalism.

Capital now circulates over longer routes at greater velocities. It increasingly takes the form of post-industrial information goods with a cognitive content (eg. a software programme) and postmodern goods with primarily aesthetic content (eg. a pop video or television advertisement). The new production is rich in information, signs and symbols. It offers consumers a bewildering array of products and identities and suggests a private sphere in which they can find happiness through spending and consuming. Globalisation increasingly brings similar products, services, and information to everyone in the world who can afford them. The growing power of global information and communications structures leads Lash and Urry (1994) to suggest that they are replacing the social structures of simple modernity as the prime determinants of social life. Those with power control or have access to these structures. They include the 'symbolic analysts' who design our software and entertainment media and the 'clever' workers in Post-Fordist factories and offices. Those who lack power have few if any ways of making these structures work for them. They include the new underclass who have no work or low paid, unskilled, and often part time, work. The powerful increasingly live amongst themselves in environments secured by the new technologies, while the powerless are abandoned in 'wild' zones with increasing crime, vandalism, drug use and despair.

In this cultural economy, where the images on video screens seem more real than reality, the meanings of objects and subjects, and of time and space, become confusing and confused. Meanings are no longer anchored in place, time and tradition. People therefore find themselves having to construct their own meanings, identities and life narratives from the growing amount of cultural capital and competences on offer. Reflexive modernisation carries de-traditionalisation and individualisation to their limits, setting people and institutions free to be self monitoring or reflexive. The potential for 'clever' workers and citizens reflects a transfer of powers from structures to agency and partly explains the rise of civil society and demands for participatory democracy. This can be realised if the new information technologies are democratically controlled and available to all.

The educational potential of reflexive modernisation lies then in its prompting more people to use judgement to monitor themselves in relation to their society and environment (cognitive reflexivity) and

intuition to interpret themselves and their lifeworld (aesthetic reflexivity). The cognitive reflexivity of individuals and institutions means that knowledge provided by the natural and social sciences can be fed back into society which itself becomes reflexive and self constituting. Aesthetic reflexivity is a central feature of youth and consumer cultures and plays a key role in the creation of those meanings (symbols and allegory) which sustain the new social movements. Cognitive reflexivity is based on structured flows of information and critiques the particular (social conditions) by means of universals (reason or ethics), while aesthetic reflexivity is based on structured flows of expressive symbols and critiques universals (eg. modern notions of development) by means of the particular (eg. local culture). Both have been present within modernity from the outset (rationalism vs romanticism) and have co-existed in creative tension within radical environmental education.

In an era of reflexive modernisation much of people's insecurity is focussed on the loss of nature and tradition. Images and news stories from around the world make them increasingly aware that nature has ceased to exist as environments and events independent of human actions and that manufactured uncertainty or risk (eg. global warming, skin cancers, declining male fertility) threatens their very survival. In these circumstances culture, in such forms as green consumerism, seeks to rescue nature by restoring it as an external and comforting reality, but such efforts are contradictory and may serve to heighten awareness of the social construction of nature and the need to construct it in more sustainable ways. Reflexive individuals are more prepared to question conventional science, technology and notions of progress; express solidarity with people across space and time; and realize the need to establish new forms of political economy and global governance. Giddens echoes Beck in suggesting that ecological politics is a politics of the loss and recovery of nature. Nature and tradition

have to be reconstructed by a new conservative radicalism which offers people security by stressing repair, conservation and care (Blackwell & Seabrook, 1993). It should unite the new politics of life style with the old politics of life chances while reviving civil society and should be guided by a utopian realism. We need to be realistic about the structures and processes shaping the world, yet recognise that with increasing reflexivity, utopias can help constitute the future.

While disorganised capitalism encourages some to be reflexive and engage with ecological politics, it offers others an easy escape into the worlds of passive entertainment and virtual reality. In cyberspace you do not have to face up to the realities and uncertainties of life.

RESOLVING THE PARADOXES

If we return to the paradoxes I listed earlier, we can now assess the extent to which theories of reflexive modernisation help to resolve them.

* The proliferation of green social theories and political ideas can be explained as various responses to the loss of nature and the need to recover nature. Those ideas which cling   t o the notion of an external nature, which is an independent source of value, should be treated with caution. Those ideas which remind us that our concern for the rest of nature is an indicator of our humanity and level of moral development deserve our attention. Green ideas give expression to voices from the margins: other species, women, indigenous peoples, postmodern or holistic scientists, etc. Such ideas and voices should find expression in critical environmental education but there remains a need for an overarching theory to give shape and unity to utopian realism and guide

collective struggles. Political ecology remains a strong contender.

* Postmodernity may be simply a new stage in the evolution of capitalism and postmodernism simply the culture of disorganised capitalism. The framework of modernity and postmodernity, modernism and postmodernism, is closely related to political ecology.   However, the literature of reflexive modernisation does point to the significance of information and communication structures, cognitive and aesthetic reflexivity, and both life and emancipatory politics. A constructive postmodernism represents modernity coming to terms with its excesses (industrialism, materialism, imperialism, patriarchy, scientism, ethnocentrism ...) or taking stock of itself. Green politics is in tune with postmodern sensibilities and attitudes. It allows postmodern hedonism to be translated into genuinely easier-going and more sustainable ways of life which are sensitive to the diversity of people and places. Such politics is progressive so long as it does not abandon structural analysis.

* Postmodernism's rejection of universal knowledge and grand narratives and its sensitivity to subjectivity, local voices and difference, have been intuitively incorporated into much environmental and development education. The influence of multi-cultural and anti-racist education has been positive but Giroux and Aronowitz's (1993) notions of border and postcolonial pedagogies deserve greater attention. They suggest that it is possible to combine postmodern sensitivities with the modern ideal of a democratic public sphere of reasoned argument and debate. This need not mean a commitment to grand narratives or universal forms of rationality and

knowledge, but it does mean rejecting total relativism and accepting that it is possible to judge one validity claim against another in specific circumstances. The critical pedagogy practised by social activists on the new Left would seem to occupy this position between modernism and postmodernism. By listening to voices on the borders, participatory action research is able to draw from all the sites of social reproduction and so widen and deepen its understanding of radical democracy and citizenship.

* The final paradox can be more or less satisfactorily resolved through such reformulations of critical pedagogy. Elizabeth Ellsworth's seminal paper (Ellsworth, 1989) on critical pedagogy suggests that when the theory is put into practice it rapidly becomes a series of repressive myths which silence and alienate pupils and reproduce the very social relations of domination it seeks to counter. She maintains that too much critical pedagogy silences diversity, reinforces a singular and oppressive form of rationality, and excludes voices that are partial and partisan. Her redefinition involves abandoning the utopian rhetoric of democracy, equality, justice, and emancipation, which she considers to be unattainable and ultimately undesirable because it is predicated on the interests of those who are in the position to define utopian projects.   The alternative involves settling for a more modest yet sustained encounter with students' voices, in which the teacher abandons all claims to authority with respect to what can be known and what should be done. Ellsworth's reformulation is more far reaching than that of Giroux and Aronowitz but it is again echoed in the activism of the new social movements.   Her concluding paragraph describes a pedagogy which suggests that many critical

environmental educators should be more patient, more modest, and far better listeners:

Right now, the classroom practice that seems most capable of accomplishing this is one that facilitates a kind of communication across differences that is best represented by this statement: if you can talk to me in ways that show me that you understand that your knowledge of me, the world, and the 'right thing to do' will always be partial, interested, and potentially oppressive to others, and if I can do the same, then we can work together on shaping and reshaping alliances for constructing circumstances in which students of difference can thrive.

* If greater humility and openness on the part of teachers can improve critical environmental education, then so too can greater attention to aesthetic reflexivity which is of growing significance in shaping young people's identity, politics and engagement with the world. This means that critical environmental education should devote far more attention to cultural studies and media education. It should educate people to understand representations of nature, the environment, and environmental issues and should empower them to use cultural products of all kinds to establish their own self-chosen identities and outlooks on the world. This will involve some teaching about the political economy of culture and consumerism (see Unit 3 of *What We Consume*) but it should also involve pupils using video, computer aided design, the Internet, and other media to gain a sense of participation in the new technologies and the creation of worthwhile realms of experience.

CONCLUSION

What of this progress, these paradoxes, and these resolutions is relevant to environmental education in southern Africa, I leave you to decide. We have made considerable progress in developing a critical environmental education in recent years and significant contributions have come from South Africa (eg. Janse van

Rensburg, 1994; O'Donoghue & McNaught, 1991). I hope I have convinced the sceptics that all practice assumes theory and that the key to closing theory-practice gaps, both in environmental education and in the reconstruction of a democratic South Africa, lies in participatory action research informed by critical theory and facilitated through critical pedagogy. Despite continuing problems the new South Africa represents a significant opportunity. With the help of critical environmental educators the twin goals of thoroughgoing democratisation and sustainability could be realized. A society of which all humanity can be proud should be your constant goal.

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