EDUCATION FOR SUSTAINABLE LIVING

AN INTERNATIONAL PERSPECTIVE ON ENVIRONMENTAL EDUCATION

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INTRODUCTION

The World Wide Fund for Nature in the United Kingdom recently published a booklet entitled *First Steps to Sustainability: The School Curriculum and the Environment* (Martin 1990). It outlined the nature of the environmental crisis, the scope and objectives of environmental education, and the ways school curricula may be organised to help young people and their societies progress along the pathway to sustainability. Jonathon Porritt, a former leader of the Green Party in Britain, detailed the challenge of education for sustainability in his *Introduction* to the book:

> Over the last 25 years we've gradually become aware of the impact of our species on the rest of life on Earth ...
> This new found awareness has at last provided a corner stone for a fundamental transformation in the way that we manage the Earth's resources and restrict our impact on other species .... The nineties will be more about finding answers to our problem than about continuing to highlight those problems.
> Whatever the nature of the changes required, education is of paramount importance. The well-being of all future generations depends on the skill and effectiveness with which we inform and inspire the knowledge base and values of those currently in our schools and colleges. The challenge is daunting, in as much as each and every delay in bringing about the necessary transformation will cost us dear in the future (Porritt 1990:1).

The purpose of this paper is to analyse the nature of sustainable development and the role that environmental education can play in what Porritt called the "necessary transformation" towards a sustainable society. Thus, my focus is to provide some answers to the challenge facing all of us who have a vision of a better, more just and ecologically sustainable world in which to live. This is the challenge of how do we get from here to there?

How can we - as individuals, parents, teachers, academics, schools, universities, communities, nations and peoples - help effect the transition from present day patterns of unsustainable development to ones which are based upon principles of social justice and democracy and which respect ecological laws and limits?

Only those very few in the business and political world whose short-term interests are served by maintaining world-wide poverty and environmental degradation - or those captured by the hedonism and materialism of the late twentieth century - now dispute the need for such a transition. The rise of general awareness of, and concern about, environmental problems means that the sustainability debate no longer needs to focus on justifying the need for change. The consciousness raising task set by the environmental predicament has been completed successfully over the last thirty or so years despite economic recession and the recent resurgence of political conservatism in most parts of the world. Today, even many of the world's business and industry leaders have recognised the need to change direction. In its manifesto, *Changing Course: A Global Business Perspective on Development and Environment*, the Business Council for Sustainable Development argued that:

> The environmental challenge has grown from local pollution to global threats and choices. The business challenge has likewise grown. ... Corporate leaders must take this into account when designing strategic plans of business and deciding the priorities of their own work.
> Sustainable development is also about redefining the roles of the economic game in order to move from a situation of wasteful consumption and pollution to one of conservation, and from one of privilege and protectionism to one of fair and equitable chances open to all ...

No one can reasonably doubt that fundamental change is needed. This fact offers us two basic options: we can resist as long as possible, or we can join those shaping the future (Schmidheiny 1992:13).

Today, the debate is over the meanings of sustainable development, and the nature, rate and details of the pathways towards it. This requires a renewal and refocussing of the consciousness raising effort, and poses new challenges for environmental education.

Changing Course was written in response to the United Nations Commission on Environment and Development (WCED) 1987 report, *Our Common Future*, which popularised the concept of sustainable development. The General Assembly of the United Nations (UN) established this Commission of academics, senior civil servants and politicians, more than half of whom come from developing countries, in 1983. The Commission which was chaired by the Prime Minister of Norway, Mrs Gro Harlem Brundtland, the only national political leader to have ever previously been a Minister for the Environment, had three objectives:

● to investigate critical global environmental and development issues and propose realistic solutions;
● to recommend new forms of international co-operation appropriate to these solutions; and
● to raise the awareness of the world's citizens, businesses, institutions and governments and increase their readiness to adopt the proposed solutions.

The World Commission took the concept of sustainable development as the focus of its report and urged governments, industries and families to adopt a pattern of development "which meets the needs of present generations without compromising the ability of future generations to satisfy their needs" (World Commission on Environment and Development 1987:8).

The concept of sustainable development has its origins in the 1980 World Conservation Strategy. The initial meaning of the concept can be seen in the way that Strategy was drafted. Lee Talbot, the former Director of the World Conservation Union (IUCN), tells the story that the first draft was seen as a "wildlife conservation textbook" because at the time many conservationists regarded development

as the enemy to be opposed just as many developers regarded conservation, at best, as something to be ignored or, at worst, as an obstacle to progress. Talbot tells how with each draft the two sides were brought closer together through a process of education and negotiation. The final draft represented the consensus between the practitioners of conservation and the advocates of development - a consensus that would not have been possible without the educational process that came with the writing of the various drafts (adapted from Yencken 1993).

However, this relatively simple concept has been subject to a variety of interpretations. A former Australian Minister of the Department of Primary Industry and Energy once said that we need to open mines to sustain the development of the mining industry - and that, as a result, we need to redefine minerals and energy resources as renewable resources not non-renewable resources (as we have always taught in school) because as mineral reserves run low, even the most impure reserves will become economically feasible to mine. Might I at this point ask you to reflect on the acronym of the Department of Primary Industry and Energy (DOPIE) to see what I thought of this interpretation of sustainable development.

It is possible to find over 160 definitions of sustainable development in the literature - ranging from DOPIE ones to ones that focus on ecological sustainability. What is important for us to remember is that all definitions - whatever their source - serve particular social and economic interests and that they need to be critically assessed. Here are two ways to do that.

First, we can see where the definition fits on the intersecting circles of Figure 1.
● The intersection of economic and environmental sustainability - the environmental management view
● The intersection of environmental and social sustainability - the limits to growth view
● The intersection of social and economic sustainability - the growth with equity view
● The intersection of all three - environmental, economic and social sustainability - ecological sustainability.

Second, we can analyse the values that underlie different definitions of sustainable development. The set of values continua in Figure 2 is useful for that.

Fig. 1: The interlocking nature of environmental, social and economic sustainability
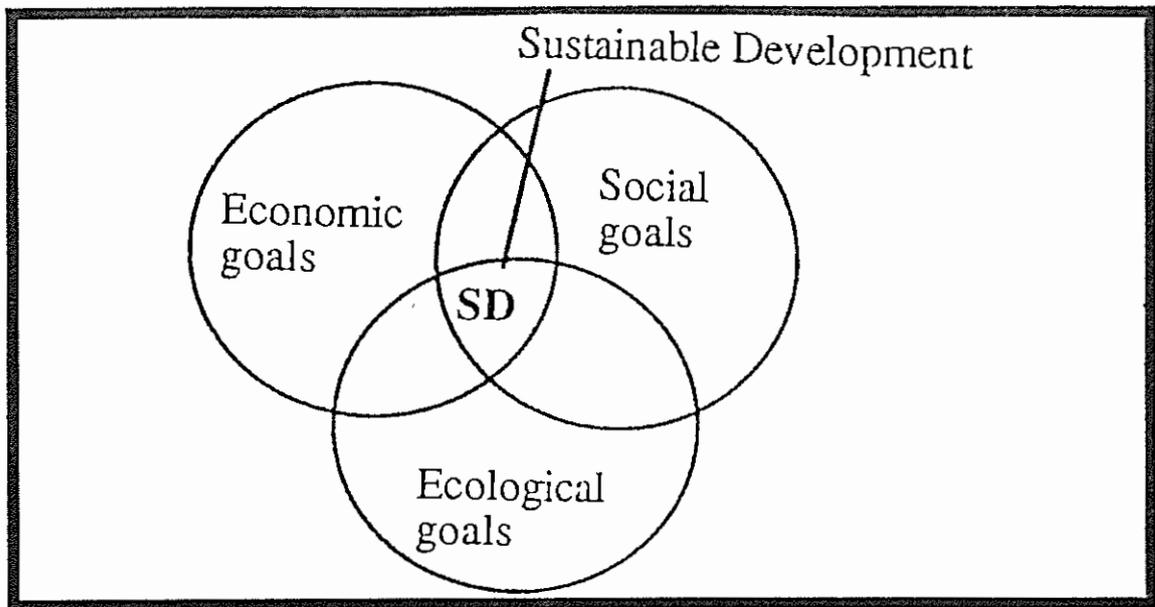

Fig. 2: Values continua for sustainable development

Supports the preservation of the natural environment	....	Encourages the exploitation of the natural environment for human needs
Supports zero economic growth	....	Supports high economic growth
Supports fairness between all species for the present generation (intra-generational equity)	....	Does not support intra-generational equity
Supports fairness for future generations (intergenerational equity)	....	Does not support inter-generational equity

An ecological view of sustainable development sees it as a process which requires that the use of environments and resources by one group of people does not jeopardise the environments and well-being of people in other parts of the world or destroy the capacities of future generations to satisfy their reasonable needs and wants. Issues of ecological sustainability and social justice that flow from such a view include the following:

- There are great differences in the availability and use of resources around the world with poverty and desperate need in some areas matched by overpopulation and overconsumption in others.

  How can the overconsumption, waste and misuse of resources by some people be reduced? How can the severe poverty that causes many to exploit the earth just to survive be eliminated and such pressure on the environment removed?

- Some economic activities do great harm to environments, resources and communities.

  How can economic activity be made of benefit to both the companies and the communities affected, and without critical damage to the environment?

- The population in certain parts of the world is increasing at an alarming rate adding to the pressure on environments and resources.

  How can population growth be restrained to match the availability and sustainable use of resources?

- Economic growth in some parts of the world is so high that it is leading to the production and consumption of many items that are super-luxuries and use resources that could be used to satisfy the need of many of the world's poor.

  How can the resources consumed by such luxuries be redirected to aid the poor or be conserved for future generations?

- The most effective arena for action on sustainability and justice issues is the local community.

  How can people best organise themselves locally - and liaise with others nationally and globally - to collaborate in the crucial aims of sustainable development?

  (after Beddis & Johnson 1988)

When it was planning the second World Conservation Strategy which was published under the title of *Caring for the Earth*, the IUCN, UNEP and WWF tried to avoid the debate over the meaning of sustainable development. In its place, they coined the term, "sustainable living", and proposed that governments, industry and families need to live by a new world ethic of sustainability. This ethic (Figure 3) contains eight values - and these, for me, define criteria for sustainable development and give direction for the development of environmental education policy and curricula. I will return to these values later in the paper and make a case for the direct and explicit teaching of them.

The important issues for us to consider at this point are the implications of the world ethic of sustainability - and the concept of sustainable living - for environmental education. I would like to address this question in three ways: firstly, by using a concrete example of two ways of teaching about biodiversity; secondly, by looking at what it means for the definition of environmental education; and thirdly, by examining what it means for some of the fundamental tenets of environmental education.

Biodiversity is one of the central concepts of environmental education. It is also one of the values in the world ethic of sustainability. Traditionally, this is what we would teach about biodiversity in environmental education:

> During the next 20 to 30 years, the world may lose many thousands or even hundreds of thousands of species of plants and animals - primarily because of environmental changes due to human activities. The list of lost, endangered and threatened species includes both plants and animals. About 10% of temperate region plant species and 11% of the world's 9000 bird species are at risk of extinction. In the tropics, the destruction of forests threatens thousands of species which live nowhere else.
> A rate of extinction of this magnitude is alarming and poses a global problem which has kindled world-wide interest in "biological diversity" or "biodiversity". Biodiversity implies more than simply the number of species

Fig. 3: A new world ethic of sustainability: core values

CORE VALUES FOR SUSTAINABILITY	
ECOLOGICAL SUSTAINABILITY	SOCIAL JUSTICE
Interdependence	Basic human needs
Biodiversity	Human rights
Living lightly on the earth	Participation
Interspecies equity	Intergenerational equity

Fig. 4: The integration of environmental, development, peace and human rights education (Greig, Pike & Selby 1987)
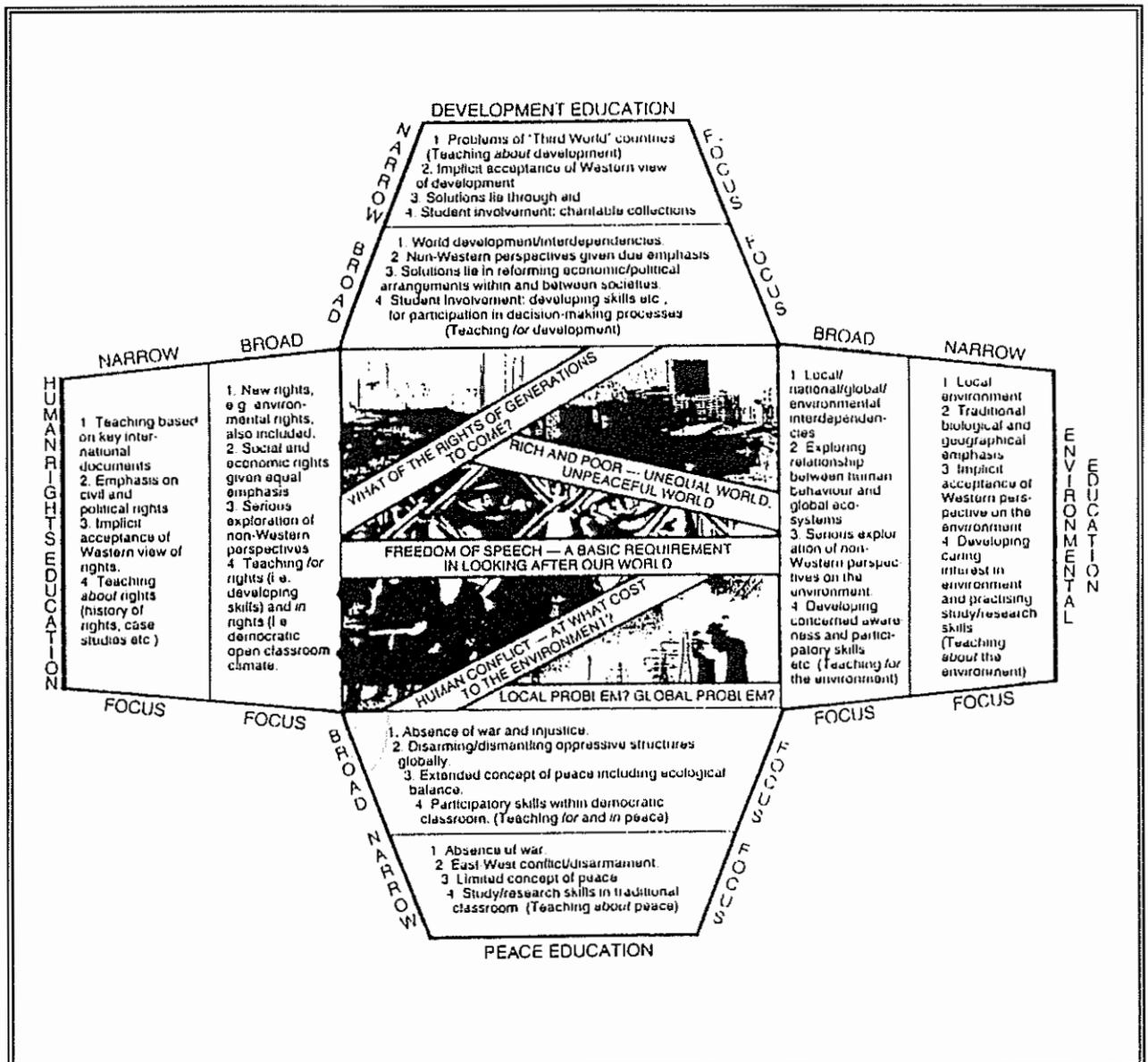
that inhabit our planet. The ecological interactions among these diverse species and their physical environment make up the ecosystems upon which the human species depends for survival ...

Biodiversity provides vital services such as renewing the earth's atmosphere, absorbing pollution and maintaining soil fertility. It provides ethical and spiritual inspiration for many societies. Biodiversity also provides the basic biological complement for the expression of coral reefs, forests and wetlands ecosystems which help in fixing carbon from the atmosphere, an important and fundamental means of controlling greenhouse warming (Hillig 1993).

There are fundamental concepts in such teaching, and much good work is being done in many parts of the world to bring people to an understanding of them. However, guided by the concept of sustainable living and the full set of values in the world ethic of sustainability, we need to expand our teaching about biodiversity. Tolba, the Director-General of UNEP, gives us a clue to what we should also consider when he writes:

> Poverty is locking the people of the Third World into a dismal cycle of events; in their efforts merely to meet needs of food shelter and heat, they are being forced to destroy the very resources on which their future survival (and the future prosperity of all) depend (Tolba 1987).

Or, as the New Zealander, Pat Devlin (1992) wrote recently:

> ...it is easier to be concerned about natural environments if you have a full stomach and some confidence that it will remain full! If your survival, safety or even comfort are under threat, then so too may environmental resolve become accordingly diluted. These issues in basic human rights and justice need to be resolved before any real progress will be made.

Thus, in teaching about biodiversity, we need to also consider the following concepts:

> Developed countries are relatively poorer in biodiversity because they have gained their current quality of life at the expense of their biodiversity and in most cases at the expense of the biodiversity of developing countries. Should those countries which have not yet reduced their biological resources stop development based on the direct exploitation of biodiversity store houses because it impairs their longer term economic development? How should the cost of preserving biodiversity for the globe be shared between the rich and the poor countries? Environmental education must address questions of this nature as well as the biological components themselves.

> While biodiversity is basically an ecological topic, biodiversity problems and issues are connected to every fabric of our global society...

> Not everyone in the world can afford to value the environment and needs of future generations may vary highly. It will be difficult to develop positive attitudes and conserving behaviour towards the natural environment among many poverty-stricken citizens of developing countries. Without food for survival, there can be little thought given towards conservation of the environment for future generations.... The motivation provided by poverty, starvation and ill-health cannot be changed merely by education about environmental quality.

This leads me into my second way of exploring the implications of education for sustainable living for environmental education. This involves a broadening of the concept of environmental education and its direct links with issues of development, human rights and peace - and, therefore, aligns environmental education as an integral partner with development education, human rights education and peace education in education for sustainable living. The IUCN has described this new direction for environmental education as "education for sustainable living". To obtain a clear definition of education for sustainable living, it is necessary to at least define environmental education and development and to uncover the links between them.

According to Stevenson (1987), environmental education involves:

> ...the intellectual tasks of critical appraisal of environmental (and political) situations and the formulation of a moral code concerning such issues, as well as the development of a commitment to act on one's values by providing opportunities to participate actively in environmental improvement (p. 69).

A 1975 UN definition of development education

states that:

> The objective of development education is to enable people to participate in the development of their community, their nation and the world as a whole. Such participation implies a critical awareness of local, national and international processes.
>
> Development education is concerned with issues of human rights, dignity, self-reliance and social justice in both developed and developing countries. It is concerned with the causes of under-development and the promotion of an understanding of what is involved in development, of how different countries go about undertaking development, and of the reasons for and ways of achieving a new international economic and social order (quoted in Hicks & Townley 1982).

There are strong similarities between these two definitions and, together, they may be seen as the core of education for sustainable living. Education for sustainable living is defined by the IUCN Commission on Education and Communication (1993) as a process which:

> ...develops human capacity and creativity to participate in determining the future, encourage technical progress as well as fostering the cultural conditions favouring social and economic change to improve the quality of life and more equitable economic growth while living within the carrying capacity of supporting ecosystems to maintain life indefinitely (p. 6).

Figure 4 illustrates how the former narrow definitions of environmental, development, human rights and peace education can be replaced by a broader, more integrative view. Of course, this view of environmental education has been described by EEASA as "education for change" (Figure 5).

The third way of exploring the implications of education for sustainable living is to ask what it does to traditional thinking in environmental education. In this regard, I would like to focus on three of the central rules of teaching I was taught as a young environmental educator. These are that:

1. Environmental education is a part of progressive child-centred education.
2. Environmental educators should be objective on matters of values.
3. The goal of environmental education is to create environmentally responsible behaviour.

1.   Environmental education is a part of progressive child-centred education.

The child centred-approach to education has given us many wonderful experiential teaching methods which have lead to many innovations in environmental education teaching methods. It has also lead to the humanisation of environmental education through which we can provide learning experiences, especially in the outdoors, which give students self-confidence and esteem, and a sense of oneness with nature.

However, there are a few dangers involved if this is the only approach to environmental education.

First, it ignores the questions, issues and problems facing the student and her community. It directs the student to look inwards rather than outwards to the links between the individual and social structures. More socially-critical or reconstructionist approaches to environmental education are necessary to address this weakness in liberal child-centred educational ideology.

Second, we must be careful that nature experiences do not become escapism. It is often argued that close contact with nature can help students to develop a strong personal bonding with the earth and, therefore, increase their desire to act for it. However, I find it difficult to see how this romantic view of nature will automatically lead to this result without a degree of political conscientising as well.

The focus on personal development and nature experiences are characteristics of New Age thinking. However, this philosophy tends to over-emphasise the importance of personal transformation at the expense of the interdependence of personal and broader structural transformation which is necessary for sustained social change. Mary Mellor (1992) warns that the focus on the individual in this approach to environmentalism may prove to be less helpful than its advocates intend:

> The problem in New Age thinking is the relationship between personal transformation and wider communal change.... While I would not want to argue about the development of a spiritual dimension to our lives and a
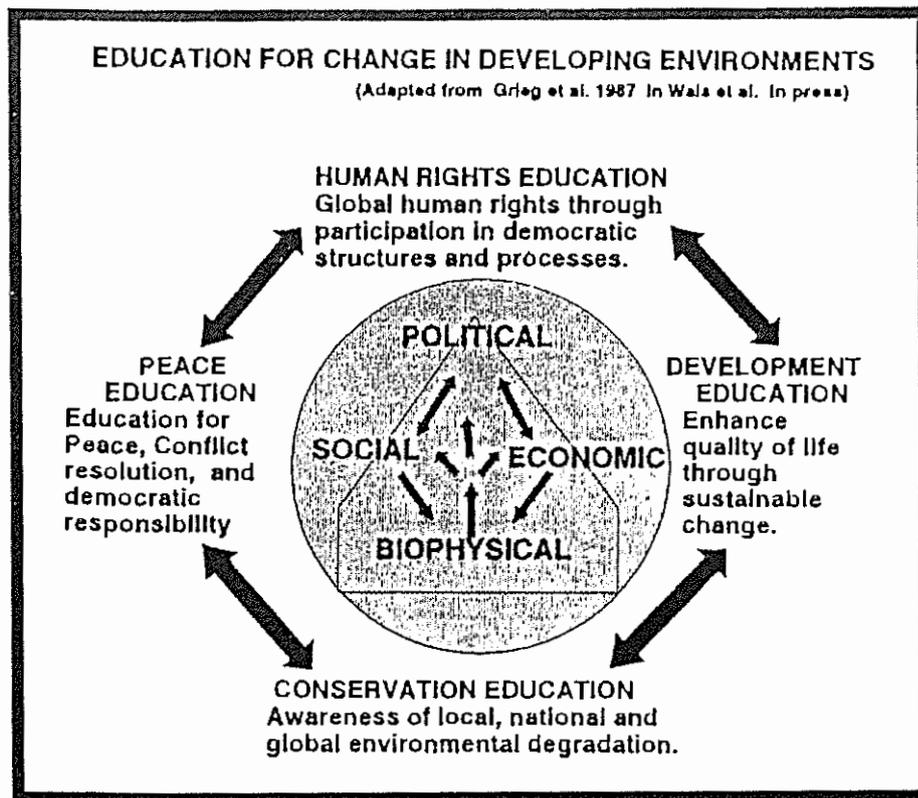
Fig. 5:   Education for Change (EEASA 1993)

EDUCATION FOR CHANGE IN DEVELOPING ENVIRONMENTS
(Adapted from Grieg et al. 1987 In Wals et al. In press)

HUMAN RIGHTS EDUCATION
Global human rights through participation in democratic structures and processes.

PEACE EDUCATION
Education for Peace, Conflict resolution, and democratic responsibility

DEVELOPMENT EDUCATION
Enhance quality of life through sustainable change.

POLITICAL
SOCIAL   ECONOMIC
BIOPHYSICAL

CONSERVATION EDUCATION
Awareness of local, national and global environmental degradation.

Fig. 6:   Action for sustainability at the personal and collective levels (Jensen 1992)

ACTIONS

LIFESTYLE
INDIVIDUAL
COLLECTIVE

LIV.COND.
INDIVIDUAL
COLLECTIVE
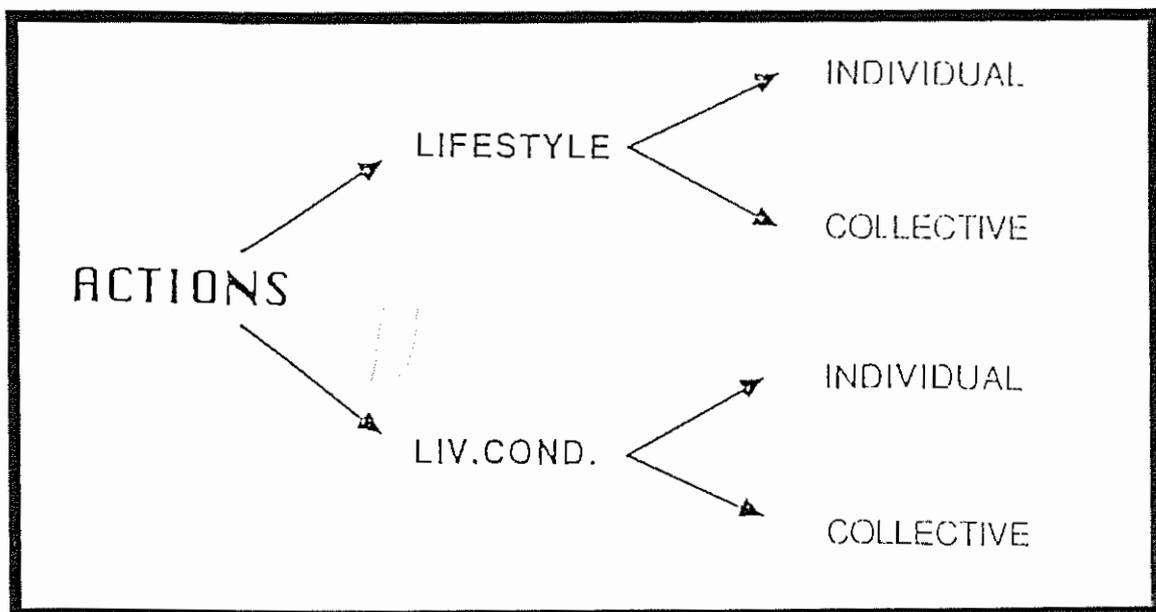
displacement of the emphasis on materialism, ... it risks diverting us into an inappropriate self-obsession. While this may help us individually to develop a wider spiritual awareness and 'bring together' parts of ourselves that have become divided in modern society, it will not necessarily lead to any wider social transformation. That must be done by transforming the materialism of our culture, not running away from it. In many ways New Ageism can be seen as just another manifestation of the 'me' generation: a movement for the powerful, not the powerless (Mellor 1992:46-47).

Speaking of these two aspects of child-centred environmental education, the Danish health and environmental educator, Bjarne Jensen (1992) notes that both run the risk of escapism - the one into oneself, the other into nature - neither of which can solve environmental problems. Jensen goes on the say, "This does not mean that such activities cannot have value in themselves or for other purposes, but they do not solve the paradox of increasing anxiety and the currently increasing action paralysis" of the modern world.

2. Environmental educators should be objective on matters of value

I never really believed my lecturers when they said that we must be neutral and objective in environmental education. That message seemed to be at odds with the objectives of environmental education which emphasise developing a sensitive and caring environmental ethic. How can you develop an environmental ethic when you are supposed to be neutral, and telling students that all points of view are acceptable, and they just have to carefully analyse the viewpoints of others and then clarify their own values?

There is a fundamental contradiction in the values relativity of this position. If all values are equally valuable, then all values are also equally valueless.

Education for sustainable living is based upon the eight values in the world ethic of sustainability, and I would like to suggest that direct teaching for these values is a responsible professional decision. As O'Riordan (1987: 2) argues:

Radical environmental education has a philosophy, content and methodology that is trying to influence the attitudes and values of

society so that care and justice are integral elements of human behaviour out of which will inevitably come a careful treatment of the world's resources.

The case for teacher neutrality does not appreciate that school curricula and practices reflect dominant patterns of power and control in society or that the ideological function of the curriculum (both hidden and overt) means that schools cannot avoid inculcating particular values. It also ignores the explicit anti-environmental values that underlie schooling (Trainer 1991, Fien & Trainer 1993) and the very values that are inculcated through pluralist values education strategies such as values clarification and values analysis (Stradling, Noctor & Baines 1984, Simpson 1986). As a result, the literature on values in environmental education has tended to ignore recent theorizing over the nature of moral thinking (Hare 1981), justice (e.g. Rawls 1971) and collective social responsibility (e.g. MacIntye 1981) and their place in democratic societies (Timmerman 1986). Trapped within its own liberal ideology, this literature has not sought to reconcile the case for directly teaching the values that underlie an environmental ethic with the case for teaching students how to reflect on the dilemmas posed by the conflicting values and how to clarify their own attitudes to particular environmental issues (Benniga 1988: 417).

Thus, Huckle (1980, 1983) has argued that the liberal position on values education - that students should be taught *about* the range of values in any situation and how to clarify their own position in relation to them - must be extended to include the direct teaching of particular values within an atmosphere of free and critical discussion. As Giroux (1981: 359) argues:

...students must learn not only how to clarify values, they must also learn why certain values are indispensable to the reproduction of human life.

The values to be promoted in this manner include the substantive or terminal values related to environmental ethics, social equity and democratic procedures as well as cultural universals such as truth and honesty. This approach to values education has been labelled "committed impartiality" by Kelly (1986). According to Kelly, committed impartiality entails two beliefs:

First, teachers should state rather than conceal their own views on controversial issues.

Second, they should foster the pursuit of truth by insuring that competing perspectives receive a fair hearing through critical discourse (p. 130).

A similar case for teacher commitment in values education has been made with regard to religious education by Hill (1982), multicultural education by Singh (1989) and environmental education by Fien (1988a, 1988b, 1991). Teaching through committed impartiality involves a number of ethical responsibilities which have pedagogical implications. For example, Kelly (1986: 130) has outlined five conditions for "teacher disclosure" which safeguard students from unethical teaching practices:

1. Teachers' views should be consciously included rather than avoided in the discussion of controversial issues.
2. Teacher disclosure of personal views should represent a positive ideal of, and model for, committed and responsible citizenship.
3. Teachers should disclose their view openly and unashamedly and not consistently disguise or diminish them through devil's advocacy or repeated qualification.
4. The timing, mode and tone of disclosure involve professional decisions that can only be made by individual teachers with regard to individual classes and students.
5. The disclosure of teachers' views should be done judiciously and with due regard to the imperatives of impartiality and critical discourse.

Kelly summarizes the pedagogical implications of these principles in this way:

> To recommend that teachers state their personal views on issues does not mean, however, that ... they repeatedly attempt to convince students of the superiority of their own positions. To the extent that teacher disclosure becomes heavy-handed advocacy, it may reasonable be perceived by students as propaganda or psychological intimidation. In either case, the norm of impartiality would be undermined (pp. 130-131).

Kelly suggests that teachers need to adopt "a set of strategic correctives" in order to adhere to the imperatives of impartiality. His suggestions include: praising reasoned oppositional viewpoints, publicly engaging in self-critique, and encouraging students to critique their points of view whilst critiquing students who merely parrot them (p. 132). These guidelines are supported by Huckle (1985: 303) who stresses the importance of "commitment to truth as a duty" and Richardson (1982) who argues that teachers have a duty to protect their students from their own power of persuasion by allowing space for doubts and differing viewpoints. Thus, Harris (1990a, 1990b, 1990c) argues that while teachers have a responsibility to "intervene" in the ideological formation of the young, to help them to resist the hegemonic influences of dominant culture, they should not impose their views on students. Instead, he recommends the critical pedagogy of

> making schooling into a site which develops skills for critical reflection and action in the struggle to overcome injustice and social inequity (Harris 1990a: 179).

3. The goal of environmental education is to create environmentally responsible behaviour

Many curriculum documents and journal articles, especially from the USA, begin with the assumption that the goal of environmental education is to create environmentally responsible behaviour (Hines, Hungerford & Tomera 1986). And they are correct - to a point. Responsible environmental behaviour is a necessary, but nonetheless insufficient, purpose of environmenta education. A sustained case has been made against the responsible environmental behaviour movement in environmental education (see Jensen 1992, Hart and Robottom 1993). I would like to pick upon two of the points that are made.

First, responsible environmental behaviour is defined in narrow individualistic terms which ignore the many types of actions needed to solve environmental problems - and even to live in an environmentally responsible way. The focus on responsible environmental behaviour addresses only the top line examples of actions in Figure 6. This is fine for the happy beneficiaries of economic development but it ignores the individual and a collective actions needed to create a sustainable world. Education for responsible environmental behaviour fits the old, narrow view of environmental education and fails to address the imperatives of sustainable living.

Second, the teaching methods advocated for developing responsible environmental behaviour are behaviouristic. They are based upon a linear view of the relationship between knowledge, attitudes

and behaviour and the assumption that "right knowledge" and "right attitudes" leads to "right behaviour". To be told what these are may lead to environmentally responsible behaviours in the short term. However, behaviouristic approaches to environmental education do not create the critical thinking skills necessary to develop action potentialities for the long term. Indeed, I do not know that they work in the short term with young people. I do not know how effective the anti-littering campaigns are here but I suspect that they are similar to those in Australia - and other behaviour modification campaigns, such as anti-smoking and anti-drinking - which are seen as irrelevant by many young people to their real needs and interests.

Alternative approaches based upon developing the critical thinking, reflection and action skills needed to make life-long decisions about the nature of a better world and the relationship between oneself, the biosphere and other people, at local, national and global scales, require a refocussing in environmental education away from responsible environmental behaviour to education for political literacy - for active and informed citizenship.

CONCLUSION

In this paper, I have tried to make a case for a broadening of the agenda for environmental education. I have explored the historical trends that have given rise to a redefinition of environmental education to Education for Sustainable Living and its integration with development education, peace education and human rights education. I have explored some of the implications of this for classroom content (through the example of traditional and newer approaches to the topic of biodiversity) and for our approach to values education and political education.

Educators who seek to follow this approach will experience difficulties, however. They may attract charges of indoctrination and meet opposition from those whose status and identity are derived from dominant conservative and liberal approaches to environmental education. Huckle (1983) argues that committed teachers will need skills to reveal the political nature of so-called "neutral" or "balanced" approaches, and to explain how their approach to values and attitude education actually rules out indoctrination in the classroom.

Giroux (1988) argues that this may be done by teachers adopting the pedagogical role of

"transformative intellectuals" who subscribe to a view of pedagogy based upon educating students to be active, critical citizens. Central to this role is a recognition of the "necessity of making the pedagogical more political and the political more pedagogical". Making the pedagogical more political means exposing the reproductive role of education and consciously working with others to foster democratic values to help students develop a deep and abiding faith in the struggle to overcome economic, social and political injustice and to further educate and humanise themselves as part of the struggle. Making the political more pedagogical means applying the principles of political literacy to the classroom; that is, using learning experiences that encourage student to be critical enquirers; giving students an active role in deciding how and what to explore; making knowledge problematic; and making the struggle for a better world a conscious educational goal.

Teaching as a transformative intellectual demands that attention be paid to the processes of curriculum planning and teaching. Attaining the full range of knowledge, skill and values objectives of environmental education requires approaches to teaching very different from those of the traditional classroom. A number of guiding principles for such teaching may be outlined. They are presented here as questions in a checklist, as ideals to which environmental educators might aspire:

1. To what extent do I maintain a clear vision of what a just, peaceful and ecologically sustainable world would be like and how does it influence the education I provide to my students?

2. To what extent do I maintain a balance between knowledge, skill and values objectives, especially so that the development of important skills and values are not subsumed by an over-emphasis on content?

3. To what extent do I follow democratic procedures which enable students to participate in curriculum decision-making and negotiation and to have power and responsibility over their own learning?

4. To what extent do I respect students' understandings, ideas and opinions and create a supportive classroom environment which encourages students to explore new ideas and voice opinions in a spirit of tentativeness but without fear of criticism or failure?

5. To what extent does my dominant teaching style respect the varying learning needs, abilities and learning styles of students, and

focus on the development of inquiry, values analysis, decision-making and social action skills?

6. To what extent do I utilise the resources and experiences of other teachers, students, parents and members of the wider community in order to draw upon and illuminate the experience of living in a particular community with a particular pattern of social, political and economic structures, and particular links to global trends and processes?

7. To what extent are the criteria I use to critically evaluate the appropriateness of teaching materials consistent with the principles of Education for Sustainable Living?

8. To what extent do I ensure a match between the content I am teaching and the styles of learning experiences and assessment to be employed so that my style of pedagogy becomes the message it is teaching?

9. To what extent do I focus on political literacy in my teaching in order to develop appropriate understandings, attitudes and skills for encouraging participation in formal and informal channels to resolve global problems, but with a particular focus on 'thinking globally and acting locally'?

10 To what extent is my teaching characterised by an action orientation that enables students to participate in some form of educative or direct action in the local community in order to practice the skills of political literacy they have developed, to see the social relevance of their school learning, and to experience the joys of success and the pains of frustration that come from collective action in working for a fair and more peaceful world?

These principles for critical teaching provide guidelines for ensuring that educational processes match the principles of Education for Sustainable Living.

I would like to conclude with recommending to you the conscious and deliberate planning and teaching of the values that underlie a committed approach in Education for Sustainable Living. Forget about being objective, neutral or balanced. These are old, false scientific notions that have been used by established interests to prevent any challenge to them. They have defined the world their way and so any challenge to it must of necessity be subjective, biased and unbalanced. This is the same argument right wing economist use when they define their brand of economics as "rational

economics" and thus brand every other approach to economics and development as irrational.

Proving that our teaching is neutral and balanced is *not* an ethical professional obligation in the 1990's. Proving our commitments are morally and rationally defensible is. And that is very easy to do as socially just and ecologically sustainable values of the Sustainable Living will only come about when we begin to live by them. I urge you to make them the core of your work as you "stand up, stand up and be counted".

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