

# Environmentalism as Social Purpose in Higher Education: A Green Education Agenda

Ken Dyer

Mawson Graduate  
Centre for  
Environmental Studies  
University of Adelaide



## A B S T R A C T

This paper considers some recent ideas about tertiary environmental education and about environmentalism as an emerging social purpose of universities. It shows that total reliance on education about the environment results in unacceptable views of the environment, environmental education and 'environmental problems'. The paper considers approaches to teaching, arguing for one which assumes that learners construct their own concepts of the environment. It distinguishes between current discipline-based teaching in universities and the more holistic Green Education. The paper concludes with a list of characteristics of Green Education which follow from the arguments presented.

The subject matter of this paper is the version of environmental education which espouses the values and ideology of environmentalism and which puts into practice what it preaches. In particular the paper outlines the nature of a comprehensive, committed approach to environmental education. Such an approach, while it is concerned with much that is already taught in universities—for example, the natural and social sciences, the technologies and managerial disciplines—is very different from them in attitudes and processes. This paper asserts that this kind of environmental education can and must co-exist with the disciplines which already exist within universities, and yet still achieve its very different objectives.

Environmental education is clearly in some way concerned *with*, or is *about*, the environment. But what is the environment with which it is concerned? Is there a specific environment or is it 'everything around us'? Education itself is a body of theory, an array of practices supporting teaching and learning, ideologies and beliefs directing those practices—and much else. It involves the transmission, learning and application of knowledge, attitudes, social and physical skills, values and awareness.

But how do environment and education articulate together? Must we be able to identify *a* specific environment, or identify *the* environment before we can speak of education which is environmental?

David Orr, a noted American educator, has said that "all education is environmental education" (1991). By this he surely meant two things: first, since the environment is all around us, learning to live is therefore learning about our environment; and second, since we are living in our environment the whole of our lives, we must be learning about ourselves and environment all our lives. It is therefore surprising that in formal educational institutions there is so little explicit reference to 'the environment', or 'environmental studies', so few Faculties or Departments of

these areas of study. This is in contrast with the existence of Faculties and Departments of Science or Music or other collections of educators and their expertise. It is in these Departments and Faculties that criteria for the respective varieties of education are determined and the activities which warrant the appropriate description as exemplars of that variety are carried out.

*'For the process of education in environmentalism a new term is clearly needed; this paper argues for the use of 'Green Education'.'*

The two questions which arises as a result of the observation that there few Faculties or Departments of environmentalism or environmental education in which environmental education can be developed and defined are: "Who is going to set these criteria for determining whether what is occurring is environmental education?" and "To what extent are such agreed criteria being met?"

The varieties of education associated with the domains of Science, Music and so on advance their causes in society. Science education assumes that science is a good thing for students to learn, practise and use for their own good and that of the society of which they are a part. The same is the case for all the other forms of education. This paper will use the word 'environmentalism' to refer to the subject matter of environmental practice and concern. For the process of education in environmentalism a new term is clearly needed; this paper argues for the use of 'Green Education'.

The paper will argue that there is much education in the environmental arena which, while necessary for an informed environmental understanding, is not part of the *process* of environmental protection or environmentalism.

### Tertiary environmentalism - some history.

Education about environments ought not to be a new idea in universities. Human beings have known factually if not emotionally for several hundred years that the earth is finite and essentially one functioning system. Humans have also known for a long time that between and among living and non-living things there are a series of intricate connections, ones which it has been obvious that human activity has proven itself capable of damaging, at times irreversibly, although again the implications of that knowledge have not been understood. For a long time, in some cases a century or more, there have been concerns about such things as extinctions, land degradation, environmental pollution and its attendant hazards, and many other major problems commonly labelled environmental issues—although they are in reality problems about inappropriate human actions in the environment. Ethical concerns for the non-human environment have also been the subject of formal philosophical debate and enquiry since the early nineteenth century although, as Nash (1990) and Singer (1993) have discussed, such concerns existed long before then.

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*‘environmentalism...is almost nowhere to be seen.’*

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And yet environmental education of any variety is a relative newcomer in most universities. And environmentalism, in the sense in which it is defined above, is almost nowhere to be seen. A number of Departments and Centres of Environmental Studies or Environmental Science, established in Australian universities in the early 1970s, almost without exception had enormous problems in establishing and justifying themselves. Their ongoing history has been one of hanging on in the face of official neglect and obstruction and more recently forced amalgamation. The early history of at least one of these Centres of Environmental Studies is given by Young, Dyer and Taylor (1989) and Young (1991). A more recent protest against amalgamations and closures of these same Centres comes from Doyle and Walker (1996) while a more general historical survey is given in Harvey and Bourman (1995) and Thomas (1987 & 1993), Cosgrove and Thomas (1996) providing further details.

Today, paradoxically, subjects with ‘environmental’ in their title seem to be everywhere in Australian universities. But few are based on the principles and ideals of environmentalism which are spelt out in this paper. People who call themselves environmentalists and who are found in Departments/Centres of Environmental Studies/Science, claim that this fragmented and non-committed approach to education about inappropriate human-environment interactions and their consequences now requires alteration or amelioration (Orr 1991 & 1992, Daly & Cobb 1989).

It is the argument of this paper, however, that some of these new developments in education concerned with environments are adopting some of the tenets of environmentalism, and are significantly different in

philosophy and practice from those kinds of education which have been traditional in universities. They are, it is claimed, both a manifestation of and a vehicle for a newly emerging social purpose in higher education. This paper examines how and why these new developments in higher education practice, which reflect the philosophy of environmentalism and put into practice the tenets of what I wish to call Green Education, are so different from what has gone before. It shows that the conditions necessary for their further growth are well established and argues that environmentalism/Green Education, despite being in an apparently weak and unpromising position in universities today, will inevitably grow and become powerful.

In developing the case I wish to make about the nature of and impetus towards Green Education in universities the paper proceeds under the following general headings:

- the participants—in tertiary environmental education.
- the practice—of tertiary environmental education.
- characteristics of Green Education.

It concludes with a discussion of implications for universities inherent in these ideas.

#### The participants

A traditional, if much oversimplified, view of formal education is that it is a one way transfer of knowledge from experts who are both teachers and researchers in a field of knowledge to students who are simply seeking knowledge, skills, professional accreditation or some combination of all three. The only active group are the teachers. This view has long been held at tertiary levels of education where the Professor was traditionally been seen as *the* source of learning and wisdom for students who were not in a position to challenge his—or very occasionally her—authority. For simple but well documented statements of some of these ideas see Musgrave (1973), Berger and Luckman (1967) and Lynch (1989).

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*‘education of all kinds in any institutional setting is ... always less active and interactivist than environmentalists would wish’*

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There are several crucially important objections to this view of education. First, the nature of this kind of view is that it is fundamentally objectivist, that is it assumes that there are such things as objective, external entities—‘knowledge’ or ‘facts’—simply waiting to be taught and learnt. This assumption also constitutes a major objection to the use of such a view. Second, this view assumes that academics have the appropriate knowledge and students do not. Third, it ignores the importance of the social use and valuation of knowledge, that is the fact that knowledge is used for survival, attaining status or power, as a religious duty and so forth. And fourth, it ignores the significance of

individual ethical beliefs, behaviours, personal and political outlooks, and individual creativity.

In the last two or three decades a very different theoretical view of education has developed and a new practice of education based partly on this latter view has achieved at least a toehold in many universities. In the case of environmental education, at least, this new practice of education is the result of actions and interactions among and between four groups of people who are not always absolutely distinct but who do have different roles and purposes in the process of education. These groups, discussed briefly below, I designate as educators *about* the environment—or simply environmental educators in the terminology of this paper; educators *for* or *with* the environment—Green Educators or environmentalists; students; and members of the university community at large. The phrase ‘education for the environment’, first used in 1972 by Lucas in the sense of education for the preservation of the environment, gradually came to change its meaning, and by 1985, was used with the intention of meaning ‘in favour of’, or ‘for protection of’ the environment. The expression ‘with the environment’ dates from the mid-1980s and is intended both to be less hierarchical and less possessive in intent and to imply we learn with the environment in the same way we learn with our friends, relatives or formal teachers how to do or understand something (Gough 1987 & 1989).

To be sure, education of all kinds in any institutional setting is always more active and interactive than was portrayed above in the simple description of objectivist education, but it is always less active and interactivist than environmentalists would wish. The difference between education concerned with active committed environmentalism and other educational experiences is that in the former case the reciprocal interactions between staff and students are recognised and made overt. Further, the roles played by the university itself, as an institution facilitating the adoption of environmental values in the kinds of educational processes it supports and espousing those values in all its other activities, are new.

#### *Educators about the environment*

There is a reasonably large and rapidly increasing number of university teachers who teach and research basically *about* the environment. They include environmental biologists, engineers, lawyers and so on. They may also be teachers and researchers in areas such as environmental planning, ecotourism and other non-traditional subjects located in Departments/Centres of Environmental Studies, Environmental Management or other specifically environmentally oriented departments. Wherever they are located, they provide much of the essential knowledge without which understanding of the current environmental predicament is impossible. But, paradoxically, the way they provide this knowledge and present it is, according to many, both contributing to current environmental problems and inhibiting the search for and implementation

of measures to prevent or reduce them (see, for example, Orr 1992, Spork 1992).

Many educators who teach primarily *about* the environment operate from one or more of the following:

- a belief in the existence of objective knowledge.
- the primary importance of approaches which attend only to scientifically derived and logically applied knowledge and which give limited credence to emotions and feelings.
- the primacy of reductionism, that is breaking problems down to ever smaller and supposedly more fundamental components, rather pursuing a holistic view.
- the belief in technical solutions to environmental problems.
- the need for disciplinary based experts to find and apply those solutions.

The education system in western capitalist countries is dominated by them and overwhelmingly supports them. The result, according to one educator,

*is an education system based on a technical view of reality, which gives credence to a reproductive form of education which equates with the status quo.*  
(Firth 1995)

According to another, ignoring the knowledge that students already have about natural phenomena and using an uncritical objectivist approach to teaching, “speedily results in dysfunctional learning” and “leads such students to believe that there are things called ‘facts’ and that some interpretations are infallible and never need to be challenged” (Hendry 1994).

Educators with this rational, objectivist, technical and conservative stance may very well be concerned as individuals with environmental conservation, with sustainability and all its attendant ideas and with being practical environmentalists. They overwhelmingly see their teaching task as presenting the techniques which assist humans to undertake the business of conservation, recycling and other manifestations of ameliorative—or ‘patch-up’—environmentalism (Schnaiberg 1980, Sagoff 1988), and with examining the consequences of not pursuing them. Nevertheless in their teaching they are unlikely to argue for particular courses of action, to show how environmental outcomes are an inevitable consequence of social inputs or to initiate any practical steps to put their beliefs into practice. If concern about environmental degradation is expressed by them it is very likely to be concern for the impact of environmental degradation on human beings. In so far as the future is considered at all, it is the future of the human species which is likely to be considered and protection of all other components of the environment is merely a means to the end of protecting human beings and their particular interests.

These are damning generalisations, but even a cursory glance at the Blueprint series of books by Pearce and his co-workers (Pearce et al 1989 & 1991), and many environmental science texts such as Tyler Miller and Armstrong (1982) and Wagner (1978), substantiate the point, and Fox's polemic (1990) in favour of deep ecology is a particularly critical analysis. Publications of radical educators such as Huckle (1991) and Dunkley (1992) are concerned with the pervasiveness of such attitudes.

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*‘additional perspectives are needed [for] an education that is actively and critically pro-environmental.’*

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There are several shortcomings in teaching about the environment in the ways outlined above. In the first place such teaching does not address the contestable, researchable question of why some ideas are presented and others not. Nor does it consider the question of how material is to be effectively presented. Further, teaching a fragmented, disciplinary view of ‘the environment’ is counter-productive when the issues emerging from human-environment interactions are so obviously all-embracing or holistic (Pepper 1996). Clearly additional perspectives are needed if university education is to present an education that is actively and critically pro-environmental. These perspectives are supplied by teachers of very different persuasions—ones outlined in the following section.

However, despite all these problems, the presence of this teaching, research and obvious concern for matters environmental in many universities is a major change and a major improvement on the situation of only a few years ago. This allows for some optimism that the kinds of education described later in this paper will become more widespread.

#### *Educators for or with the environment*

Another of the four overlapping groups which have contributed significantly to environmental education in universities comprises those university teachers and researchers who are *for* the environment. The principal focus and objectives of the activities of these educators, the traits which define and identify them, their teaching and their research, are that their efforts are directed primarily towards:

- saving, defending and protecting the environment.
- encouraging others to think and behave similarly.
- emphasising that humans are part of the environment—that the environment is not something separate from us which we can and should manipulate for good or ill.

In contrast to discipline bounded educators *about* the environment, educators *for* the environment believe that the root causes of most environmental problems are an

outcome of current social, economic and political systems. They also believe that at least some components of ‘the environment’ have intrinsic value and that ‘the environment’ should be protected for the benefit of those other components of the environment as much as for the benefit of human beings. It should be clear that to identify ‘the environment’ as anything simply mechanical and positivist is thoroughly misleading. We humans are part of the environment which is itself a dynamic relational concept, not some concrete entity. Indeed, as argued below, humans create the concept of the environment and their knowledge of it. Educators *for* the environment believe above all that it is their task to persuade others to this point of view. This does not imply that they argue for a particular means of protecting the environment. Over the means of environmental protection there can be legitimate debate and disagreement.

They believe that

*socially and ecologically sustainable relationships between people and nature require an education system which can transform materialistic values and empower people to participate in environmental improvement and protection.*  
(Firth 1995)

As Doyle and Walker (1996) argue

*[Environmental Studies] can contemplate with equanimity the possibility that its critical approach will lead at times to radical thought and even political action...Environmental Studies has not shrunk from advocacy.*

One of the fundamentals of environmental studies has been to inform and direct environmental, political and social change.

Educators *for* or *with* the environment are likely at present to work in Departments/Centres of Environmental Studies or perhaps Departments of Education. But they may be located, and increasingly should and will be if their view of the world becomes more widely accepted, in more traditional discipline-based departments. It can be assumed that wherever they are located they are likely to increase in number and grow in influence as the number of graduates from Departments/Centres practising Green Education or environmentalism increase, and the number of departments in which they can find employment increase. For example, Adelaide University introduced in 1997 three new environmental degrees: a Bachelor of Environmental Science offered jointly by the Faculties of Science and Agriculture and Natural Resource Sciences; a Bachelor of Environmental Studies offered by the Faculty of Arts; and a Bachelor of Science (Environmental) offered by the Faculty of Science. A Bachelor of Civil and Environmental Engineering had been introduced three years earlier. There is a degree of co-operation and cross listing of subjects in the many departments involved in offering these awards

such that, even though educators for/with the environment may be few in number and restricted in the departments in which they teach, their influence is increasing. Other universities in Australia and elsewhere can point to similar initiatives (Cosgrove & Thomas 1996).

### *Students*

A further group of people participating in the process of environmental education and necessary for it to occur is the students. Too often, students at all levels of educational activities are seen as some sort of empty vessel into which can be poured the necessary facts, as technicians to be equipped with the necessary skills and techniques or, in the environmental context, treated as some sort of moving automata who simply need to be nudged in the direction of environmental responsibility or sustainability. But few students are like that. All students bring to all courses, but particularly those at the tertiary level, their own knowledge, attitudes and beliefs which strongly influence the way they react to and rationalise what they are taught, and what they believe about what they are taught. Of course all students, even those enrolled in Green Education/environmentalism courses, may be strongly influenced by technocratic rationality, may believe strongly in the power of positivist reductionist science and technology to address the world's environmental problems and be primarily concerned to attain the knowledge, skills and professional accreditation to enable them to put their beliefs into practice. Indeed, if the educational system pre-tertiary is as described by Firth (1995) and many others, then it is hardly surprising that the majority of students entering the tertiary sector think this way.

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***\*students in such departments will demand changes of their teachers and in the curricula they are offered\****

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However, many students are now rebelling against such views; they are bringing to their courses pre-existing commitments to environmental conservation, environmental activism, environmental concern and a range of personal environmental ethics often markedly different from their tertiary teachers and a majority of their fellow students (Blaikie 1993). They require and will demand very different things from their teachers. If trends of the last few years are maintained the numbers of such students will increase for at least two reasons. First, as the severity of environmental crises become more apparent students seeking to study them in order to act for/with the environment will increase in number. Second, changing patterns of primary and secondary environmentally oriented education will produce different sorts of university entrants (Dyer & Gunnell 1993). Many students seek out those departments offering Green Education or environmentalism. In such departments they are

encouraged and will, both individually and as a group, respond differently to the teaching and learning process compared to those students with less developed environmental values treated to objectivist education in other departments. Conversely, students in such departments will demand changes of their teachers and in the curricula they are offered. It was, for example, student initiatives in many universities which forced the abandonment of compulsory animal dissection in zoology courses and in many universities it was students who initiated the development of university environment policies (see next section) (De Rosa 1996).

### *The university community at large*

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***\*this mixture of social obligation and educational imperative... forms the basis for a new social purpose of universities\****

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The final group of people considered here as essential participants in a form of environmental education congruent with environmentalism or green ideals consists of all those members of the university—executives, administrators, all other academics and all general staff—who contribute the functioning of the university. It is, after all, they who devise and put into practice environmental policies, who practice—or decide consciously or unconsciously not to practice—what environmental teachers preach. But it is more than that; it is the whole university community which, in the most broad sense, communicates with its students and with the community at large through everything it does. Given the high a proportion of the population which now passes through universities, and that universities are such prominent employers and economic instruments in our local and national communities, it is clear that universities have the clear potential—and some would argue obligation—to offer to their supporting societies responsible environmental policies and practices. It is this mixture of social obligation and educational imperative which forms the basis for a new social purpose of universities identified here.

Environmental education, which is socially critical, non-disciplinary, non-liberal in temper and avowedly *for* the environment, is a recent development in universities. It is still small but it is growing in significance, if slowly, and is one of the driving forces behind the emergence of what this paper identifies as a new social purpose of universities, that of their being agencies of environmental concern. There are two other powerful forces leading to this new social purpose—one primarily educational, the other primarily administrative. First, there is the rapid expansion of more traditional types of education, research and scholarship about the environment and the hazards to it; second, there is the adoption within universities of environmental best practice and formal environmental policies. If universities

wish to present a credible face to their internal and external communities and critics they must both practise what they preach and preach what they practise.

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*‘environmentalism is ... in apparent conflict with more traditional discipline-based varieties of environmental education’*

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Universities have always had a variety of formal educational and more general social purposes. Some of these purposes have continued to be in tension with others. For example, universities’ roles as planners of society and providers of technically qualified people for society have always conflicted with their role as social critics and purveyors of a liberal education. In this case environmentalism ‘as social purpose’ is directly confronting another newly emergent social purpose of universities—that of their being instruments of economic and social policy (Mahony 1990, Powell 1990, Richardson 1993, Wilson 1992). And, as is usually the case in the contest between environment and economics everywhere, environmental concern is, at present, coming off second best.

As if this were not enough, environmentalism is simultaneously challenging the internal educational structure, functioning and liberal philosophy of universities, suggesting radical ways in which their educational purposes might be met. It is therefore in apparent conflict with more traditional discipline-based varieties of environmental education which espouse traditional views of supposed neutrality and objectivity of the educational process. Here, too, environmentalism faces major problems.

How and to what extent is this social purpose played out in practice by the university at large? Most Australian states and territories now have some form of legislation associated with environmental hazards and nuisances such as toxic emissions, noise and so on. This legislation is binding on all corporate entities including university Councils. Universities are therefore tightening their operational procedures to ensure that such events are rendered as unlikely as possible and adopting Environmental Management Standard 14000 to demonstrate publicly their philosophical commitment and practical adherence to environmental policy (De Rosa 1996).

In 1990 at a conference in Talloires France, a number of “Presidents, rectors and vice chancellors of universities from all regions of the world” who identified themselves as “University Presidents for a Sustainable Future” signed the Talloires Declaration (Springett 1995). This Declaration commits those universities which sign it to:

1. Use every opportunity to raise public, government, industry, foundation and university awareness by publicly addressing the urgent need to move toward an environmentally sustainable future.

2. Encourage all universities to engage in education, research, policy formation, and information exchange on population, environment and development to move toward a sustainable future.
3. Establish programs to produce expertise in environmental management, sustainable economic development, population and related fields to ensure that all university graduates are environmentally literate and responsible citizens.
4. Create programs to develop the capability of university faculty to teach environmental literacy to all undergraduate, graduate and professional school students.
5. Set an example of environmental responsibility by establishing programs of resource conservation, recycling and waste reduction at the universities.
6. Encourage the involvement of government (at all levels), foundations, and industry in supporting university research, education, policy formation, and information exchange in environmentally sustainable development. Expand work with non-governmental organisations to assist in finding solutions to environmental problems.
7. Convene school Deans and environmental practitioners to develop research, policy, information exchange programs, and curricula for an environmentally sustainable future.
8. Establish partnerships with primary and secondary schools to help develop the capability of their faculty to teach about population, environment and sustainable development issues.
9. Work with the UN Conference on Environment and Development, the UN Environment Program, and national and international organisations to promote a worldwide university effort toward a sustainable future.
10. Establish a steering committee and a secretariat to continue this momentum and inform and support each other’s efforts in carrying out this Declaration.

In a related development, in 1993 the International Association of Universities, responding to Agenda 21 which arose out of the United Nations Conference on Environment and Development at Rio in 1992, adopted the Kyoto Declaration on Sustainable Development which urged individual universities to adopt an Environmental Action Plan to put into practice the principles of Sustainable Development. Both of these initiatives have been widely supported (De Rosa 1996).

In short, and in brutally practical terms, universities as a whole are being forced to practice what they preach. If their overall educational purpose is to be seen as more than a mere sham they must function in an environmentally responsible and ethical way. That involves at least ‘reducing, reusing, and recycling’ where appropriate and adopting avowedly environmentally friendly policies and procedures. Second, universities’ teaching and their administrative structure must be such that non-discipline

based education is encouraged and valued, and that teaching methods very different from those used in the traditional hierarchical transmission of knowledge are allowed and encouraged.

Green Education is the primary vehicle for the establishment of a broad new social purpose of universities. Would-be Green Educators will not fully be able to achieve their holistic, committed, value-laden goals in institutions which are committed, at best, to a patchy mixture of discipline-based environmentally related subjects, and within which the majority of teachers profess belief in and transmit knowledge as ahistorical, socially neutral, and separated from value, status and power. Nor will Green Educators be able to achieve their goals unless they recognise and respect the pre-existing knowledge and values of their students. But Green Educators are also clearly at a systematic disadvantage in institutions in which students, despite increasingly having strong environmental values, find these values at best ignored and at worst challenged and opposed by the nature of most of the education they receive and the very mixed messages their institutions send them.

#### The practice

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#### *‘Green Education ... recognises the interests of and gives intrinsic value to all components of the environment’*

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The numbers of courses, subjects, committed academics and participating students in disciplinary-based, environmentally related courses in universities have increased dramatically in recent years (Smith & Ealey 1980, Thomas 1987 & 1993). This expansion has been partly for educational purposes—disciplinary specialists have genuinely believed that they had important knowledge, theory and techniques necessary to address environmental issues. It has also been for more social and ethical reasons—disciplinary specialists and the university sector as a whole believed that they should be addressing environmental issues. The economic pressures to develop courses which would attract fee paying participants who believe such courses offer significant employment prospects must also be mentioned. The problem is that expansion of university education about the environment along these lines does not escape the inherent limitations of disciplinary knowledge.

Environmentalism/Green Education differs from traditional disciplines in several respects. First, it is concerned with understanding and solving the problems of environmental degradation which humans are bringing about; it is concerned both with knowledge and applying knowledge to solving human/environmental problems. It is both pure and applied, to use conventional terminology; it needs both

educators about the environment and educators for/with the environment, or environmentalists/ Green Educators to use the viewpoint developed in this paper. Second, environmentalism/Green education is not just concerned with human problems. It recognises the interests of and gives intrinsic value to all components of the environment not just to humans. The knowledge which is sought through research and passed on by teaching is equally concerned with problems experienced by these other components of the environment as it is with problems experienced by humans.

The third difference is that environmentalism/Green Education is an escape from the tyranny of the disciplines. Various commentators describe much of the newish environmentally associated courses as multidisciplinary, interdisciplinary or sometimes transdisciplinary. This is usually done to indicate that a wider spread of subjects and methods is allowable than in traditional discipline-based subjects. This paper advocates use of the term ‘nondisciplinary’ to describe the more comprehensive, genuine, inclusive version of environmental education here labelled environmentalism or Green Education. This term is chosen to emphasise the fact that environmentalism/Green Education differs from traditionally defined disciplines in that it is as much process as content. It rests, to be sure, on those disciplines which are concerned with the components of the physical and social environments. Those of particular importance include: the earth sciences and biological sciences; the social and behavioural sciences such as law, politics and economics; technologies such as engineering and energy studies; and disciplines centred around architecture, planning and design. It is argued by traditional disciplinists that students can only master enough of the basic environmental knowledge and skills they need to have in any area of environmental relevance if they give that area their full attention. In other words students must be chemists, ecologists, economists, lawyers or whatever first—and environmentalists second. In this view anything concerned with the environment, if it is considered an academically respectable activity at all, is merely an addition to or perhaps a sub-discipline of the existing disciplines. In the view of environmentalists, of course, this stands the relationship entirely on its head.

The argument of this paper is that Environmentalism/Green Education is indeed different, but that it is neither a subset of any existing discipline, nor is any discipline a subset of it. And this is because neither Environmentalism nor the philosophy of Green Education which informs it, are disciplinary in the conventional sense at all. Environmentalism/Green Education provides a necessary and specific focus for the working out of a new social purpose for universities (Dyer unpublished). Therefore its placement within universities and the roles it is allowed to assume must reflect both its educational and its social purposes. The question of how this can occur often becomes how can environmentalism/Green Education can exist at all in an educational environment

which seems intrinsically, administratively and ideologically incompatible with and unsympathetic to it?

### *The use of the term 'environment'*

Another important difference between discipline-based environmental education and environmentalism/Green Education concerns the meaning attributed to the word 'environment' itself, or more accurately what the concept 'environment' means to the two approaches and how it is operationalised.

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### ***'something which is entirely a human construct'***

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The word environment is used in reference to two 'things' which are not at all the same. It first may refer to the sum of all the biophysical components which surround us humans and other life forms and the influences which they have on us. In some cases 'social' components are included, but the intent is usually to emphasise the specifically human surrounds and not make a great distinction in principle. Most dictionary definitions follow this line. However, the *Fontana Dictionary of Modern Thought* provides a fuller consideration. It says that an environment is:

*The sum total of the biological, chemical and physical factors in some circumscribed area, usually an area associated with a particular living organism. Essentially an environment only exists because it is inhabited by this organism. Thus a field is the environment of a cow, a cowdung pat is the environment of a dung beetle and the exoskeleton of the dung beetle is the environment of a parasitic mite.*

*Therefore the field comprises an infinity of overlapping environments.*

According to this definition an environment therefore only exists because an organism exists; many other definitions imply an objective reality of a set of entities independent of organisms. The definition quoted also suggests that there is an infinity of environments; both these 'properties' makes study of them problematic to say the least, certainly more problematic than popular use of the term environment suggests. If, further, we agree that it is only humans who can conceive of what an 'environment' is then the implications of the second usage of the term environment become clear. It is a term which refers to something which is entirely a human construct—our perception of what is around us. It may be organised into subconcepts such as ecosystems, species, biodiversity, urban environments and so forth but it is an organising concept entirely specific to usage and context.

There is obviously a 'real' physical world, even if the words we use to describe it—atoms, molecules, living things,

energy, and all the ways these interact and are united to form larger entities—refer to human-named and human-constructed entities. However, the theories humans have devised about its behaviour are just one possible way, and inevitably a human way, of describing what is happening in it. But there are no such things as biodiversity, an ecosystem, pollution, environmental stability, ecology, climate and so on outside of the human mind. These ideas are created by humans for human use. 'The environment' is a synthesis of all these variables into something which the human mind has constructed. Our so-called management of the environment is therefore contingent upon particular human perceptions and descriptions. Hence the absolutely crucial significance of treating students as active participants in the educational process with existing information, attitudes and preferences on environmental matters.

Part of the incompatibilities which exist between the traditional disciplines concerned with human/environmental issues on the one hand, and non-disciplinary environmentalism/Green Education educating for the environment on the other, is that the former do not recognise the force of this distinction between the conceptual environment and the one which has some tangible reality. The concerns of discipline-based environmental educators are with such things as molecules of pollution, energy levels and distribution, numbers of animals, plants, bacteria and other life forms, soil chemistry and structure, atmospheric temperatures and so on. Traditional disciplines claim that such things are objects and/or can be assessed objectively. The words objective and objectively betray some of the confusion here. First, they imply that the environment is an object when humans are a subject separate from it. Second, they imply that humans can comprehend it and do things with it in an objective, that is neutral, way. The fact that this latter usage hides a confusion between what is done and how it is done is just a further difficulty.

Environmentalists/Green Educators or educators for the environment, however, are concerned primarily with the concept of 'environment', not merely physical reality. 'The environment' is a holistic idea not just a physical association of earth, air, water, animals, plants or other entities. While it may be convenient to analyse the biophysical environment, that is break it down into its chemical, biological, geological and other components in order to enable us to investigate and communicate about salinity or acidification, species extinctions, erosion, geological hazards and so forth, it must always be stressed that this is but a pedagogic device. It must never become the only way of describing and analysing these kinds of phenomena.

Environmentalism/Green Education is distinguished from the disciplines concerned with analysing the biophysical, tangible environment by both recognising this distinction between the biophysical and the conceptual environment



and by being always centrally concerned with constructed conceptual environments. This difference in emphasis has profound implications for the way environmentalism might be effectively taught or, it would be more accurate to say, with the processes of a thoroughly Green Education. As (Hendry (1994) points out

*Objectivism leads to a conceit of knowledge in that it is assumed that certain people can aspire to become privileged holders of valid representations of a real entity, knowledge, or authorities compared to less experienced students, and can capably organise re-represented objective knowledge and map efficiently, or impose the latter onto learners. In teaching based on objectivism...learners are rarely encouraged to express their ideas.*

Environmentalism/Green Education which pays comprehensive attention to the constructed nature of 'environments' can only do so if it encourages student exploration of their constructions. This is but one of several necessary characteristics of Green Education.

### Characteristics of green education

#### *'a holistic approach to learning and teaching, and living in the environment'*

Those features which distinguish Environmentalism/Green Education from other environmentally related subjects and courses in universities include the following:

- Green Education is concerned very largely with a holistic view of the concept environment. It is only incidentally concerned with the material components of the physical world considered in isolation.
- Green Education does not claim to be value free. In particular it adopts an advocacy role; it is *for* the environment.
- Green Education recognises the intrinsic value of all other living things on the planet with all that this implies.
- Green Education adopts a holistic approach to learning and teaching and living in the environment which has three aspects—
  - \* it minimises the distinction between (human) subject and (environmental) object.
  - \* it is not based on the traditional disciplinary division of knowledge.
  - \* it recognises the essential interconnectedness of everything and the consequences which flow from that.
- Green Education seeks a unification of theory and practice. That is, it ensures the inclusion and comprehensive coverage of what individuals and

communities/societies/governments can and should do personally in and for their environment as well as the abstract consideration of environmental change.

- Green Education has a future orientation. Futures do not just happen; they are consciously, if imperfectly, created by us, and these futures have varying probabilities of outcome. Green Education articulates preferences for particular futures.
- Green Education proceeds on the belief that the educational process, the way learning is organised, and the practice of pedagogy, are as important as what is learnt.
- Green Education adopts an activist, constructivist style of pedagogy with the consequence that new knowledge is created by both teacher and learner.

Clearly Green Educators deal with ways of thinking about knowledge which are just not congruent with traditional approaches to thinking about and teaching it.

The challenge for environmental studies/sciences, is not simply to teach concrete facts about the environment, nor simply to teach these in a holistic way; it is to create a process of learning which itself sets up and lives out alternative values for consideration and provides opportunities for values to be debated (Gunnell & Dyer 1993).

### Conclusions

If Environmentalism/Green Education is to succeed in both its educational and social purposes, it is absolutely essential that a number of things happen. First and foremost the two categories of lecturers and researchers directly involved in environmental issues, those identified as educators *about* the environment and those identifying themselves *for* or *with* the environment respectively, must be encouraged and supported in the kind of formal and informal staff development which will allow them to both understand one another and to co-operate with one another in trying to achieve Green Education. And that means agreeing within and beyond universities that these institutions are in fact developing the new social purpose this paper suggests they should, and that Environmentalism/Green Education is one of the vehicles by which this purpose is developing and being promoted. Ultimately, it must surely be hoped, any significant distinction between these two categories of educator will all but disappear, although naturally there will always be differences in emphasis between the methods and objectives of academics working in different traditions in universities.

Second, the nature of tertiary education processes must evolve into something rather different from their present forms. This itself means two things. The first that their purposes—social/ethical in the promotion of environmental good, and formal education in providing instruction, information, skills and so on—must be made clear and overt.

The second is that the interactions of both categories of teacher with environmentally committed students require the employment of carefully planned pedagogical strategies very different from those still often used which imply that students are merely empty vessels and which are based on objectivist approaches to theories of knowledge and the nature of teaching.

The outcomes of the pedagogical strategies congruent with environmentalism/Green Education will result, among other things, in very different sorts of knowledge being produced in the teaching process. In practice, therefore, environmentalists/Green Educators must solve two problems of considerable difficulty but critical importance. First, they must determine ways in which they can maintain the integrity of their approaches while at least appearing to fit into the current normal administrative arrangement of discipline-based departments in universities. Second, they must change their teaching methods to ones which are very different from the traditional hierarchical transmission of knowledge and which will assist university communities to challenge and to change that teacher-centred pedagogy.

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***‘One of the avowed purposes of Environmentalism/Green Education is to change current views of the universe and universities and humans’ places within both’***

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Of course, universities and the academics within them have in the past claimed always to be concerned to improve the quality of their teaching and research. The difference between that and the sort of change this paper has argued is that hitherto changes in pedagogy have been considered largely as matters of educational efficiency, research productivity and the most appropriate matching of traditional departmental and faculty structures with some imagined structure of the universe. A crucial point, however, is that the very view of the universe which is used as a benchmark for the quality of university teaching and learning is itself an outcome of and determinant of, among other things, the departmental structures through which knowledge is generated and delivered and the sort of teaching strategies adopted. One of the avowed purposes of Environmentalism/Green Education is to change current views of the universe and universities, and humans’ places within both.

The third major requirement for Green Education to succeed is therefore that the structures of the universities must be such that it can succeed; the requirement that Green Education should succeed needs to be recognised as one of the formal social purposes of the university. Fortunately it seems clear that slowly, unequally and often reluctantly all these changes are occurring. Environmentalism is a new social purpose of universities, albeit in embryonic form and it is one which can only grow larger. ☺

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Much of Ken Dyer's teaching and research career has been concerned with crossing the divide between the biological and social sciences. Having taught in the areas of human and social biology he migrated to Environmental Studies at Monash University in the 1970s and from there to Adelaide University in 1976. He's still surprised at the gulf of misunderstanding between most biophysical and social scientists, and the daft things which many of either 'species' are apt to say about 'environmental problems' and how to understand them.

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