BRIDGE BUILDING AND BARRIER BREAKING BETWEEN ECOSOCIALISM AND DEEP ECOLOGY.

A METATHEORETICAL PERSPECTIVE.

Alan Marshall, Institute of Development Studies,
Massey University, Palmerston North, N.Z.

M.Phil. Thesis: Development Studies: 100 pts.

THESIS CONTENTS.

INTRODUCTION

The objective of this thesis is to explore the relationships and the theoretical bounds of compatibility between Ecosocialism and Deep Ecology. The ultimate aim of such an exploration is that a suitable synthesis of Ecosocialist and Deep Ecological thought is achieved. Such a synthesis may ellude this author, but hopefully some progress towards building bridges and breaking down barriers between the two streams of environmentalism can be made.

This 'syn-thesis' concentrates on examining the metatheoretical perspectives of Ecosocialism and Deep Ecology for it is from such an examination that the major incongruities between them can be identified. The metatheories examined include Deep Ecology's unitarianism, Self-realizationism and non-anthropocentrism, and Ecosocialism's communitarianism, sociality and anthropocentrism. There are other theoretical barriers between them but the ones listed above may be interpreted as encompassing those islands of thought, between which bridges can be built.

As an aid to the reader, some definition of Ecosocialism and Deep Ecology may be useful:

Ecosocialism is a stream of environmentalism that draws on the theoretical background of socialist principles and Marxism to identify environmental problems and effect solutions. Although the productivist outlook of most modern socialisms has been theoretically ejected from Ecosocialism, its continued anthropocentrism keeps it from attaining 'radical' environmentalism status.

Deep Ecology is a non-anthropocentric stream of environmentalism that relies on the personal experiences of human individuals with nature to effect environmental attitudes within society. Deep Ecology's 'deepness' has variously been attributed to its deeper respect for nature, its deeper perspective of egalitarianism, its deeper analysis into environmental problems and its deeper affiliation with things spiritual.

THE COMMUNITY - UNITY BARRIER

THE UNITY CONCEPT

The literature of Deep Ecology espouses a constant metaphysical theme. The whole of nature is in unity:

> "There is unity in diversity...life is fundamentally one" (Naess, 1989:192).

> "I and nature are one" (Callicot, 1985:275).

> "The grandeur and majesty of oneness I have only found in nature" (Spretnak, 1990:8).

> "In the broadest sense, we need to accept the invitation to the dance - the dance of unity of humans, plants, animals, the earth" (Devall and Sessions, 1985:ix).

It is suggested by Deep Ecologists that while humans might consider themselves separate from nature, somehow above the natural world, they are in fact intimately linked with it - and to entertain such thoughts of separation is to invite destruction (to both humanity and nature). Whereas Western thought has been dominated by a dualistic view of nature and humanity, Deep Ecology advocates and celebrates unity as the basis for its philosophical outlook (Devall, 1980).

For Ecosocialists it is hard to look at a world wrought with conflict, domination, inequality, aggression, competition, misery, oppression, selfishness, struggle and violence and thence to espouse a view celebrating the unity of all things on planet Earth. Thus there exists a metatheoretical conceptual barrier between Deep Ecology and Ecosocialism at the metaphysical level. A barrier that I call the Community - Unity barrier.

To assist in the explication of this barrier let me clearly define the features of a unity with a formal definition: a unity is a united entity composed of separate parts which act in a unified, integrated and interdependent way towards a common purpose - to maintain the unit entity as a whole.

THE COMMUNITY CONCEPT

It will also be useful if I formally define what I mean by community: a community is any group of distinct, unitary organisms living together, often in an interactive and interdependent way, but which act individualistically and without a common purpose.

From a Darwinian sense it is odd to regard nature as being in unity, or to conceive of it as a united or unitary phenomenon. The same might be said of society from the point of view of Marxism. Both nature and society are not unities but communities, composed of individuals and groups of individuals engaged in pursuing their own interests while in substantial competition with others and in a struggle against the physical environment. Within society, Marxism seeks to change this state of affairs. In the non-human realm such a change is at best irrelevant [1]. Nature does not act as a unified whole at any level other than the individual level. Similarly, society does not act as a united whole. In the event that social unity is said to be achieved it is always because one particular group, class, race et cetera, has over-powered and subsumed another. Even the most tightly-knitted social organization, say a family, a religious sect or a football team, can be regarded as a community rather than a unity. Points of unity may be achievable, but unity in a comprehensive and all inclusive form is not. Unity is a false perception of reality in the social and natural worlds that is designed to mask dominance and oppression, or acts to bring about mutually beneficial social change, or indeed is an imposition of human cultural and political ideals on the non-human world.

THE GLEASONIAN - CLEMENTSIAN SPECTRUM

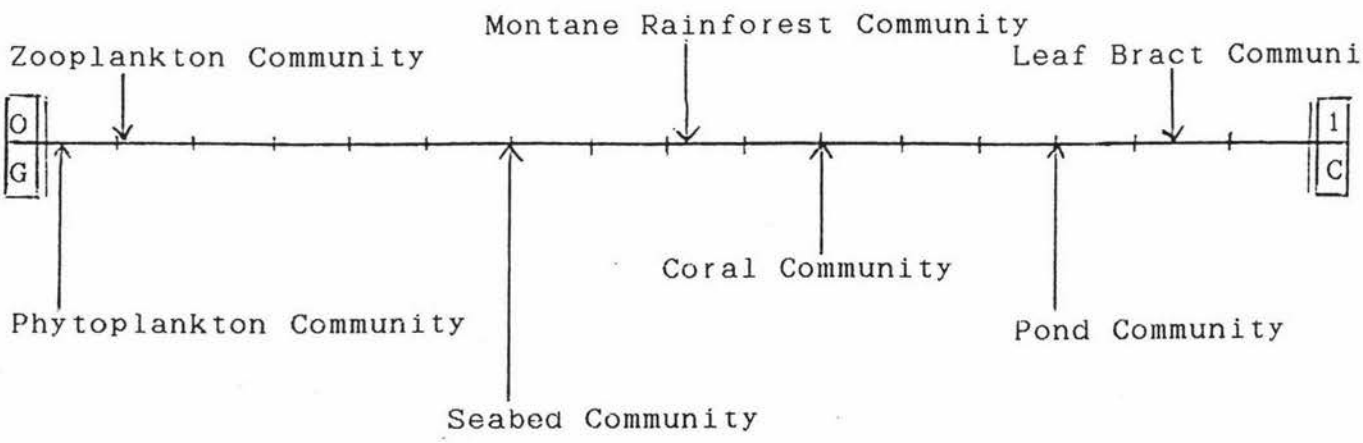
Though communites may be highly integrated, this does not make them unities. We can describe the degree of integration of different communities by referring to the typological descriptions of ecological communities found within the science of Plant Ecology. The two polar views of the plant community revolve around the Gleasonian concept

and the Clementsian concept of a plant community [2]. The ideal Clementsian community is composed of individuals and species that are so interelated and interdependent that the community can be regarded as a balanced, self-regulating, highly-defined organic unit. A unit whose self-regulation and definition is such that it has the characteristics of stability, resilience and non-invasibility conferred upon it. The total species composition of a Clementsian community is limited to those species that possess a certain ecological complimentarity with each other.

A Gleasonian community, on the other hand, is often described as being a merely fortuitous collection of often ecologically and genetically unrelated plants, brought together by chance happenings in their history and immigration. The Gleasonian view of plant communities emphasizes that the definite and integrated character of a plant community is a human abstraction, and that community structure is stochastic and fluctuating.

Rather than seeing the Gleasonian and Clementsian concepts of community as mutually exclusive diametrical opposites it is more useful to see them as poles at the extreme ends of a spectrum. A spectrum that would proceed from zero (representing no community integration) at the Gleasonian end, to one (representing an integration characteristic of a unity - where each and every part has some contact with each and every other part) at the Clementsian end of the spectrum. We can then describe different communities with respect to their position on the spectrum (see fig. 1).

fig. 1: The Gleasonian-Clementsian Spectrum.



As shown in fig. 1, a phytoplankton community may be placed nearer the Gleasonian pole of the spectrum, while a pond community may be placed nearer the Clementsian pole, and a montane rainforest may fall somewhere in between [3]. No community, however, would ever be at one/unity [4].

The conception of community as embodied in this piece of work does not refer to a level of biological organization somewhere between the organism and the biosphere, nor does it refer to a level of social organization somewhere between a family a and nation. It refers to any spatio-temporal collection of co-living individuals. An Acacia shrub and its insect residents, a stand of Acacia shrubs, a landscape that includes Acacia shrubs, or an assemblage of microbes in a drop of water clinging to the spine of an Acacia shrub, are all appropriately regarded as communities.

Similarly, a Mexican family, a Mexican village, a Mexican football team or the nation state of Mexico are rightly regarded as communities.

Thus it might be fair to suppose that because a community can be any collection of co-living individuals the concept of community as expressed like this bears little resemblance to the 'Gemeinschaft' concept as conceptualized by the humanists Brownell (1950), Nisbet (1962) and Kenneth Boulding (1956) from the work of the late 19th century social philosopher Ferdinand Tonnies. This type of community might be considered the popular vision of what being a community is all about (moral unity, togetherness, common purpose and social cohesion) but from the community concept as encapsulated in this section the 'Gemeinschaft' is but part of the oppressive conservative and bourgeois thought from which the concept of social unity emerged. The social order, cohesion and common purpose of a Gemeinschaft community represents implicit domination of some community members by others. A domination manifested ideologically or physically.

Without going to the other end of Tonnies classification of human organization (the individualistic 'Gesselschaft' community) the most appropriate alternative for ecosocialists is the Marxist 'Gemeinwessen', where an equal participation in the communities affairs for all members is implicated, no matter what the scale of the community may be.
The Marxist Gemeinwesen, explains Pepper (1993:124), "is secular, unhierarchical and non-conservative". While an ecological community might resemble Tonnies' Gesselschaft, this is no reason to suppose that

human social communities must exist in such a state (as will be explained later).

What are the criteria that distinguishes a community from a unity? Among the key biological differences, those revolving around natural selection, homeostasis and common interest must be pointed out. Unities are persistently homeostatic entities that are the units of natural selection whose component parts have a demonsrated common interest or purpose: the maintenance of the unit whole. Communities are not more than transiently self-regulating (and usually only in a one-dimensional manner with regard to the flow of a particular nutrient or the population of a particular local species). Communities are not acted upon by natural selection and the component parts (members) of a community have their own identity and act in their own interest, independent of the fact that it may contribute benevolently or malevolently to the whole.

This does not mean that communities are never highly integrated, that the members that compose them are not highly interdependent and interrelated and that the individual members do not possess the occasional common interest. "No organism is an island" says Burrows (1990:466). Individuals in a biological community do not exist as ecological atoms. On the contrary the community concept urges that we do see the interactive side of ecological and social players, but states that this interaction is not of the type that unitarians suggest.

Another categorical difference is that under the unity concept the various levels of biological organization are essentially the same phenomena. An individual is much the same as an ecosystem, they merely operate, or are characterized at different scales. Under the community concept, individuals are fundamentally different from all other levels of biological organization. An individual can not be equated with an ecosystem. We can illustrate this by refering to the Gleasonian-Clementsian spectrum. Under the community concept all types of biological organization except individuals lie at various points along the spectrum from zero to one, exclusive. Only individuals lie at one. Communitarianism indicates that an Acacia shrub or a Mexican woman lies at one on the Gleasonian-Clementsian spectrum, but an Acacia stand or a geographical landscape that includes Acacia lies between zero and one, depending on the degree of integration. Just as a Mexican village or city lie not at one/unity, but at a point somewhere below it.

Under the unity concept, all biological, ecological and social organizations lie at one on the Gleasonian-Clementsian spectrum. An Acacia tree, an Acacia ecosystem, a Mexican football team, the city of Guadalajara, the Sierra Madre mountains, the nation state of Mexico, the North American continent, and Planet Earth all lie at one, or unity.

THE COMMUNITY-UNITY BARRIER AS A CONTINUUM

The arguments so far go to some length to describe the community and unity concepts as existing in dichotomy. Something is classifiable as a community or as a unity. Some will quickly point out the difficulties in regarding the community and unity concepts as dichotomies, and they will refer to the ambiguous nature of sessile hydrozoan colonies (coral), parabionts (siamese twins), endosymbionts (benevolent intestinal bacteria for instance), cancer patients (whose cancer might be regarded as a declaration of independence by a small group of somatic cells), mammalian lymphocytes (amoebe-like white blood cells which roam the body in a most independent manner), and obligate mutualists (such as lichens) as being classifiable as both communities and/or unities.

You may wish to get around such taxonomical difficulties by proposing that we redefine the community-unity barrier as a continuum. But if a continuum is perceived as being the most appropriate way to represent the differences between a community and a unity then there is a risk that the whole community concept will be usurped by the cultural bias of individualism present in western thought. 'Degrees of unitarianism', rather than 'degrees of communitarianism' will be invoked to describe the various levels of biological, ecological and social organization. Rather than expanding individualization 'upwards' so that villages, ecosystems and nations are desribed as unitary individuals (as Huxley, 1912; Bertalanffy, 1961; Gould, 1990; and other biologists suggest) it is preferable to see an expansion of collectivism 'downwards' so that entities commonly describes as individuals become communities[5].

STRUGGLE AND COMPETITION

The stuggle inherent in communities that I refer to in the beginning of this section results from the relationship that individual organisms have with their environment. Both humans and non-human organisms interact and transform nature through a labour process. It takes work for an animal or plant to transform part of its environment into food and/or materials. The work is made more difficult (or expensive) due to inter- and intra-specific competition. The ontological commonality of humans to other organisms is exemplified by acknowledging the labour process as the way that living things interact with their environment.

The social relations we witness in human communities (class structure, families, ethnic groupings, patriarchy) and the structures we perceive in non-human communities (physiognomy, species composition and distribution, spatial and population patterns) are indicative of the competitive relations between member individuals.

An exclusive emphasis on competition as being the only contributor to community structure may, however, not be warranted. While the American ecologist Jared Diamond has been cited as claiming that the idea that processes other than competition contribute to community structure "strained ones credulity" (McIntosh, 1985), others feel that competition is only one factor, and not necessarily the most important one, in determining the structure of particular ecological communities. For instance; predation (Paine,1980), disturbance (Drury and Nisbet, 1973), parasitism (May and Anderson, 1979 & Anderson and May, 1979) and symbiotic mutualism (Faegri and van der Pijl, 1971) have all been noted as being important factors in community structure.

On mutualism, some biologists would claim that symbiotic relationships (at the biological or social level) are naturally selected adaptations that give the symbionts a competitive edge over other organisms, or allow better rates of survivability in the face of nutrient shortage, predation or environmental extremes.

Similarly in the social realm of humans, mutualism can be seen as a way individuals or groups of individuals further their own interests, since mutualistic associations offer benefits unattainable

individualistically. Within such an interpretation humans affiliate with each other simply because it is in their interest to do so. Thus mutualism can be observed as a subset of competition and the struggle against the physical environment [6]. To some degree, this may be so, but my own view is that factors other than self-interest keep human (and some non-human) social groups in association [7].

Whether competition is the prime determining factor in community structure or not, I would not hold to the view that interspecific and intraspecific competition act as balancing forces to confer a self-regulatory, or homeostatic, character upon a community. The product of nature red in tooth and claw is blood, not harmony.

Deep Ecologists often emphasize co-operation in both nature and society. For instance Simon (1990) claims that struggle does not characterize every, even most instances of organism-environment interaction. But in those activities determining survival, such as food gathering, territoriality, habitat protection etcetera, struggle with the physical environment and competition with other organisms (as expressed through work and work relations) is manifestly intrinsic [8]. Simon (1990) talks of the inordinate time lions spend lying around the savannah in tranquil peace. It seems to escape Simon that in order that they survive lions must struggle for miles over the plains, and compete for their lunch with numerous other individuals. The very fact that they are lying around in seemingly happy oblivion, merely testifies to the fact that they have struggled and competed successfully. A living lion, in itself testifies to the fact that the price we pay for being alive, is eternal labour, struggle and competition [9]. Lions might be thought of as being a bad example by some, chosen by me to prove my point. But sunflowers, butterflies and bunny rabbits also must compete for nutrients and struggle against the physical world to survive. It aint easy to survive and a lion's claw, a sunflower's floral assemblage, and a butterfly's wings are not mere aesthetic inventions for either us or them to admire, but are working adaptations - evolved for survival purposes.

Deep Ecology's desire to see cooperation and harmonious peace in nature, rather than struggle and cooperation, results from it's crude and unsophisticated approach to unity. This unity they seek to see in nature and humanity gives them a real problem, however. Because Deep Ecologists have united nature and humanity within their basic philosophical outlook,

human nature must therefore be a reflection of the nature of the non-human world. Non-human nature has to be seen as co-operative and harmonious or else the Deep Ecological call for a cooperative and harmonious human attitude to the environment will have no basis. The basis of both human nature and human society is nature. Nature points the way, according to Deep Ecologists, towards the fundamentals of human nature and society. If only we learn the secrets of nature's inherent harmony, we might be better able to construct a more environmentally and socially harmonious society, based upon the harmony of nature and the essential cooperative nature of human beings.

Ecosocialists do not suffer from such illusions for they believe that both human nature and the characteristics of society are socially constituted. There is no need to adopt a hippified view of 'nature in harmony' and to espouse a 'nature knows best' attitude, and therefore there is no need to hide the dark secrets of nature behind a veil of false harmony and illegitimate cooperation. In other words, Ecosocialists realize that the 'is-ought' debate of Deep Ecology's naturalistic interpretations of society fall down pretty quick because the 'is' part is so open to debate - and in effect is determined by the 'ought' part. Socialists have 'is-ought' problems of their own, but atleast they have escaped fashioning what actually 'is' in the natural world, from what 'ought' to be in the social world.

Socialism and Darwinism have often had an uneasy relationship. Marx himself has often been interpreted as saying that Darwinian theories of struggle are but bourgeois economic policies applied to the natural world (see Pepper, 1984). But Marx was fond of Darwin's theory of evolution (to the point of asking Charles Darwin whether or not he would mind Marx dedicating Das Kapital to Darwin [10]). Marx, and Darwin too, was aware that the competition and struggle inherent in the theory of evolution by natural selection, need not be interpreted in the vain of bourgeois philosophy. The point that I am trying to get across is that regarding the natural world as being a cauldron of struggle and competition is not bourgeois, but to suppose that out of such a cauldron emerges harmony, is. Certainly the Marxist biologists Levins and Lewontin [11] would agree, as they see Marx's version of nature as one of conflict and struggle - but Marx, Levins and Lewontin would not see much harmony flowing from this conflict.

In a way, Marxism takes Darwinian struggle in the natural world and socializes it, so that struggle and competition does not occur only

or mainly at the personal level between individuals - but between groups of individuals. The individual labour processes of animals and plants are 'classified' in human society, and it is through these classes that the main conflict and competition is found when looking at the human species [12]. Within and between these groups there is often much cooperation. Within late capitalist economies for instance there is pronounced cooperation between union leaders and the owners of capital, despite the fact that the labouring classes continue to be alienated from the fruits of the cooperation (Pepper, 1993). Such a relationship of cooperation does not directly lead to a harmonious society, or to a society in harmony with nature. The master-slave, husband-wife, father-son, and public-private sector relationships all show a marked degree of cooperation, but also socially-constructed oppression. The oppression, itself, being the product of a hardworked cooperation between the members of the oppressing classes. Thus, co-operation as a social force seems inadequate by itself to propel humanity towards environmental friendliness. A theory of social struggle must also come into play. While the unity concept dismisses struggle and conflict as trivial in the face of the planet's inherent unity, the community concept is an attempt to deal with the struggle that besets all living things.

SYSTEMS ECOLOGY AND UNITY

The differences in approach between the community and unity concepts can be seen to parallel the differences in approach that exist between community ecology and systems ecology. Systems ecology (sometimes termed 'functionalist', 'process' or 'holological' ecology) is described by Shugart and O'Neill (1979) as a hybrid of engineering, mathematics, operations research, cybernetics and ecology. As such, systems ecology is distinct from ecosystem ecology which is, as F.E. Smith describes, first and foremost "a branch of biology" (quoted in McIntosh, 1985:202).

The division between systems and ecosystem ecology however is fuzzy, with over-lapping philosophies, analytical techniques and methodological approaches (prompting McIntosh (1985) to declare that some ecologists cannot discern whether systems ecology is a horse chestnut or a chestnut horse). While directed at systems ecology, much of the following criticism may well fall on ecosystem ecology too.

Under systems ecology all in nature is a unified whole due to the passing of matter and energy between the constituents of the system. The functionalist approach of systems ecology sees the constituent members of the biotic community as shells or black boxes involved in the transfer of matter or energy. The shells, whether individual animals and plants or entire forests, can be viewed as functional phenomena acting as packages to continue the flow and cycling of matter and energy. The members of a community are converted to mere components in a system. The identity of the shell is unimportant so long as the cycling of energy and matter occurs. Indeed the identity of the individual lies in its quantitative contributions to the system. Or as Murray Bookchin (1980:88) puts it:

> "systems analysis reduces the ecosystem to an analytic category for dealing with energy flows as though lifeforms were mere reservoirs and conduits for calories, not variegated organisms that exist as ends in themselves".

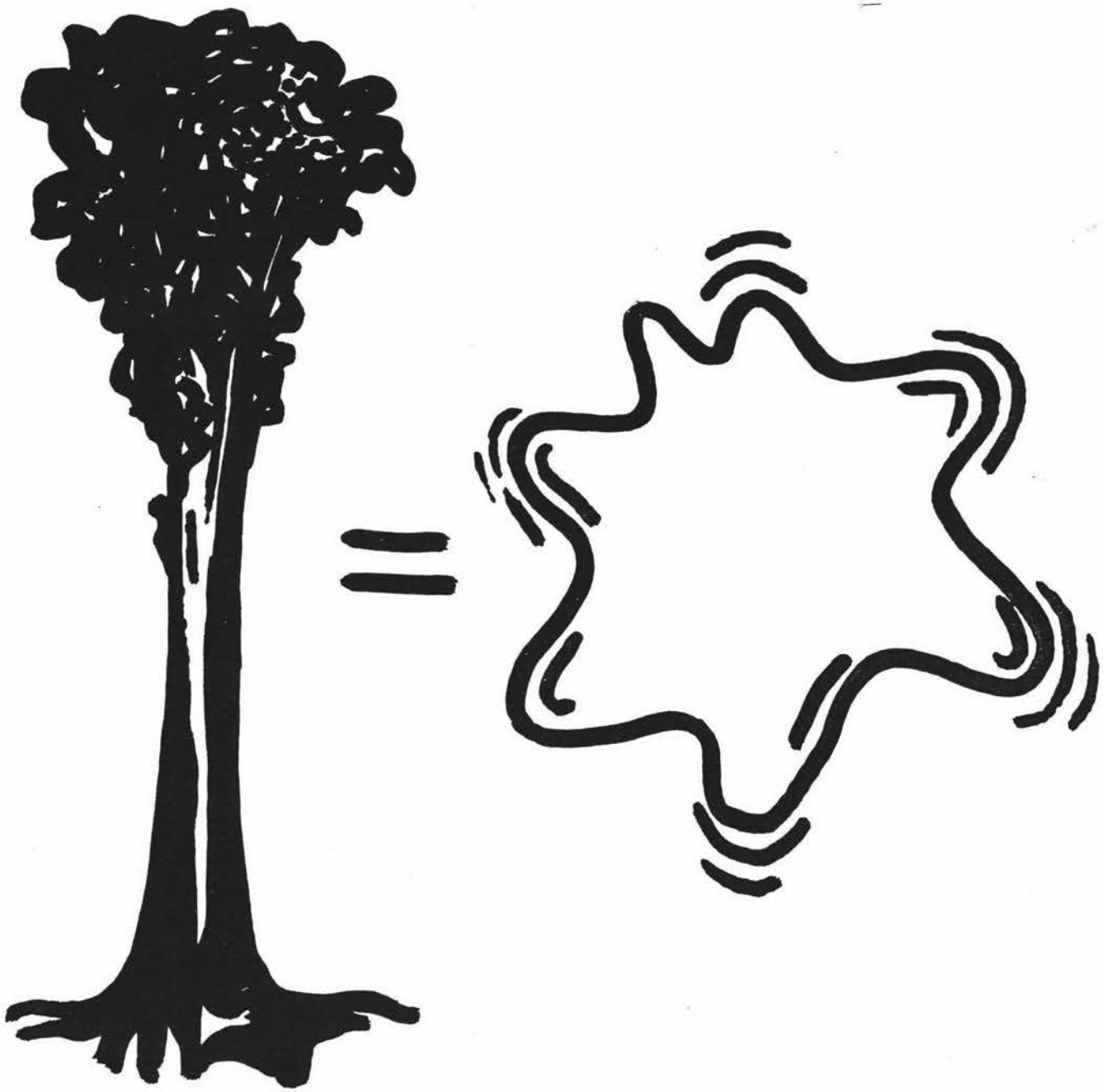
Given this stance, it might be suggested that a change in the biotic construction of a community (such as species composition) is unimportant if the matter and energy flow systems are maintained. From the metaphysical perspective of systems ecology it seems as though matter and energy are the true essences that give a community its identity and character. Colin Burrows, a New Zealand ecologist, cites R.V. O'Neill as taking such an extreme view because O'Neill maintains that ecosystems retain their identity even when species composition changes (Burrows, 1990:426).

In adhering to the functionalism of systems ecology, many relationships that are crucial in determining the structure of the Earth's ecological communities are ignored because they do not significantly contribute to the flow of matter and energy. The most obvious examples are those relating to sexual interaction such as pollination, seed dispersal, courtship displays and practices and off-spring care. As Peters (1991:118) points out:

> "A systems model invariably lumps some organisms together, ignores others, depicts only a few of the relationships that are known to exist, assumes or 'improves' essential empirical relations and in many other ways departs from reality."

Under systems ecology individuals and species are quickly converted into typological categories depending on their role in the system, for example a Kauri tree becomes an autotroph, a Kereru becomes a heterotroph, and Nitrobacter, as its nomenclatural history would indicate, becomes a nitrogen fixer. It matters little that a tree is a 500 year old Kauri, for its role as a primary producer or a user of this or that mineral is all that matters to a systems ecologist. The Kauri might as well be an exotic pine, or a great amorphous blob of plant cells (see fig. 2.).

fig. 2: Under systems ecology, a Kauri = a great amorphous blob of plant cells



To study a biotic community solely in terms of the flow of matter and energy into and out of it is like basing sociological studies of human communities on the quantitative flow of food and electricity into a community and the flow of heat dissipation and shit out of it. A useful exercise perhaps, but not one sociology should organize half of its resources around as ecology has done in the non-human world.

Systems ecology claims to be a holistic approach to ecology, but any ecological approach based purely upon the study of matter and energy is an approach based upon reductionism, since ecological actors and processes are reduced to physical entities only [13]. Or to put this another way; much of systems ecology is not ecological, since, as Trojan (1984:30) points out, the phenomena being explained "can be evaluated by physical and chemical methods, with total disregard for ecological ones".

Deep Ecology relies heavily on the metaphysical perspectives and scientific veneer of systems ecology, for this is the type of ecology most able to deliver the metaphysics and scientific support for the Earth's biotic unity. But the unitary perspective can only be maintained from a physicalist perspective. The unitarianism of systems ecology presents the relationships that exist between different organisms as being physical rather than ecological. This is an adequate explanation for the unitary nature of an individual organism, where the transfer of matter and energy proceeds without a hitch according to physico-chemical laws, but not for a group of co-living but distinct individuals whereby the phenomena associated with getting into, or out of, a position that enables a transfer of matter and energy are more important in determining the relationships present in nature than the mere transfer of matter and energy itself [14]. Such inter-organismal relationships are not reducible to physico-chemical laws.

The community concept recognizes that a physicalist unitarian approach to nature might help in identifying some environmental problems, but not <u>all</u>. And it certainly has little ability to solve those problems. The solutions offered by physical interpretations of environmental problems are purely technical. For instance, a systems ecologist might identify that there is a particular amount of sulphur dioxide in the atmosphere, and that this will cause a certain amount of acid rain in a

designated region per unit time. The problem = too much sulphur dioxide, the solution = cut back sulphur dioxidelevels to a particular amount. Deep Ecologists might go a little further, claiming that once people realize that they are at 'one' with the trees or forests being ravaged by acid rain, they will adjust their values accordingly to care about sulphur dioxide emissions. The community concept of Ecosocialism, however, would advocate that the solution does not lie in either the technical or personal value realm, but in the realm of the inter-organismal relationships of the polluting species; i.e. by altering the relationships and structures within human society [15].

I am far from the first person to comment on the explanatory and normative drawbacks of the systems and physicalist approach to ecology, indeed the ecological literature of the 1960s, 1970s and 1980s is pitted with the debate. Yet, Deep Ecologists remain largely ignorant of the debate and by adopting the science of systems ecology as a basis for their principle of unitarianism they fall into a metaphysical quagmire that has claimed many a soul in the past.

The epitome of the unitarian perspective is what is found in the Gaia theory. A theory espousing the unitary nature of the whole Earth, to the point of declaring that the planet can be considered to operate as a great stupendous single organism [16]. The Gaia theory, which is avidly supported by most Deep Ecologists, is an example of a 'holistic' ecological theory with its roots in reductionist science. The Gaia theory, in its systems ecology guise, has little regard for the conservation of individual species or the communities in which they exist. Their importance stems from their contribution to the overall organism; the Earth. Individual species destruction can be considered trifling because their place in the cycling of matter and energy can be undertaken by another species. The unitary perspective of the Gaia theory regards the whole Earth as an individual, composed of parts that function to preserve the unitary whole. Like lungs in a human individual, marine communities are seen as mere gas exchange organs. Coastal wetlands are compared to kidneys and tropical rainforests are referred to as the thermostatic regulators. Funnily enough humanity is depicted as the brain or the reproductive representatives of the Earth.

This last point is important and deserves more attention. Deep Ecologists press continuously for the eviction of anthropocentrism from human thought and practice, but by adhering to the Gaianism of systems ecologists such as James Lovelock, they place themselves in the position of contributing to the ideological justification for anthropic

imperialism. To explain; if the whole Earth is deemed to be a single unitary organism then what could be considered more natural than its reproduction? Gaians such as Lovelock, Lynn Margulis and Dorian Sagan envisage the great organic Gaia producing spores that may be used to colonize other 'dead' planets. Whether or not the candidate planets for such human assisted cosmic Gaian expansion can be considered dead is open to debate [17], but the point is that the Gaia theory naturalizes and justifies such an expansion by unitarianizing the Earth. Deep Ecologists would certainly doubt that a technophilic enterprise such as extraterrestrial expansion is likely to render humanity any more environmentally benign, but they might not be able to convincingly argue against such a proposition if they continue to utilise unitarianism and naturalistic interpretations as the basis of their ecological metaphysics and environmental programmes. Ecosocialists, however, do not fall for the Gaianist interpretation of human space expansion. Gaia is but a bourgeois cover for the astronautics industry which so desperately fights to justify its aim to promote a viable and profitable space expansion programme [18]. The community concept views space expansion not as a natural inevitability like the Gaia and unity concepts, but as the result of social forces operating between members of one particular species of the Earth's biotic community [19].

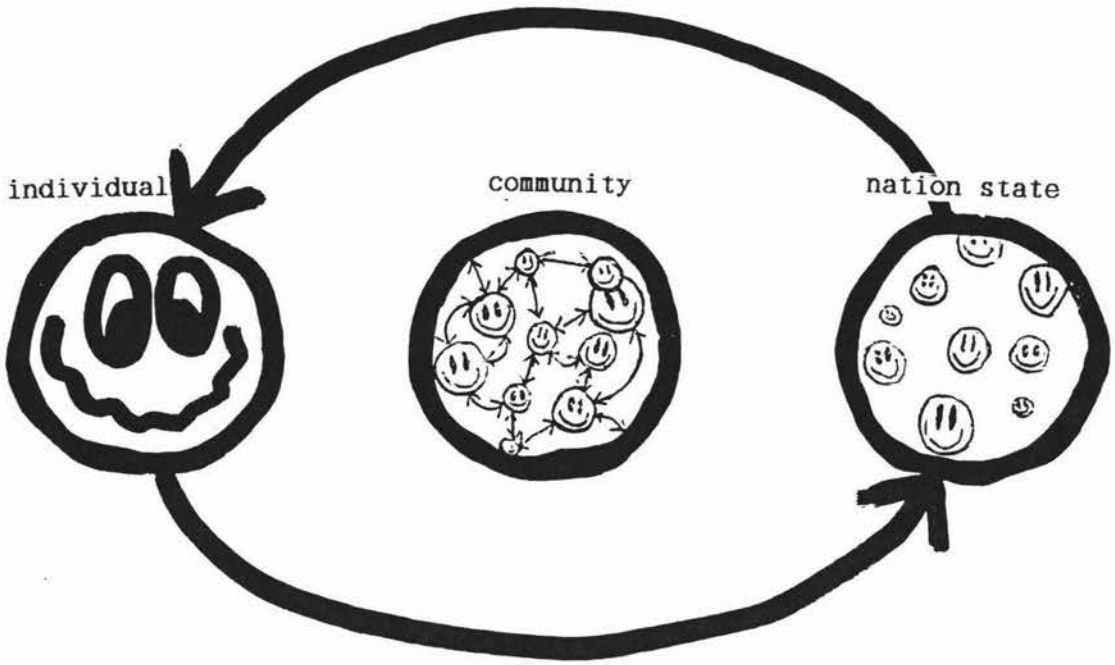
THE UNITARIANIZATION OF COMMUNITIES

The rampant unitarianization of something as decentralized and disorganized as the biotic community of the Earth is evidence of the anthropocentric nature of the Gaian unity perspective. Because we perceive the world as individuals it is easy for us to fall into the trap of perceiving that the world is an individual. All types of individualization of higher level biological organizations can be regarded as examples of such anthropocentrism. Lovelock and Margulis' Gaia, Clements and Leopold's superorganismic land communities, Forbes and Birges' organic lakes and Bismarck and Hitler's Germany are all communities.

The individualization of such communities is often spurred on by liberalist notions of individualism. Or more accurately; bourgeois notions of individualism. Bourgeois individualism is a slippery and slimy conceptual character, involving the recognition of any particular social entity as a fundamental and cohesive unit when it suits the

interests of those in power (Marshall, 1994). Most of the time the sanctity of the individual person is uppermost, as this allows the continued dominance of those doing well in the laissez faire capitalist system. At times of political, economic or military crisis the notion of individuality is extended to the nation, in order to promote nationalist fervour against a foreign threat to the status quo, or in order to promote a false unity within society so that subversive forces are held at bay (see fig. 3.).

Fig. 3: Bourgeois individualism slides easily between the unity of an individual and the unity of the state. A slippery slide instigated and controlled by the bourgeois classes, which constantly bypasses the sociality of the community.



Spokespeople for capitalism speak incessantly of the dehumanizing effects of the collectivist spirit of socialism and communism, yet they are happy to extol the same sentiments of collectivism under warped notions of unitarianism when their own status is threatened.

As well as the nation state, so fundamental to capitalism, the family and the corporation are presented as fundamental social units by bourgeois individualists - again, in order that those in power within such 'units' can maintain their status. Corporate directors and patriarchs of families are particularly prone to maintaining strong accentuations of unity to impress upon their subordinates the need for solidarity so that the larger unit whole is not adversely affected by the desires and practices of the member individuals.

One might hesitate to transfer the holism and unitarianism of systems ecology and the Gaia theory into the social world (although James Lovelock and, more explicitely, Edward Goldsmith do not have any qualms about making the transfer [20]), but if we do apply it to the social sphere any one community or individual can only be regarded as possessing an identity in so far as it functions in the flow of energy and matter. It is of no significance to Gaia that an indigenous community may be subsumed by an imperialistic community if the maintenance of the matter and energy cycles is assured. Infact the world may be conveniently stripped of Navaho, Maori, Tiwanaku and Celts because their functions can be undertaken by an imperialistic successor.

BALANCE, HARMONY AND HOMEOSTASIS

Deep Ecologists operating under unitarianism tend to see other phenomena in nature closely related to and indicative of nature's unity. Notably balance, harmony and homeostasis; as well as ecological order and maturity (for instance see Devall and Sessions, 1985; Ferré, 1989; Fox, 1990, and Hallman, 1991, as recent examples).

The 'balance of nature' concept has permeated the study of the natural world since antiquity but (according to F.E. Egerton, 1973) has been superceded by more precise ecological concepts relating to productivity, succession and energy flow. Egerton feels that the 'balance of nature' ideal within ecological thought has a political rather than an heuristic use, stating "ecologists think in terms of the 'balance of nature' when they need a poetic or propagandistic phrase for a discussion of conservation or pollution" (Egerton, 1973:346).

While balance may appear to be a prevalent phenomena, to varying degrees, in the ecological community, balance as a pervasive explanatory device is inadequate when confronted by the many instances of imbalance in nature [21].

It is clear to one Australian philosopher of the environment that far from being a demonstrable phenomena within ecological research, beliefs in harmony in the natural world are more likely to be based upon metaphysics rather than science

(McClosky, 1980). Another who has philosophized somewhat on the 'balance of nature' question, Barry Commoner, reiterates the century old conception that ecological systems are so integrated, equilibrated and balanced that they are comparable to pocket watches in their unitary state of exactitude. Sixty-five years ago the American ecologist, Charles Elton, dismissed this view as erroneous with some degree of literary flair:

> "It is further suggested that if we knew enough about the ecological relations of the animals we could predict the effect of any interference, just as a clockmaker can work out the ultimate effect of the twirling of one wheel upon the rate of revolution of any of the others. At the same time it is assumed that an undisturbed animal community lives in a certain harmony, referred to as 'the balance of nature' and that although rhythmical changes may take place in this balance, these are regular and essentially predictable and, above all, nicely fitted into the environmental stresses. The picture has the advantage of being an intelligible and apparantly logical result of natural selection in producing the best possible world for each species. It has the disadvantage of being untrue. 'The balance of nature' does not exist and perhaps never has existed. The numbers of wild animals are constantly varying to a greater or less extent, and the variations are usually irregular in period and always irregular in amplitude. Each variation in the number of one species causes direct and indirect repercussions on the numbers of others, and since many of the latter are themselves independently varying in numbers the resultant confusion is remarkable. The simile of the clockwork mechanism is only true if we imagine that a large number of the cogwheels have their own mainsprings which do not unwind at a constant speed. There is also the difficulty that each wheel retains the right to arise, migrate and and settle down in another clock, only to set up further trouble in its new home. Sometimes, a large number of wheels would arise and roll off in company, with no apparent object but to escape as quickly as possible from the uncomfortable confusion in which they had been living." (Charles Elton, quoted in Connell and Sousa (1983:823-824).

While McClosky accepts that there might be a 'balance of balances' in nature (McClosky, 1980), Elton is under the impression that even this scenario is fantastic.

According to the Deep Ecologist M.O. Hallman (1991:119), ecological science emphatically demonstrates that "the entire biosphere is composed of delicate homeostatic mechanisms which go to make up the balance of nature". But doubts about the existence of homeostasis (self-regulation) above the individual organismal level are also rampant in the science of ecology. Burrows (1990:466) states "Ecosystems are not really homeostatic because the plants and animals of which they are composed are not capable of the degree of communication which would be required to achieve this". But even if inter-organismal communication, cognition and organizational foresight are inherently achievable in an ecological community, these aspects cannot by themselves surmount the opposing interests of the member species.

To accept that homeostasis works to maintain community constancy is to presuppose that equilibrium (stability) is achievable (Trojan, 1984). But equilibrium, even dynamic equilibrium, is not a pervasive characteristic of all ecological communities. Indeed, it may only be an ephemeral phenomenon of but a few communities. In Wiens (1984) and Wiens and Rotenberry (1981) it is pointed out that many ecologists presume that equilibrium as a concept is directly relevant to the study of a particular community, and that because of this presumption ecologists may tend to use methodological techniques that find patterns of equilibria where there are none. Connell and Sousa (1983:794), in turn, point out "natural perturbations are often so frequent that there is not enough time between them for a community to achieve a stable equilibrium state".

Another point of relevance is made by Frank (1968) who indicates that humans tend to infer a state of equilibrium and stability within ecological communities because they are composed of long-lived individuals whose lifespan is mostly many times that of a human. A forest or a coral reef only seems stable to humans because we live such piddlingly short lives.

It might be important to recognize that the concepts of equilibrium and stability mean different things to systems ecologists and community ecologists. This involves a perceptual difference in scale as well as a difference in what Connell and Sousa (1983) call the 'characteristics of interest'. An ecosystem might be considered by a systems ecologist as being in energetic or nutrient stability, but its species composition may

be collapsing all around. With regard to ecological communities it would be asserted by many community ecologists that stability and homeostasis are not particularly relevant concepts. Homeostasis (or self-regulation) it is not, for the species within the community are not generally maintaining themselves - but forever changing. From an environmentalist point of view it may thus be claimed that the things that are generally homeostatically regulated (i.e. matter and energy) are not the properties of a particular ecological community to be valued. One may as well value the matter and energy that constitutes the latest oven or refridgerator because they represent homeostatic entities.

With regards to scale it may well be argued that stability is not a standard feature at the population or community level of organization but becomes more prevalent as one proceeds to higher levels. In other words, those that do not see stability and equilibrium in nature are not thinking big enough, either spatially (to take into account the whole biosphere) or temporally (to take into account evolutionary history). However, as the examples in note 21 show, stability even at these grand scales is not assured.

The ecofeminists Karen Warren and Jim Cheney (1993) are liable to claim that stability and harmony might not be seen in nature from many a point of view, but infact do exist. Taking their cue from hierarchy theory [22] they assert that the predisposition towards a functionalist or systems (i.e. a unity/harmony/balance of nature) or a social - ecological (i.e. community/struggle/stochastic) approach is merely the result of observing at different space-time scales. In other words, Warren and Cheney, amongst many others, claim that observation sets of ecological phenomena are space-time scale dependent and so both the functionalist and community approaches are relevant depending on whether one is localizing or globalizing their outlook. But I would assert that this is not the case at all. Functionalists (cum unitarians) are predisposed to looking at nature in a functionalist and unitarian way due to many more reasons than purely what spatial and temporal viewpoint of nature that they take. Both environmentalists and professional ecologists are liable to take on board theories of nature according to their their social, political, scientific and cultural background [23]. The other point is that one can just as surely view an organism from a functionalist - systems outlook as a an ecosystem. Infact, this is what animal and plant physiologists do. Both a huhu grub and a hinau forest stand can be viewed as matter and energy flow units - as dictated by systems theory and unitarianism. But, both the huhu grub and the hinau stand can also be represented using the community concept; the hinau

stand as a collection of self-interested individuals, and the huhu grub as self-interested individual within a collection.

Whether or not balance, stability, or equilibrium exist as fundamental features, their mere presence is not, itself, adequate evidence for the operation of super-organismic homeostasis. Just because the input of a particular chemical element is equivalent to the output of the same element with regard to a particular ecosystem does not mean that that particular system is actively or passively maintaining that balance (see Williams, 1992).

There are numerous examples of the stability of communities (of various scales) over a considerable number of generations but the longevity of such a community owes more to the life-histories and physiological tenacity of the individuals within the community than to some invisible homeostatic ability of the collective community.

The ascription of homeostasis to levels of biological organisation higher than the organism arises from the application of cybernetics and systems theory to ecological problems. There was much promise that the incorporation of the principles of these fields would turn ecology into a hard science. But far from revolutionizing and hardening ecology into a respectable science (as Odum, 1971 and Patten, 1971, promised), systems theory injected a confusion into ecology by exposing patterns with no biological significance and by proposing generalities of dubious merit. According to May (1973) systems analysis could benefit from the installation of an on-line incinerator.

Deep Ecological unitarianism, through its adoption of Clementsian plant ecology philosophy, also has a strong ecologically determinist stance. Clementsian ecology, Gaianism, systems science and ecosystem ecology all affirm the existence of ecosystem or community maturity through the notion of the ecological climax. The 'eco-climax' is viewed as the final or perpetually stable community within a succession of natural communities in a particular geographical area. But such maturity in ecosystems is, for the reasons outlined above, merely a human abstraction. Maturity, like homeostasis, harmony and balance, is only ever a unitary (i.e. individual) phenomenon, not a community phenomemon.

The inability to eviscerate the 'balance of nature' concept from ecological and environmental thought has been attributed to the depth in which it is embeded in the guts of western culture, particularly as associated with Ancient Greek Metaphysics and natural theology (see Egerton, 1973; Simberloff, 1980 and Botkin, 1990).Both of these traditions have entrenched metaphysical and political obligations to order and harmony. The natural world was viewed as a particularly obvious manifestation of this order and harmony.

STRUCTURAL FUNCTIONALISM AND UNITY

The unitarianism of systems ecology, Gaianism and Deep Ecology has normative consequences in the political arena. Simberloff (1980) holds that Leigh (1971) suggested that the success of systems ecology, and its concomitant concepts of balance and homeostasis, in spite of their often poor explanatory record is that they provide support for the view that there are inherent self-regulatory powers within laissez-fairre capitalism. In this light, homeostasis is Adam Smith's invisible hand that leads to balance in both nature and society, which is to the benefit of the whole community.

Perhaps a slightly different approach is called for; systems ecology, because of its propensity to see balance and harmony in nature, is inherently bourgeois, since it is only the wealthy that have accumulated enough material benefits to secure some sort of balanced and harmonious life from a unbalanced and disharmonious world. The rich and powerful then produce a dogmatic discourse that espouses the balanced and harmonious nature of the world and they extol the virtues of acting to maintain this balance and harmony. The poor can thus be ascribed a role which must not be interfered with lest the breakdown of balance and harmony occurs.

From this perspective, the systems approach is strikingly similar to to the lines of thought inherent in the structural functionalism of sociological studies. "Structural functionalism regards a culture or a society as an entity, all parts of which function to maintain one another and the totality" Pepper (1993:24). Hierarchy is thus easily, even obligatively sanctioned - since every individual or class of individuals have a precisely ordained role to perform.

Structural functionalism tends to see the nation state as a hard and fast organic entity, like an individual cell or a human body. The poor, in such a scheme of things, are like golgi bodies in a cell or kidneys in a human body. They must exist for the organic state to function. Without a ready supply of poor people to work the fields and factories, society as we know it would grind to a halt.

Like the functionalism of systems and Gaian ecology, structural functionalism claims homeostatic or self-regulatory phenomena are at work in the social world to render society, through laissez-fairrism, in a balanced and harmonious state. In structural functionalism this self-regulation is apparent through the medium of democratic pluralism.

Through pluralism it is claimed that there is constant negative feedback (as indicative of homeostasis) via the democratic voting system to a state most wanted by most members of society. Somehow, the very existence of pluralism is suppose to confer a harmonious state upon a society. Thus, homeostatic theories of nature and society fit in very well the bourgeois liberalist programme for social change whereby the ballot box is supposed to adequately reflect the needs and desires of the body politic. Neither Ecosocialism, nor most Deep Ecologists would accept such an idea - but whereas Ecosocialism has an inbuilt metatheoretical critique of bourgeois democratic ideology, Deep Ecology rides along with many of the metatheoretical and metaphysical viewpoints of society and nature as espoused by those who are most destructive to the environment; the bourgeoisie.

Structural functionalism studies the components of society that contribute to the existing social and political order. Like functionalism in ecology, structural functionalism in sociology and politics looks at cohesion, harmony and staticism. Hence, both ecological and societal functionalism are easily examined using a systems approach - where concepts of equilibrium, staticism, and interconnected cohesion flower uncontrollably. The supreme example of the functionalist approach, in ecology is that encapsulated in the Gaia theory, where all the physical and biological components of the Earth are represented in unity. Societal functionalism, too, has an epitomizing example. The World Systems Theory [24] promotes the idea that the global collection of individual societies act as one great interconnected political economy. The closeness of ecological unitarianism to economic unitarianism is exemplified by J.Baird Callicot's remark: "We could plausibly say that ecology is principally, if not altogether, the study of the economy of nature. Each of the myriad living forms, while pursuing its own interests, performs a function which contributes to the overall flow of materials, services and energy within the system" (Callicot, 1989:72).

Systems science in political economics attempts to do the same thing as systems science in ecology. It scientizes the very debatable idea that struggle, competition and so on, of the dog eats dog world of capitalism produces a balanced, harmonious state. The veneer of science once again glosses questionable ideological premises.

HUMANITY AND NATURE IN UNITY?

To regard the biological constituents of nature (or the sociological constituents of humanity) as being in a conflicting and somewhat chaotic community, rather than in a harmonious unity then suggests that we should not seek to be in harmony with nature but seek to be in a community with the other members of nature. To achieve unity with nature is to so subsume nature so as to deprive all the non-human biological constituents of their identity and their existence (perhaps humanity can be considered to have done this already). The community concept appreciates that a more benign understanding of the human-nonhuman relationship would be this: we are in a community with nature, just not an equitable one. Humans abuse the nonhuman members of the community. We objectify, devalue, alienate, marginilize, commodify and destroy the other members of the community. From a socialist point of view, and as Benton's (1993) work alludes, humanity appropriates the labours of other animals and plants in the biotic community. An appropriation of the fruits of the work that animals and plants undertake beyond all degrees of necessity and reasonableness.

Just as in the social realm, the solution to such abuse does not lie in calling for the unification of the members of the social community under a repressive regime of unity. Cuomo (1992), amongst many others, points out that "historically, the interests of people of colour, women, lesbians, and jews, and other oppressed groups have been ignored or destroyed in the interest of unity". The solution lies in identifying the appropriate manner in which the oppressive members can come to act in a less domineering way. In the human world the oppressor is usually made to do this by forces beyond its control. However, no such external forces act in this manner with regard to humans and their relationship to the rest of the biotic community. This is because the nonhuman biotic community is incapable of identifying and acting to revolt against its oppressor [25], just as in many human communities.

THE INDIVIDUAL IN THE COMMUNITY

A community approach to nature as outlined in this section, might be reinterpreted as being no different to the unity approach - in that the value of the community parts lies in the community as a whole. Such a conflation will probably arise in the minds of those that crudely equate

communitarianism with communism and therefore with values of social unity - so that the community can be viewed as the most important entity (despite its inherently abstract nature) and the parts that make it up are transient and expendable. Such fears of the fascism of the community are misplaced, and as I have tried to explain, are more accurately directed at the unity concept.

One of the important ideas of the community concept is that when the individual or species composition of the community change, then the whole community can be considered to have changed. This may be considered a description of ecological reality as well as a value judgement since:

> "as far as is known, each species is uniquely different from every other species in at least some respects. This means each species must respond uniquely to the ecological situation in which it occurs, compared with other species exposed to the same set of conditions. Infact...genotypic variation within species and even within individuals will produce some ecological difference between populations of the same species" (Burrows, 1990:82).

The personal history (both ecological and sociological) of an individual or group of individuals adds further to their own uniqueness, so that the identity of any one community must be peculiar to that particular community. Far from retaining its identity in the face of a change in its species composition, as Robert O'Neill asserts [26], the species composition is an important defining feature and measure of community identity.

While the composite members of a community all possess their own unique identity, this identity is not independent of the community. This is to say that the community has the capacity to influence the nature of the individuals and species within it. In a human community, this may be done through precise and direct social relations (like employment hierarchies, laws and education) as well as through less defined forms of socialization such as cultural and gender biases. In an ecological community the influence is expressed through the medium of emergent properties. Emergent properties such as soil fertility, nutrient availability, predation rates, niche patterns and resource distribution affect the ecological individual just as emergent properties such as ethnic groupings, unemployment rates, class biases and income tax levels affect an individual in a human community.

EMERGENT PROPERTIES

Despite Edson's (1981) warning that emergent property studies are irrelevant in the science of ecology, the subject continues to be looked at throughout both the ecological and environmental literature - especially those writings with a philosophical bent. Andrew Brennan (1989) for instance, classifies emergent properties as those properties that a collective (community) possess which the individual parts lack, and which are not inherited by any one part on its own. Emergent properties are thus relational properties of individual constituents (Martin, 1991).

According to the hierarchy theorists Allen and Starr (1982) emergent properties disappear as observer ignorance of the subject decreases. But Pomeroy (1988) points out that some believe that we will never eliminate observer ignorance to the point that the concept of emergent properties may be ejected from ecological discussions.

Emergent properties are relevant to the community - unity barrier in so far as they contribute to explanations of the human-nonhuman relationship. The issue of emergent properties is linked with the 'more than the sum of its parts' argument (which will, no doubt, rage on in ecology and social philosophy for many years to come). While the Australian environmental philosopher Lawrence Johnson (1992) cannot understand what the argument means; generally those who believe that a whole (a collection, community, ecosystem, nation-state et cetera) is more than the sum of its parts are called holists, whereas those that believe wholes are merely the sum of their parts are labled reductionists. Most examiners of my arguments would predict that because I emphasize the Gleasonian cum Gesselschaft view of eco/social communities that I would be best classifiable as a reductionist - believing that a nation state or a forest community is merely the sum of their individual components. But I also claim that some collective properties of a community impact upon the opportunities available to, and nature of, the constituent individuals. A paradox in my approach - or so it would seem. I submit, however, that although communities are rightly regarded as amorphous abstractions, they also possess emergent properties. This is to say the existence of emergent properties, say income tax levels in a society or parasite numbers in an ecological community, are not dependent on these collections being hard and fast, well-defined units. To draw an analogy; an 'atom' might rightly be considered a human abstraction of a collection of electrons, protons and neutrons. Yet these collections of particles exude properties

when in combination, that they do not exude individually. Whether one views the atom holistically or reductionistically is a matter of perception, and they can both possibly be said to be correct. The community concept can not be decreed holistic or reductionist, since "holism and reductionism are simply different ways of looking at the same phenomena" (Burrows, 1990:466). Similarly, unitarianism does not wholly correspond with a purely holistic way of looking at things since the unity approach exhibits reductionist tendencies (as shown through its penchant for naturalistic interpretations and physicalism). Holism and reductionism cut across both the community and unity concepts.

UNITY IN DIVERSITY?

'Unity in diversity' and 'unity through diversity' are popular slogans for all manner of social and cultural movements, including Deep Ecology. What does it mean? Arne Naess (1989) has had a problem with how to work out the notion of 'unity in diversity' though he remains an explicit supporter of it.

Diversity does not mean just a diversity of species, of cultures, of lifeforms, of colours, structures and ways of thinking. Diversity also means a diversity of interests. Many of these interests being mutually exclusive. Yes, Hegelianism might be incorporable into Buddhism, and yes you might be able to mix red with green, punk-rock with eurofunk and cubism with pointalism. And one can conceivably imagine a peaceful nation of Serbs and Croatians, a tranquil forest of possums and pohutukawa, and a royal family devoid of reportable crises. But, alas diversity of interests often means that one individual or group of individuals are going to feel their interests transgressed. And, moreover, this transgression will sometimes take the form of one actually destroying the other. There are alot of things that are not at all compatible when one messes with the unavoidable world of survival and self-interest.

There is little wonder why Naess finds 'unity in diversity' problematical. Diversity is not, realistically, compatible with unitarianism. The 'unity in diversity' notion sets out as 'poetic propaganda' that attempts to embody the sanctity of individuality in universalist solidarity. It falls prey to the erroneous idea that despite all the differences of interest that exist in nature and in society - somehow, they can all be worked out and to the benefit of everybody.

'Unity and diversity' attempts to reconcile the irreconcilable. Unity encroaches on diversity just as diversity pulls apart unity. Diversity is not the product of unity, it is a product of a community. Diversity emerges not from a cohesive, unified and harmonious unity, but from a community entity - where there exists ample instances of conflicting interests, opposing forces, historical and genetic variation, heterogeneity, chaos, disturbance and struggle. Having said that, though, it must be pointed out that neither diversity nor the factors that contribute to it, need be valued in and of themselves.

THE COMMUNITY - UNITY BARRIER: SUMMARY

Deep Ecologists need to get a grip on reality and see nature and humanity as communities, instead of unities. This includes seeing humans not in unity with nature but as existing in a community with all the other members of the living world. Deep Ecologists seem to have a naive and unsophisticated approach to unity. To be at one with nature is to assume that human interests coincide exactly with the interests of all other members of the biotic world. They do not. Each individual acts selfishly to preserve or better its own interests. Those theories that depict ecosystem or global homeostatic mechanisms as being capable of rendering the self-interests of individual organisms benign or benevolent for a larger level of biological organization fail to take into account the lack of empirical evidence demonstrating such homeostasis in action. Homeostasis (and the equilibrium it is purported to maintain) are ephemeral phenomena in but a few communities.

The continuing success of theories relating to unity, balance, homeostasis and equilibrium in nature stems from metaphysical, methodological as well as political and historical factors. The most important of these are:

1) the need to invoke concepts of balance and equilibrium in environmental politics when dealing with the problems of environmental pollution and biological conservation;

2) the influence of bourgeois notions of unity and individuality, and of the bourgeois tendency to see order and balance in a disordered and imbalanced world;

3) the prevalence of 'physics-envy' in ecology (mathematical and physical abstractions as an approptiate way to explain ecological phenomena); and 4) the embededness of the metaphysical outlook of order and harmony in nature within science and society due to the historical influence of Ancient Greek metaphysics and the natural theology of western theological traditions.

Nature can only be regarded as a unitary phenomena at the physical level. Any description of unity beyond that extends beyond ecological reality. But if Deep Ecologists espouse notions of unity based upon such physicalism they will continue to fall into a pit of mysticism of Pythagorean proportions (in which abstractions of nature fail to provide any meaningful explanations) and they will forever erect a barrier to meaningful normative analysis. For instance, under the physicalism of the unity concept, although each individual is competing with other individuals they are 'unified' due to the fact that they happen to be made up of material that previously made up another member, and happen to use energy that was once stored by another member. Similarly, although one biotic member may be savagely and cold-heartedly predating upon another they are actually united in a common bond of matter and energy exchange. Zoophagy, by this reckoning is an appropriate way to express your oneness with the endangered animal of your choice. In this way you are at one with nature not because you care to develop an ethic of respect for its members interests, but because you transfer matter and energy with it; i.e. because you eat it...and it eats you. "All flesh is grass" may be considered a Deep Ecological sentiment. But it would not encapsulate the real state of affairs. Namely, that the grass does not want to be flesh, and I submit, that you too do not want to be eaten by another member of the biotic community - even though this would be an expression of the inherent unity of nature.

Harmony and stability in nature must also be approached with caution. Both for environmentalists and for ecologists. Harmony and stability are human-imposed attributes thrust upon the natural world to make the explication of naturalistic theories of society and ethics easier. It is no great accomplishment once we have put them in nature to pull harmony and stability out of it again (Visvader, 1991), and then pretend that nature has told us how to act.

Whereas Deep Ecologists share with systems ecologists the fascination for things harmonious and stable, Ecosocialists see not harmony and united cohesion but conflict and disharmony in both nature and society. A conflict which in the human realm is initiated mainly due to class relations. To

Marxist structuralists the harmony that bourgeois functionalists see is but a shallow and splintered reality. One that the rich enjoy at the expense of the poor.

Rather than seeing ecosystems, humanity, society, the Earth or the nature-humanity complex as being unities, these groupings are more appropriately regarded as communities. Communities composed not of a group of integrated and unified individuals engaged in a common goal, but communities composed of a collection of organisms engaged in their own pursuits, during which the interests of others are often transgressed. Accepting such a metaphysic, in which ecological relationships are considered primarily sociological rather than physical, leads us to attacking the environmental problems by working out a just way to apportion ethical considerability to the various members of the entire biotic community.

The ecophilosopher Joe Weston (1991:285) comments that: "There is feedback from metaphysical views to value". However, to derive values from the metaphysical outlook of systems ecology is to stumble at the starting blocks of ones environmental value formulation. Systems ecology can not direct us towards valuing the very things that make up the environment, namely the individual community members and the indistinct communities that they compose. Instead systems ecology, functionalism (and Deep Ecology by metaphysical and metatheoretical association) tells us to value mere abstractions and the mere physical make-up of the biotic environment.

Unitarianism has shades of ecological and sociological totalitarianism darkening its ethical worth. Wholes are implicated as being not only the locus of value (at the expense of parts) but are thought of as being the only real entities. Parts and individuals are not parts or individuals at all, they only think they are. Such 'parts' and 'individuals' must realize this integrated wholeness and act upon this realization so as not to defy the ecologically prescribed limits and bring ruin upon both the whole and therefore the individual.

Communitarianism does not advance a theory promoting the sanctity of the individual over the whole [27], it merely emphasizes that the individual, in association with other individuals, define and construct the whole. Moreover, the community concept makes a clear warning; that the whole is often defined and utilised by a few individuals to control the majority of individuals. The whole thus becomes merely the reflection of the ideas and desires of but a few individuals, and acts as a vehicle to manifest these ideas and desires.

Fig. 4: Cartoon of the unity concept.

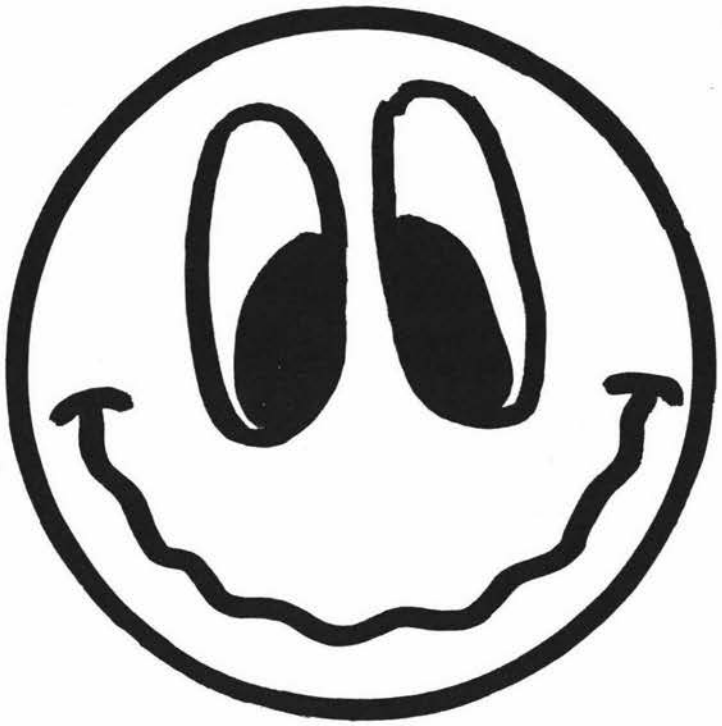


Fig. 5: Cartoon of the community concept.

The totalitarianism of unitarianism drowns the voices of the world's biotic community in a sea of unity. A sea that washes with the metaphysical outlook of but one community member; humanity.

Some will claim that in proposing the community outlook at the expense of the unity concept, I am merely replacing one totalizing discourse for another. But I would maintain that the community concept enables, or accepts, that each biotic member (each face in fig. 5) constructs its own version of reality (though this would be mediated by its social and environmental background) rather than having that reality thrust upon it by its position in a unity. The community concept represents a multiplistic way of looking at the world, yet attempts not to cower from the realism associated with being a living organism in a physical universe that cares not for its biotic members.

Unitarians have clung to the unity approach in the belief that it offers a value system more caring for the Earth's environment. An organic view of nature wrestles back the notion of the living Earth from the rationalists of the enlightenment and from the industrial revolution - which converted the Earth and living things into mere machines. But such organicism only converts living things of the Earth into golgi bodies, chloroplasts and kidneys, rather than cogs and wheels. An organic functionalism rather than a mechanical functionalism. The real aim is to rescue the living components of the biotic community from such functionalism and appreciate them for what they are rather than for what they do.

Through their unitarianism Deep Ecologists have searched for a more enchanting and environmentally-appropriate metaphysical outlook. I believe they have failed. But the sentiments behind such a search are not all negative, and through them there has been an encouragement for Ecosocialists to widen their outlook for environmental concern to the non-human world. I think that Ecosocialism can actively take up the challenge to extend the boundaries of communitarianism, and not only this but that some very basic Marxist principles will contribute positively to such an extension. Most notably with regard to the socialization of ecological studies and environmental philosophy.

SOCIAL REALIZATION VERSUS SELF-REALIZATION

INTRODUCTION

Deep Ecologists, and many other streams of radical environmentalism, often emphasize the importance of individual humans getting into spiritual touch with nature in order for them to attain awareness of their heritage within nature, and dependency on it. This 'self-realization' is a fundamental principle of Deep Ecology [28]. The individualism and voluntarism of this ecological consciousness towards self-realization sharply contrasts with the tact of Ecosocialists who prefer to speak of environmental issues as related to social consciousness, where attention is most heavily focussed on criticizing the existing social order and upon identifying appropriate social change. This difference of perspectives I call the 'social realization versus self-realization barrier'.

Deep Ecology's approach to environmentalism is initiated from their metaphysical outlook of the Earth; i.e. unity. 'Self-realization' refers to the realization that the self does not end at ones physiological borders. The self (with a small 's'), through the process of self-realization, becomes the Self (with a capital 'S' [29]). This larger Self being the whole united mass of nature.

The Deep Ecology process of Self-realization relies heavily on psychology and metaphysics, for instance listen to the following passages:

> "Deep Ecologist's analysis of self is such that they consider that if one has a deep understanding of the way things are (i.e. if one empathically incorporates the fact that we and all other entities are aspects of a single unfolding reality then one will (as opposed to should) naturally be inclined to care for the unfolding of the world in all its aspects" (Fox, 1989:246)

> "Deeper perception of reality and broader perception of self is what I call ecological realism. That is, in philosophical terms, however important environmental ethics are, ontology is the center of ecosophic concerns" (Bill Devall, quoted in Fox, 1989:226).

While George Sessions, Bill Devall and Warwick Fox believe that "our problems seem to channel down to human psychology, or states of consciousness" (Sessions, quoted in Fox, 1990:225), Ecosocialists believe that our problems channel down to the social realm, and ethical values derived from social processes rather than metaphysical truths. Ecosocialists would generally join the environmentalists which have come to be known as 'Social Ecologists' in advancing the view (as Zimmerman, 1993:vii, clarifies) "that the principle root of the ecological crisis involves social heirarchy: authoritarian social structures allow people not only to dominate other people, but also to waste, despoil and destroy non-human beings". Ecosocialism would direct the blame for such social hierarchy most strongly at the door of capitalism - whereas Social Ecologists often view hierarchical relations in existing 'socialist' states and the environmental problems of these states as indicative of the failure of socialism to offer salvation from the environmental crisis [30].

Whereas Deep Ecologists prefer to rely upon the psychology and metaphysics of Self-realization in order to effect environmental friendliness in human societies, Ecosocialists would not view every human being as being amenable to ecological consciousness. Either because of people's inability to put the health of the planet above their own material or class interests, or because there are poverty-related barriers lying in front of people that prevent them from affirming their 'ontological oneness' with the environment. According to Ecosocialism, relying on individual value changes (especially those instigated by the metaphysics of ecology) is clearly insufficient to induce environmental integrity. Not only because mass Self-realization is impossible, but because even a society of Self-realized individuals will possess the hierarchies involved with capitalism; classism, patriarchy and racism. Thus there is a clear critique of the social shallowness of Deep Ecology within Ecosocialist thought.

THE SOCIAL SHALLOWNESS OF DEEP ECOLOGY

The main criticism levelled at Deep Ecology (and which I aim to level at Deep Ecology's Self-realizationist approach) is that it contains socially shallow interpretations of environmental problems. Deep Ecology has been noted by numerous authors as lacking concern for human-human relationships, and interminably concentrating on human-nonhuman relationships. Guha (1989:72) notes that the original Deep Ecologist, the Norwegian philosopher Arne Naess, made some attempt to note the social inequalities that made a negative impact on the world's environment, but that Naess' "concern with social cleavages and their impact on resource utilization patterns and ecological destruction is not very visible in the later writings of [American] Deep Ecologists".

On this social shallowness, I start with a brief description of Deep Ecology's universalist stance against class relations and in the process explicate the barriers to universal Self-realization.

Jonathon Porritt (1984), amongst many others, has detailed the universalist applicability of environmental problems on planet Earth. Environmental issues affect everybody, it is claimed, because environmental problems affect everybody. As Dobson (1990) notes the general political position that the environmental crisis will eventually be suffered by every one and that we all have equal vulnerability to ecological disasters is a perceived source of strength for the environmental movement. This makes the call for environmental friendliness so much easier for Greenies since they do not have to target particular groups and muck around with the messy reality of inter-group conflicts.

Ofcourse, many Greens (Ecosocialists in particular) know this not to be true. One environmental problem, is different from another environmental problem. They may all be related to a particular cause (be that anthropocentrism, industrialism, capitalism, patriarchy etc) but no matter from what particular environmental strain you come from, it is clear that environmental problems do not manifest themselves uniformly across the human species. Urban decay does not affect a rich white suburbanite as much as it affects a poor black ghetto-dweller. The death of the Zambezi river does not affect Californians as much as it affects an upper Zambian

village community. And a rise in sea level has more potency for polynesian fisherpeople than Wellingtonian businessmen. The universalist appeal to 'survival politics' (as outlined by Bahro, 1982) should not, as Bell (1992) indicates, be the main political weapon to institute environmental change, since class interests are always unlikely to be pushed aside.

As well as environmental problems being manifested amongst humanity in variable degrees of intensity, so environmental problems themselves are variously defined. An environmental problem is thus in the eye of the beholder. This can be said even for different environmentalists, and becomes most notable in the debate between Deep Ecologists and Ecosocialists. Most often, these two environmental streams have very different ways of defining the environment and so dispute what are important environmental problems and what are not. An interesting point here is that both Deep Ecologists and Ecosocialists criticize each other for having too narrow a conception of what the environment is. Ecosocialism asserts that a preoccupation with natural wilderness preservation exposes Deep Ecologists as middle-class forest-lovers, who merely fight for places of recreational and spiritual value for themselves. Deep Ecology, on the other hand, berates the social approach as being merely another way to put human interests ahead of nature's. Although, I believe both the natural and built environment are appropriate concerns for <u>all</u> environmentalists, I find it impossible to defend the call by some Ecosocialists to redefine environmental problems in terms of what affects they might have on humans only [31].

Whenever the 'socially shallow critique' is levelled at them, Deep Ecologists usually counter it with an argument that indicates that 'Deep Ecologists do care about the oppression of the poor, of coloured people, of Third World people and of women. But sorting out these problems will not rid the world of the underlying cause of environmental problems; namely the disjunction that humans feel with regard to the rest of nature and the anthropocentric hubris which thus follows'. This argument can be translated into 'Deep Ecologists only care about the oppression of people in so far as it contributes to environmental problems' (which tends towards the lesser degree of significance as far as Deep Ecologists are concerned). A harsh and cynical interpretation, I know, but one that I feel is justified due to the continuing asocial approach of Deep Ecology.

Within Deep Ecology, however, there is a debate emerging about the degree to which Deep Ecology can continue to espouse changes in metaphysical commitment as being able to propel humanity towards ecological soundness. Some Deep Ecologists [32] do see a role for studying

human-human affairs, but others languish far behind in their development towards social realization. The editor of the ecosophic magazine The Trumpeter, Alan Drengson, writes in the Journal of Applied Philosophy that "if folk in the modern industrial society would get out of its rush and its structures, into the wilderness or in silent meditation, they could open themselves up to a larger world" (Drengson, 1987:225). An Ecosocialist critique of Drengson's suggestion is that not all people are equally able to obtain enough material security to enable them to go and visit Yosemite National Park or partake in Yoga classes. Even if the criticism that Self-realization is based upon a dubious metaphysical interpretation of ecology does not wash with Deep Ecologists, they might admit to the inherently bourgeois nature of Self-realization. The poor and the oppressed are a bit busy fighting for survival to give too much of a damn about realizing that they are connected to the Earth. If they sit around trying to work out how to make the connection of Self-realization rather than busying themselves with collecting batteries from the tip or selling plastic roses for a buck they are likely to become one with the Earth in a much more meaningful way than that of a Self-realized Deep Ecologist. Death is a rather drastic way to reaffirm your oneness with the Earth, but it is laughable that a University philosopher or a magazine editor claim to be more Self-realized with the Earth than a street child whose brains are but a few calories away from mingling with the dirt.

From this perspective Deep Ecology's Self-realization is an avoidance of reality afforded to the wealthy due to their inherent capability to fluff around thinking about how they can cleverly build philosophical bridges between themselves and the natural world. Having such a connection between themselves and nature they believe that they are inherently unlikely to do nature any harm because they would be harming themselves. Well that is all very well for those that are able to Self-realize (although I dispute that Self-realization necessarily leads to environmental benevolence). But the Marxism within Ecosocialism emphasizes that individuals are "materially bounded (especially if they belong to the underclasses in society)" (Pepper, 1993:12) and hence are unable to partake in the individual metaphysical consciousness afforded to those with more time and money. These (under-) classes are also prone to despoiling their immediate environment, despite the fact that they possess the knowledge of their dependency on it, because this is the only road to survival. Thus human-human studies and social change is implicated in the strive towards an environmentally friendly society.

David Johns, a Deep Ecologist, would concur to some degree with the above argument, for he states:

> "We cannot dismiss the struggles over human structure and realize a Deep Ecological vision...In struggling to alter the order of things it is necessary to understand how it works, for if we do not , the vision in the hearts of a few will not be enough" (Johns, 1990:252).

If Johns' view is typical of Deep Ecology then part of the Ecosocialist critique must be considered defused. But with Warwick Fox (1989) claiming that looking at human-human relationships only serves to perpetuate the idea that these things are relevant to solving environmental problems, one may be skeptical that Deep Ecologists have progressed beyond benevolent individualistic metaphysical psychologism.

One of the pet 'social' projects of Deep Ecology is population control. And it is worth examining the degree of sociality embedded in this 'social' approach.

OVER-POPULATION

The 'population explosion' problem is a 'mainstream' environmental problem that has been given much consideration over the past thirty years. Deep Ecologists have incorporated as one of their eight 'platform' principles of Deep Ecology [33] the problem of population control. The reason stated revolving around the biospheric and ecosystemic integrity of the planet. This is the main point for Deep Ecologists; yes population problems may contribute to poverty, and to urban decay, crowding, unemployment and other human problems - but the real problem is that the growing human population is encroaching on the natural landscapes of the Earth. This is another example of Deep Ecology not necessarily rejecting social phenomena, but simplifying such phenomena in order to identify a cause for their pet project of preserving the wilderness. Deep Ecologists cite instances of poverty, crowding, pollution and famine as indicative of the unequivocal power of over-population and then simplistically apply it to issues of wilderness encroachment.

Thus the issue is rather tangential to the Ehrlich - Commoner debate since Deep Ecologists could care less about the health and job opportunities of the World's poor, and the affect of global environmental destruction on humans.They feed off the Ehrlich - Commoner debate to get political and popular support against those contemplating taking a light stand against population increases. Thus, Deep Ecology buys into Malthusianism and they espouse a numerophobic ideology. Deep Ecology Malthusian 'numerophobes' insist on addressing poverty related and technology related environmental destruction by advocating the elimination of the poor and the masses who use the technology rather than getting rid of poverty and the actual technology. They find it easy to adhere to the notion that environmental problems are due to over-population because it places emphasis on a single, readily identifiable problem, which incidently does not call for them to make any sacrifice. [34]

The one-dimensionality of the Deep Ecology approach to the population problem is reflected in their angle of attack against it. Namely;
-education,
-family planning,
-immigration.

The answer to the population crisis lies in educating people to the dangers of over-population, providing family planning for women and stopping the flow of immigrants (into the U.S.). But none of these 'answers' will work without directly paying attention to alleviating poverty. This is a much more comprehensive problem than any of the above 'answers' for it involves more than throwing resources into the public sector to initiate education, family planning and immigration policies. Poverty alleviation involves delving deeply into the structuralism of international and intra-national relationships. Educating the poor to the plight of the planet and towards an adoption of family planning techniques will lead to nothing if the poor have no other insurance from starvation offered to them apart from a large working family. Socialist - feminists also point to the inequitable distribution of family resources as indicating that many women are unable to take part in the 'answers' that Deep Ecologists and 'progressive' Malthusians offer.

Population control is advocated by a broad spectrum of mainstream environmentalists who are unable to understand that it is impossible given the present state of social relations in the world. The time when a public authority is capable of manipulating its subject population through one-dimensional education, planning and immigration policies will be a time when the social structures leading to environmental problems will have [35]

have been dissolved. Those factors in society which promote high population growth (i.e. those factors that lead to economic poverty) are the same as those factors leading to social relationships malevolent to the environment.

The strength of the Deep Ecology position for population control is exemplified in the Earth First! movement (although Eckersley, 1992:230, warns us that "Earth Firsters do not represent fully the views of Deep Ecology theorists"). Gary Snyder, an "influential" ecosophic poet, for instance, "would like to see a 90% reduction in human populations to allow a restoration of pristine environments" (Guha, 1989:72). While some Earth First Deep Ecologists want to bring in humane family planning and women's education to combat Third World population problems, other less humanistic (?!) Earth Firsters employ population control tactics that border on the boundary between imperialism, fascism and anti-humanist callousness [36].

Because Ecosocialists perceive the environment in a somewhat different way from the wilderness focus of Deep Ecologists the population issue is of relevance mainly in how it affects the lives of people, most notably through the affects it has upon social conditions, poverty, resource depletion, famine, overcrowding and pollution. The Ecosocialist stance upon population numbers and these factors is distinctly non-Malthusian. It is not that resource scarcity manifests itself through over-population as famine, but that resource maldistribution manifests itself through inter- and intranational inequality as poverty which leads to famine. British Ecosocialist Hugh Stretton comments "limiting poor numbers is likely to reduce the suffering of the poor and limiting rich reproduction is likely to reduce poor suffering even more" (Stretton, 1976:6). Thus, a vital link between the way the rich treat the poor and the way rich nations treat poor nations with regard to economic relations is implicated in the Ecosocialist attack against Deep Ecological Neo-Malthusianism. Aspects of colonialism and Dependency theory are used to explain the international relations directly relevant to rising populations, and Marxist structuralism works on the intranational relations that promotes regional and class differences in population growth rates.

When environmental degradation and wilderness destruction is cited in connection with population growth, the general response of Ecosocialists is to refer environmentalists to consumption in the First World as causative agents, rather than Third World people who have more babies than they know what's good for them.

In this vain there are three basic faults with the Deep Ecological fascination with population control as far as Ecosocialism is concerned:
1) environmental damage is not proportional to absolute population number of humans,
2) even if environmental damage was proportional to population numbers, Deep Ecology's asocialism precludes it from solving the population problem any way, and
3) even if environmental damage was proportional to population numbers and Deep Ecologists did effect a solution to control it (which to a Deep Ecologist ostensibly means decreasing the number of humans on the planet) a reduced population would simply expand its consumption so as to effect the damage that was previously wrought by 10 times as many people.

Having said this, though, within the scope of those environmental problems that Ecosocialism is traditionally concerned with (such as pollution, environmental health and over-crowding) there does seem to be a case for population studies. The overt examples of absolute population impacting upon the built and lived environment of humans, such as urban overcrowding in Mexico City and rural starvation and disease in Rwanda, stem from the social existence of inequality and poverty. Mexico City attracts poverty-stricken poor rural emigrants in search of a better life. In Rwanda, a civil war was precipitated by the inequality and perceived inequality between ethnic/economic groups. A revolution that displaced massive amounts of people to an extent that demographers have never seen before. Neither problem stems from there being too many people on the planet but due to social problems which put too many people together at any one time at any one place.

It has been said many times before that the term 'over-population' is manifestly a normative judgement. Deep Ecologists get scared of large numbers but have yet to hold a cogent argument that large absolute population numbers of humans directly influences the rate of wilderness loss. Other environmental issues such as pollution are linked to the absolute local population number of humans but these humans do not reproduce uncontrollably like fruit flies. There are social reasons (and not necessarily social issues related to birth rates) for humans to congregate and cause concentrations of people in excess of the ability of the socially constituted infrastructure and built environment to support.

WHY IS DEEP ECOLOGY SOCIALLY SHALLOW?

The asocial approach towards identifying and addressing environmental concerns within Deep Ecology has historical, metaphysical, socio-political, ideological and class roots. It is worthwhile undertaking a deconstruction of the social shallowness of Deep Ecology for a few pages. In many ways, this whole thesis tries to identify the causes for Deep Ecology's asocial environmentalism, and this subsection is a mere summary of this, contextualized for the arguments presented in this 'Social- versus Self-realization' section.

The very metaphysical presuppositions of Deep Ecology leads it to an asocial approach, since if all the animals, plants, microbes and so on are interconnected with humans to produce a unity, each individual is likely to act (consciously or not) so that the health of the whole is not likely to be adversely affected. The Gaia theory indicates this is fully mediated through the natural selection processes of evolution [37].

According to Deep Ecologists, humans, by deed of the rise of anthropocentrism, have lost touch with the ontological oneness of nature and the interconnectedness of all things and that this wandering of metaphysical assumptions has caused the problems we see in the Earth's environment. If only humans were to recognize the true essence of nature's unity they would eschew their anthropic fantasies and act in a responsible way towards the environment. The total interconnectedness and essential unity of all the Earth's biota is only demonstrable, as we have seen, from a physical perspective of nature. Physicalism pays no heed to the struggle for material resources and survival that afflicts inter-organismal relations and so Deep Ecologists thus launch their attack on anthropocentrism and environmental degradation from a platform devoid of real sociality.

The lack of concern for things social may not just be a result of the metaphysical positioning adopted by Deep Ecologists. It might also be an indication that Deep Ecologists would like to avoid social analysis so as to repel any attack on the existing social order that has been so kind in providing them with well paid jobs in the Universities of the western world. In other words, Deep Ecologists have a personal material interest in pursuing an asocial approach. When Deep Ecology does employ social concerns and sociological analyses, they are of such a nature that will preserve their privileged and dominant status. A couple of examples may be warranted here. Deep ecology has a distinct distaste for urbanism and advocates bioregionalism in its place. This is because bioregionalism

and deurbanization will not lead to a toppling of their own position but a reinforcement of it under a new social fabric. A social fabric that, like Bolshevik communism, places the academic elite at the zenith of the social pyramid.

Another example of Deep Ecology going 'social' is through its incorporation of many of the ideas and values of Ecofeminism. Mainly those parts of it (derived from radical feminism) that reaffirm the natural caring nature of both womenhood and nature. A plot to ensure that the patriarchical nature of Deep Ecologists' social and economic life does not invite criticism, no doubt. It is convenient for Deep Ecology to accept the essentialism and metaphysics of Ecofeminists pronouncing the 'earthliness' and nuturing nature of women, because it gives male Deep Ecologists (by far the majority gender) an excuse to pursue masculine abstract endeavours while the women stays at home and takes care of the children of mother Earth.

A third major contributant to Deep Ecology's social shallowness may be the politico-historical background from which Deep Ecology emerges. Guha (1989) notes that despite its claims to universality, Deep Ecology is firmly rooted in American environmentalism and cultural history. A history replete in the political philosophy of individualism and asocialism. David Johns (1992:62) answers such criticism by saying:

> "Deep Ecology is obviously rooted in the culture of those who espouse it; that is true of any movement...But to point to the origins of a particular historical experience does not invalidate it".

This may be so, but it does provincialize it to one historical experience. Guha's criticism emerges from a general critique of Deep Ecology's lonely focus on wilderness, another traditional American environmental experience. But my point refers to the metatheoretical composition of American liberalist politics, upon which Americans continuously congratulate themselves without delving deeper into it's inherent asocialism. The Deep Ecological solution to the environmental crisis is quite commensurate with liberalist individualism, focusing as it does on social change through personal obligations (in this instance to the environment) rather than attempting any structural alterations to American society.

TO DERIVE VALUES SOCIALLY OR METAPHYSICALLY?

Both Ecosocialism and Deep Ecology emphasize a role for values in instituting a society benevolent to the environment - but there are subtle differences between their respective approaches. Deep Ecology believes values are the prime instigator of social change towards eco-friendliness and they derive their 'ethics' from a firm metaphysical base. Ecosocialism believes, like it or not, you can't change the fact that both values and metaphysics are socially and historically based. A base that is not firm but wobbles around according to historical, political, social and economic situations. This Ecosocialist attitude to ethics and metaphysics pushes socialist minded environmentalists to two broad conclusions:

1) You cannot rely on metaphysically derived ethics because they are really socially derived ethics in (religious, spiritual, cultural or scientific) disguise.

2) You cannot rely only on values to instigate social change towards environmental benevolence, since values only emerge out of a particular social milieu anyway and serve to justify the interest of those in that milieu. The key to change is thus not a battle of ideas but, primarily, a battle of social relations.

Deep Ecologists believe science unmistakably proves the interconnections and unity of humanity, nature and the cosmos and that through the psychological realization that this is so, humans are pretty much uniformly inclined to treat the interconnected unity with respect.

Or in the words of Warwick Fox: "Deep Ecologists are not concerned with the logical connection between the fact that we are intimately bound up with the world and the question of how we should behave but rather with the psychological connection between this fact and our behaviour" (Fox, 1990:246). Deep Ecologists thus don't have to muck about with historically transient ethical fights between conflicting groups of individuals but rely on the universalist and uniform reaction of human psychological processes (as though human psychology is not socially constituted). But are all human psyche's the same? Do they react in a uniform manner to the revelation of a metaphysical truth? Is there no room for unity to evoke an uncaring or critical response from a human individual?

To think of all humans as being equally reactive to the unity metaphysic through Self-realization is to confer atleast one standard characteristic upon the members of humanity: that they will act in self-interest. "Sermons seldom hinder us from pursuing our self-interest, so we need to be more enlightened about what our self-interest is" (Joanna Macy, quoted in Fox, 1990:229).

Ecosocialist thoughts about social and ecological communities also indicate that self-interest is a manifest tendency of human (and non-human) nature [38]. Do we have a theoretical bridge assembling here? Does the reliance on the essential self-interest of human nature offer a common denominator towards unifying the Deep Ecological and Ecosocialist approaches toward environmental degradation. I fear not, for the way they approach self-interest and, more to the point, how they approach the mediation of it indicates their very disimilarity at a metatheoretical level. The Deep Ecological approach to mediating self-interest is by immersing an individual in the expanded reality of his or her self-interest. The Ecosocialist would state that self-interest is mediated through social relations and socially-derived ethics. In Ecosocialism other individuals or units are implicated when self-interest is brought under control. Under Deep Ecological concept of 'Self' the other is not implicated, there is no other to worry about - act in your own self-interest and all will be well. Just as long as one realizes that one's survival is dependent upon the survival of the whole ensemble unitary Earth then the pursuit of self-interest is sanctionable. As we have seen, though, the 'whole ensemble unitary Earth' picture is a picture painted by humans with the ink of their political, social and historical background. In looking after that Earth unit, decisions have to be made as to how to do it and where to focus your efforts. A process not realizable purely through metaphysical guidance but arrived at after (hopefully) considerable debate between those promoting action. Just as the mere existence of a deity does not throw light on how one is to act, nor does the ontological 'reality' of unity offer a description of the appropriate actions of human individuals. Those are decided between humans. Seeing the world as a unity is a value judgement as much as it is an attempt to desribe ecological reality. Thus unity is a socially derived ethical statement manifested in a metaphysical form.

If this is the case, if unitarianism and the concomitant Self-realization of this unity, is actually a socially derived ethic masquerading as a metaphysic, then is there not a traversable bridge

between Deep Ecology and Ecosocialism? (The only difference being that the socially derived ethics of Ecosocialism are not flaunted around as metaphysical truths.) It may be a bridge, but one that shudders with fragility in the midst of the merest analytical breeze. The masquerading metaphysic is the very harbinger of this fragility since it cleaves off the need to debate whether the world is actually a unity, whether nature and humanity should be regarded as interconnected and whether oneness is a metaphysic borne of, and giving rise to, arguable normative stances. We find in unity: togetherness, completeness, totality, common-heritage, majestic interconnectedness, interdependency and a functional role. But we also find that unless one is at the control panels of this great starship 'unity', one is likely to have one's interests ignored, identity crushed and survival subject to domination. The masquerade is put there to inspire us towards behaviour appropriate to nature. But ethical interpretation remains necessary, why not dump the metaphysic and get on with arguing about how to treat the world's members?

ON AXIOLOGY

The Self-realizationism of Deep Ecology exhibits an asocial approach towards formulating values in the biotic world as well as an asocial approach towards an ethical conduit focused on disseminating such values. While biocentricity is an active principle of Deep Ecology, it, too, is more of a felt phenomenon within the psychological realm than a topic able to be discussed analytically from a range of social ideologies. Value theory turns Deep Ecologists off, for they find it anthropically driven. Better just to accept that the eyes of a mammal emit glorious resplendences of unity when they look at you than to delve into working out the locus of value in the natural world.

The communitarianism of Ecosocialism, on the other hand, needs value theory, because the world is full of individuals and groups of individuals who conflict and compete to survive. There is a constant transgression of individual interests in the toiled life of living things. Somehow, a way has to be forged to divvy up the transgressions in an equitable manner. So far, Ecosocialism hasn't found a non-anthropocentric way to do this, but through intrinsic value theory it stands a good chance [39].

On axiology, it is claimed by many a biocentric that "extending liberal

egalitarianism ideals through extensionism of legal rights anthropomorphizes the human world in order to include it in a human ethical code" (Eckersley, 1992:58). On this issue I would submit that extending legal rights is an ethical mechanism which seeks to encompass the concerns and pay full attention to the intrinsic value of those to which it is extended. Yes, such a conduit of applying intrinsic value is anthropogenic, but it is not anthropocentric for it limits the legal rights afforded to human beings and offers them out to the non-human members of the biotic world.

THE SOCIAL AGENT OF CHANGE

In the preceding subsections it has been noted that Deep Ecology and Ecosocialism express different ways towards instigating sustainable ecological integrity and environmental soundness. The Ecological consciousness approach of Deep Ecology's Self-realization principle which invokes a metaphysical (cum spiritual[40]) awareness to catalyze a psychological responsiveness at the individual level to inspire environmental activism. And the structural change approach of Ecosocialism which concentrates on adjusting social relations believed to be responsible for environmental decay.

Because Ecosocialism runs along with the Marxian theme that "it is not the consciousness of men which determines their being, but their social being which determines their consciousness" (Pepper, 1993:136), the ecological consciousness approach of Deep Ecology merely reflects value judgements writ large into the biotic world. In a truly socialist spirit it may be stated that the real trick is to change what we do to the world, rather than to change our ideas about it. In this vein Dryzek (1990:20) comments that:

> "Even if a primarily spiritual orientation toward nature is adequate for maintaining an ecologically harmonious society, it contains no effective guidance about how to reach this happy state from our current plight (except perhaps through a massive exercise in spiritual empowerment). To put it crudely, there is no effective 'theory of transition'. Most of those who speak of ecological spirituality say little about this transition, let alone any practical political program".

If the Deep Ecological framework for social and political change is so manifestly inadequate, then what has Ecosocialist theory got to contribute? What, or who, are to act as the agent for social change?

Dobson (1990) notes that a central characteristic of Green political theory is that it has never consistently asked the above question, mainly because the answer was held to be obvious: everyone. Certainly this is the way Deep Ecologists have addressed the situation. The heterogenous nature of society and of environmental degradation leads Ecosocialists to identify the fact that this is not the case. Some people are materially benefited by the destruction of the rain forests and the pollution of streams. Class analysis is thus implicated.

Under orthodox socialism the role of the working class as the agent of revolutionary and reformist change is clear. But the importance of this class in Ecosocialism is less well defined. There are certainly links between capitalism and the degradation of the working and living environments of the proletariat, but the solutions to such problems in the built environment are of little import in the natural environment. In any case, it may be claimed that the working class have been bought out with regards to environmental problems. They have received the required submissions with regard to a safe workshop environment and a safe and healthy residential environment and they are also convinced of two other arguments promoted by the bourgeois classes: 1) that worrying about environmental concerns too much will cost you your job, and 2) that you can work your way up and out of decrepid work and home conditions if you try hard enough. Some diehard socialists still see an environmental role for the workers (for instance David Pepper, 1993, calls for the recognition of the labour movement as a potential revolutionary force in environmentalism) but I cannot locate the material impetus for workers to unite and revolt against Dupont, BP and Mercedes Benz just because they cause environmental degradation [41].

Because the working class are satisfied with their material lot in life, or are convinced that it can not be done any better, other groups or classes need be invoked in order to identify social change agents. Dobson (1990) explains that such a class must be significantly disengaged from the productionism of the bourgeoisie - proletariat complex. The members of such a class, Dobson informs us, might be enveloped in a philosophical attitude that scorns, questions or is in someway dubious of the work ethic and which is for the most part alienated from work, even in the instances when it is wanted. The unemployed (or the unemployable) fit into this mould. Not all unemployed are actually actively disengaged from work but

structurally so. But given the extent of this structurally induced alienation, the feeling of the inadequacy of the system to provide for everybody tends to grow. The unemployed along with others of the 'benefit classes' (such as pensioners, students, single parents and teenage children) may see the incapacities of either the conservative industrialists or the labour movement to provide them with adequate environmental conditions in their immediate environment. These may be the classes to give up on the dominant paradigm (in its totality) first and assemble in such massive numbers that a non-material based alternative will arise.

Other environmental writers [42] speak of a new class emerging from the middle classes that have already adopted a non-materialistic attitude towards life [43]. A class that is characterised by highly educated but moderately paid professionals whose major form of capital is 'know-how' rather than land or money. Deep Ecologists, to my mind, fall nicely into this class. The main environmental objective of this class is not the built environment, since their own is perfectly serene, but the natural environment. Thus they hug trees in Oregon and Tasmania, rather than campaign for cockroach extermination in Harlem or Brixton. They lecture about the evils of acid rain and ozone depletion rather than campaign for adequate water supply for shanty towns. No ethical judgement is being made here, just an indication that the new class is fighting for its interests and the benefit class will arise to fight for theirs.

It may be argued that the structural approach is endemic to the benefit class' environmental campaigns - lying as they do at the bottom of the heap. And that the 'new class' likes to keep things asocial because they are doing well the way things are, a structural change would not be appreciated. New class Deep Ecologists have, in particular, unconsciously cottoned on to the idea that a structural change may indeed lead to a drastic lessening in environmental degradation, but what will be the point of that if they cannot hop in to their cars and upon their aeroplanes to be beside their beloved forest or coral reef.

If well-educated Deep Ecologists are willing to see the ethical screwiness of their own politics and if the benefit classes escape their own materially bound environmentalism then a metatheoretical wall can be broken down. This is to say that there exists a complimentarity between the social approach coming up from the benefit classes and the value change approach enunciated by the new class[44]. With complimentarity, however, comes compromise. The new class environmentalists will have to compromise their material welfare in order that structures appropriate for

the dissemination of biocentrism are put into place. The mass of the benefit classes combined with the expanded horizon of biocentricity will create a potent force of non-materialism with huge political clout. If that clout be big enough political success will lead to policies that reflect both biocentric (perhaps tentatively to start with) and social egalitarianism.

With their immediate needs supplied and with the failure of capitalism to deliver justice to all (humans and non-humans) fresh in their minds this amalgamated class can equilibrate their incomes and and allow for the flowering of biotic egalitarianism to rid the world of the remaining environmental problems.

The vision of an environmental society coming into being as sketched briefly above is simplistic, I admit. But it does break the metatheoretical barrier between Deep Ecology's penchent for personal value changes and Ecosocialisms requirement for social change. It is a bridge that suggests that value changes and social changes go hand in hand. That there is not one without the other. Social change is implemented upon the collective values in a society, which are themselves affected by changes in society in the first place. With no social change occuring values might be the only thing keeping a movement together. There is also an admission that in the complex world of solving environmental problems value changes (and the dissemination of these value changes) is more apt to fight a particular environmental problem than an emphasis on social change. This particular bridge has its foundations in the post-modernist dislike for (perhaps not surprisingly) monocausal metatheory. Environmental problems are not really caused by one particular cause, but arise due to the action of many causes (be that poverty, anthropocentrism, hierarchy, capitalism, industrialism or the dualistic philosophy of humanity vs nature). Each environmental problem thus has its own recipe; a peculiar mix of patriarchy, anthropocentrism and international corporate capitalism makes for a nice bout of grassland desertification in East Africa, for instance; a specific assortment of inappropriate technology, statist hierarchy and poverty creates flood disasters in Bhangla Desh and a mixture of dualistic hubris, industrialism, consumerism and social inequality leads to deforestation in Nicaragua. Given multiple causes, a multiple collection of solutions must be sought. Good economic systems must replace bad, good values must replace bad values, good social relations must replace bad ones.

To invoke multiple causes and differentiate between particular environmental problems is not to say that 'there is no big environmental crisis on Earth, only little ones that can be solved piecemeal in a

pragmatic manner. Rather, it is to say that the environmental crisis is the sum of all the environmental problems now lashing the Earth. Problems which have overlapping causes such that a universalistic approach is justified. If 75% of the biological conservation problems in the world are at least partially attributable to anthropocentrism then I think a blanket negation of anthropocentrism is justified, to avoid the growth of anthropocentrism any further. The same may be said in the case of social change, patriarchy dismantling and ethnocentrism destruction.

There will be instances when a biocentric value approach conflicts with a social relation approach with respect to implementing a particular environmental policy. The intensity of biocentrism to be adhered to is not yet decided by Deep Ecologists and intrinsic value theorists; is one whale = to the value of one human, is one ant = to one human in value, is a forest of trees more important than an indigenous forest tribe?, so I feel justified in going to ground for a couple of decades before proposing a biocentric plan for an environmental society to follow.

VARYING SELF-REALIZATIONS

While the biotic egalitarianism of Deep Ecology is an admirable trait of the movement, it is arrived at through psychological experience with the natural world. Relying on psychology and Self-realization presents us with a problem; that of varying Self-realizations amongst human individuals.

Under the community concept each of the psychological responses of the Earth's human individuals is likely to be different, or atleast immensely variable, given the differing personal, emotional, cultural, economic and social experiences (let alone intraspecific biological diversity), and so uniformity in thinking is a most dubious outcome. Totalizing human psychology by uniformitizing it makes the Self-realization stance explicable for Deep Ecologists but only under an essentializing framework. We are all psyhologically determinable from looking at just one example of us. You've seen one human psyche focusing on nature's unity, you've seen 'em all, I suppose?

The point that I wish to make is that, psychological uniformitarianism aside, the weakness of a realizationist ethic is that there is no guarantee that every one will have the same realization (Reed, 1989) [45]. One may see the unity of the cosmos in all its complexity and proceed to hate the fact that he or she can't escape being at 'one' with just about every hideous being known. Perhaps Self-realization can only really be positive if the omission of the pervasiveness of 'psychologically yucky' things from life is made. This is to say that humans might only be able to go through Self-realization and obtain a benevolent outlook on unity if the experience of things in that unity (i.e. the natural things in that unity) are not clouded up with confrontations of horror, regret, sorrow or misery.

In explaining Self-realization Warwick Fox states:

> "If we were all to understand at the deepest level, -that is to incorporate, to take into our being, to embody - the fact that we are leaves on the tree of life, that the cosmos has given rise to all the differentiation we see around us, we would come to identify with all aspects of this process, this tree of life, and thus be predisposed toward allowing all entities to unfold in their own ways" (Fox, 1992:75).

Yes, all very well and prosaic, but is not the concept of realizing the fact that "we are all leaves on the tree of life" exactly what Charles Darwin explained over 100 years ago, that we all possess a common ancestry through the history of planet Earth? I think that the commonality of humanity and nature is taken as read by most of the western world, but this has not slowed down environmental destruction. Infact, if one wants to be historically crude, one can argue that the expression of this notion of commonality is the cause of environmental decay, since the rise in the acceptance of humanity's common heritage with the rest of nature corresponds with the rise in environmental degradation.

The insistance of psychologism in Deep Ecology's Self-realizationism might also be stretched to breaking point if we examine Fox's implication that the processes leading to cosmic

differentiation are worthy of admiration. Parasitism, predation, death, violent struggle, mega-ecological disruption, incessant competition and the endless labour to survive are all ways that this rough and tumble cosmos manifests differentiation. What psychological response do these factors elicit from humans? If we are to thank the cosmos for differentiation then we must thank the cosmos for blood-sucking leeches, poison ivy, Candida albicans, Jim Bolger, worm-infested apples, shark-infested estuaries and plaque-infested teeth. While an ecological role can be found for all of the above, and while an intrinsic right to live might also be found, few people would have positive psychological responses to the said products of the differentiation processes so admired by Warwick Fox.

THE METAPHYSICAL IMPERIALISM OF SELF-REALIZATION

According to Peter Reed (1989:55) Self-realization has little to do with the individual ego". To Reed "it is clear that the proponents of Self-realization are not talking about egoistic self-interests" (Reed, 1989:68). I am not so sure. To start with self as a means of expanding ones conscious is quite natural because your self is the only base you have to construct a view of the world upon. (That you are doing all the constructing is open to debate, though). However, to engross yourself in compiling the lives of others as a way to realize your larger self smacks of hubris and metaphysical imperialism.

Is not the identification of others as part of your own self not an act of annexation or stamp collection? According to Naess and Rothenberg [46] such self-centredness is not the goal of an expanded self to Self, but Cheney (1991), a self-professed post-modernist Ecofeminist, does not agree as he indicates that self realization of the Self is as much about the expansion of self to contain the different others of the Self. Frodeman (1992) comments that Cheney misses the point that the expansion of the self in Deep Ecology's Self-realization means the "othering" of self as well. So are the other selves on the biotic world 'others' or the same entity as our own individual selves? Is Deep Ecology confused or is it me? How can one realize the oneness of the the world's biota and then claim that through this realization they are able to identify with the otherness of the metaphysically consumed biotic component? Frodeman has stated the 'othering' aspect of the self in Self-realization but one is liable to remain unconvinced of his statements on otherness in Deep Ecology when, in

the same p[illegible]details Self-realization as a Deep Ecological process that involves "Emphasizing our commonality and continuity with the natural world, rather than the differences." and that this "allows us to interpret our sense of self-interest in terms of others, our community and the natural world". In as much as we share similar interests to other animals and plants (water, oxygen and a bit of carbon and nitrogen) I guess we do have a commonality, but when interests conflict - when I want to raid a brussel sprout of its water and minerals (a very rare occurence, I grant) - the commonality must be considered rather superficial. Maybe the personal level of interaction is of no import, that what Frodeman and other Self-realizationists are saying is that Self-realization offers a chance for individual humans to identify the interests of the other species and the ontological reason to look after those interests - i.e. look after the brussel sprout species, because your existence depends on it. This is what I think Deep Ecology is getting at. If it is, then there is no wonder that I am having trouble with it, for identifying with the interests of other animals and plants I think is not best done merely by hugging trees and looking into the eyes of reindeer. It requires empirical work, lest one may be led to making wildly false interpretations about what is best for a particular species [47]. If one were to engage in such empirical work the first thing one might learn is that the 'Commoner' [48] conception that everything is connected to everything else is, alas, the product of an aquarian viewpoint of life, the universe and everything. The brussel sprout that resides dejectedly on the corner of my dinner plate has no effect on the acidity of the rainfall in northern Ontario, nor does the population of freshwater lobster in the Winisk river influence the radioactive decay of the fat molecules in a Kievian infants bloodstream. The most that we can say is that there are innumerable numbers of interconnections and vast numbers of interdependencies (most of which we remain ignorant about). Not all connections are relevant, however, to the survival of any one individual, let alone a species (including humanity). Yes, it would be prudent to let the interdependencies that we know about well alone, and to implement environmental policies that accept that other (unknown) interdependencies exist, but I believe that we can proceed to sing in the shower with the knowledge that a bum note does not melt icecaps or spread koala STD's.

The Self-realization way to knowing nature suffers from the same problem as other philosophies that seek to unite the natural world with them 'selves'. People who are so 'united' are liable to conclude 'if I am a part of nature, is not what I do natural and representative of nature?'. They fall right back into naturalism. An easy escape, some Deep Ecologists might exclaim, a Self-realized individual is liable to act in accordance with the dictates of nature's natural limits. But, I claim, nature's limits are both 1) debatable from a scientific perspective (thus implicating empiricism), and 2) debatable from an ethical perspective; they do not tell us where the locus of value lies or how to solve conflicts (thus implicating socially derived value debates).

Self-realizationism relies on felt psychological responses to enact environmental attitudes, so maybe I should not make an attack on a psycho-philosophical process which has its 'heart in the right place'. For instance, listen to Robert Aitken (quoted in Fox, 1990:239) explain his relationship with the American Rockies Black Bear:

> "Deep Ecology...requires openness to the black bear, becoming truly intimate with the black bear, so that honey dribbles down you as you catch the bus to work".

An intimate feeling for the interests of the black bear, no doubt. But what about the bees?; the existence of the honey denotes the struggle and transgression of interests that manifestly characterizes nature. Despite the love we have for any particular member of the biotic community, it too is the bearer of a sword that cuts into the interest-field of others. Nature isn't the land of bear and honey. Both the bear and the bees know this, but a Self-realizing Deep Ecologist seems protected by his or her position on the top of the biotic totem pole to enter into a meaningful understanding of nature. To side with the bear on the honey issue sets off a major criticism that can be levelled at the psychologism of Deep Ecology's Self-realization philosophy. Humans tend to identify with fluffy mammals to a greater degree than most other biotic members [49]. This psychological affinity will draw out the biocentric policies in favour of such beasts if ethical arguments (i.e. values emerging from sociality rather than psychology and ontology) are not encouraged.

The aquarian view of nature's unity is also exhibited in John Livingston's passage:

> "When I say the fate of the sea turtle or tiger or the gibbon is mine, I mean it. All that is in my universe is not merely mine, it is me... I shall defend myself, not only against overt aggression but also against gratuitous insult" (quoted in Fox, 1990:237).

But, I am compelled to ask, how shall Livingston defend himself? If he is everything then how does he know which part of himself is the overt aggressor or gratuitous insulter and which part of himself is being insulted and aggrieved? If all is one then nothing is wrong [50]. Industrialists have as much claim to do with themselves what they wish as fully Self-realized, ecologically conscious, unitarian Deep Ecologists. Any advice as to the proper action (from the point of view of a particular part of the unity) must be the result of social wrangling, not automatic psychological response.

The personal level of Self-realization is, as Arne Naess (1989) and other Deep Ecologists inform us, not necessarily the only component to Self-realization. Above the personal level of getting to identify with the flora and fauna that one comes into contact with, Deep Ecology advocates cosmological Self-realization as a way of getting into realizing the universal connections between you and the cosmos. Without even having heard of bengali paper scarabs, Tanzanian crab-eating frogs, the Neptunian moon of Nereid or the Tau Ceti star system you can connect with them through Self-realization. Somehow, ignorance of the lives and needs of the world's biotic members is no barrier to being intimate with them, according to Deep Ecology. Like a child rushing up to squeeze a big fluffy gorilla, Deep Ecologists expand them 'selves' to things that do not want them.

Self-realizationists make constant references to the 'single-unfolding reality of nature'. The community concept views not one single unfolding reality in nature, but an ultimate physical reality which has the multifarious and different realities of each biotic member super-imposed upon it. There are 'multiple unfolding realities' in the world, some of which get chopped off too soon, like that of the Huia and the dodo. Each reality is specific to the historical context (both social, or experiential, and genetic) of its perceiver. To Self-realize a single unfolding reality is to metaphysically colonize other 'selves' by colonizing their reality.

After all the labour that other animals, plants, fungi and so on, have expended in defining their identity and reality along come some Californian and Tasmanian hippies to usurp their identity and appropriate their reality - rapidly reconfiguring it in the process.

Why worry about 'metaphysical imperialism'?, one may ask, since it does not involve the transgression of interests as such, just an arrogant annexation of the view of life that individual biotic members have. But we might equally acknowledge that the identity and reality of individuals is at least partially determined by ones economic interests; i.e. by ones particular labouring characteristics (ones ecological/economic niche, if you like). Thus the identity of an individual is a reflection of what interests it,(where its interests lie). In this manner the appropriation of identity and reality and its reconfiguration by metaphysical imperialists is morally objectionable (atleast to those who believe that the appropriation of labour is morally objectionable).

By uniting nature, by believing that there is nothing in the world (perhaps the whole universe) that is not yourself, Deep Ecologists push the idea that there are no boundaries between individuals, between species and groups of individuals. If there are no boundaries between people, there are no transgressions, or atleast there are no debates as to where transgressions are fair and where they are not - except in the context of the health of the great Earth unit.

By extending ones 'self' into the world and beyond into the universe is an example of self-aggrandizement without comparison. To delve into the boundaries of others and envision your 'Self' as the universe reeks of mind-blowing vanity (Morrison, 1994). Contentment with a lesser picture in life might be a more appropriate position for non-materialist ecophiles to adopt.

As well as such vain-glorious metaphysical imperialism, Dryzek (1990) discerns the possibility of value totalitarianism within Self-realization. He states:

> "Even though the 'Self' of Devall and Sessions is benign, extending beyond humanity into the natural world, willing immersion in the larger 'Self' is also surely the essence of totalitarianism" (Dryzek, 1990:200).

The totalitarianism of the great organic Gaia system, I would assert. The closeness of Gaianist systems ecology to the imperialistic and totalitarianism of Self-realization is encapsulated in the 'process ethics' of the systems philosophers Keffer et al (1991). The principles of

the process ethic proceed like this:

1) there are no entities, only processes,

2) there are no 'selves', you are not your 'self',

3) because there are no 'selves' there is no 'selfishness' only selflessness,

4) because there are no 'selves' people will not engage in self-interest.

We might like to add to this process in the spirit of the Ecosocialist critique of Deep Ecology's Self-realizationism with the following assertions:

5) because there is no me and no you, it doesn't matter what I do to you because you and I are but processes that reveal the interelatedness of all things. Whatever thing I do to you; love you, feed you, free you, bash you over your head (your cognitive process ganglia) with a cricket bat, it is but an interactive process demonstrating your and my existences as processes (as conductors of heat and sound energy rather than feelers of pain or probable victims of death).

Another point made in the ecophilosophical literature is that Self-realization seems to rely on seeing the self in nature to inspire environmentalism. To only look after nature because you are part of it reeks of either (or all of) a) vanity, b) anthropocentrism c) egocentrism. Reed (1989:68) comments that "I hope we have not been so mesmerized by the concept of self that we think it is the only possible basis for an ethic". Self-realization might be logically equated with ecological self-absorption or metaphysical masturbation, since there is no 'other' in the ecological world to care about and no 'other' in the social world to have sex with.

Peter Reed, Holmes Rolston and Jim Cheney have, in recent years, expressed a deep concern about Self-realization being able to compel people to act environmentally and they advocate the rise of an environmental ethic based upon 'otherness'. Jim Cheney (1991) feels that the preoccupation for unity cuts individual humans off from the insights, compassion and sensitivity afforded by a more pluralistic approach to caring. Reed (1989) hints that Self-realization is nothing more than a clever philosophical bridge between ourselves and nature, and asks "can we feel awe for nature when we think that what we are looking at is part of ourselves" (Reed, 1989:67). Rolston (1989) feels that Self-realization merely envelops others, and does not appreciate them for themselves but as part of a bigger structure or process.

Whether based upon psychological notions of awe, humility and respect, or upon stricter axiological approaches, the community concept

tends to support the otherness ethic at the full-scale expense of Self-realization since it perceives humans not as unified with nature but as one class of members of a biotic community. If the "clever philosophical bridge" can be washed away and the unity between nature and humanity dissolved (as the community concept would suggest) then the metaphysical basis for Self-realization is shattered. Self-realization from the community perspective would involve the realization that the other members of the biotic community (given the chance of an interspecies conference) would vote us as a too effective competitor with dubious values, and a dubious claim to intelligence, and they would view us (to continue with the anthropomorphization for a moment) as imperialist, domineering oppressors.

SOCIAL REALIZATION VERSUS SELF-REALIZATION: SUMMARY AND CONCLUSIONS

Self-realization is a process advocated by Deep Ecologists for individual humans to experience their interconnectedness with nature and so be emphatically compelled to do something about protecting it. Thus Self-realization relies on ontology, universalist psychologism and individual value changes to instigate an environmental activism in society. The realization of ontological truths in human society requires standard psychological responses to this realization throughout the human community. In other words it is implicitely accepted by Deep Ecologists that every human individual is equally susceptible to the metaphysic of unity and will respond to it in a uniform and beneficent way. According to Deep Ecology, the absurdity of degrading the environment is readily apparant to anyone who has become Self-realized. Ontology thus dictates personal and social action.

Social realization is a process whereby environmental problems are identified, studied and are attempted to be solved by social wrangling of individual members. [51] It is not necessarily anthropocentric because the interests of non-humans can be given moral weight. It might be classed as being anthropogenic however, since the social conflict of competing values is something undertaken between humans. The point here is that because metaphysical outlooks are socially derived views of nature (or humanity, or anything else) the premise held by Deep Ecologists that ontology is somehow outside or independent of human musings is a grand illusion. To put values into ontology, or to construct a metaphysic based on values and then to pull those values out again is to cover up the real source of those values in the first place: namely interpersonal human relations. Thus, the Self-realization of unity and interconnectedness is as anthropogenic as the

value theory undertaken by humans.

We may ask why Deep Ecologists need their metaphysical viewpoint of of unity, wholeness and Gaian stability when all they are espousing are human values of such? They obviously think that extra weight is given to their cause and to their values by making it appear as though they are handed down by the grace of Gaia. It becomes beyond the realms of human argument to the realms of what is 'is' and you had better just accept it. It might be pertinent to also ask of Deep Ecology; why unity, why interconnectedess and functional interdependency? They espouse unity in the belief that such a metaphysic, adopted as a value statement, leads to personal and thence to societal commitment to the environment. But I would claim that they also do so because such a metaphysics leads, through a morass of metatheoretical implications, to a highly conservative justification for the structural functionalist image of society. An image that allows Deep Ecologists to advocate one-dimensional solutions to the worlds multi-dimensional environmental problems. Instead of dealing with poverty Deep Ecology can deal with overpopulation, instead of dealing with social inequality Deep Ecology can deal with anthropocentrism, and instead of dealing with adverse social structures Deep Ecology can deal with adverse personal belief systems. Dealing with poverty, social inequality and social structures leads to Deep Ecologists themselves being identified as social 'baddies', but wallowing in the muds of values and beliefs means that they can advocate changing the environmental destructiveness of humanity without forfeiting their position in the social scheme of things.

Self-realization is an environmental solution that lies in the hearts and mind of human individuals, and it does not require a drastic readjustment in social structure, just personal behaviour. Deep Ecology could have been invented by Benjamin Franklin or JS Mill.

It is easy to see why the Marxist-Ecosocialist 'community' concept and the bourgeois-liberalist Deep Ecological 'unity' concept have differing approaches towards how values and ethical rules are to be constructed. The community concept is hooked up with describing the world as a collection of automonous and independent individuals. Thus any moral rules are decided through social processes involving friction of opposing attitudes. Moral truths are not so much self-evident as socially decided according to the prevailing values, systems of production, power structures and so on. The unity concept, because of its emphasis on things as united, interdependent and intimately connected has little interest in things social. Rather than looking at the differences in the biotic or natural

world, unitarians look at the way things are the same. If every thing is connected to everything else, then no one acts independently. A world at one with itself is an asocial world. The various parts of nature are like organelles in a cell or organs in a human body; they may think of themselves as anatomically independent atomistic individuals but really they are intimately interconnected and interdependent, with carefully prescribed functions. Once they realize their function (and the unity of all the interdependent parts) the organelles or organs will quit raving on about their independence and decide to act a little more kindly to the liver, say.

Even if Deep Ecologists ever get over thinking that their metaphysical/ontological values are not socially constituted, there is still the problem remaining that Deep Ecologists view only value changes as the secrets to the Earth's environmental success. This social shallowness has been indicated to have its roots in Deep Ecology's cultural and intellectual history, its metaphysical standpoint and the self-interests of Deep Ecologists themselves.

Just as Ecosocialism must admit the influence of values on social change programmes, so must Deep Ecology admit the influence of sociality on value formulation. For Deep Ecologists it seems that everything in the universe is intimately interconnected, except psychology to sociology and value changes to social changes.

What are Deep Ecologists afraid of? That human-human concerns will actually sort out environmental problems and in doing so they will topple the class, gender and racial differences that have been so materially beneficial for them? Since Deep Ecologists have sussed out environmental values, why not spend a bit of time on social issues? [54].

If personally-held values are identified as the primary agents of change, that doesn't dismiss the need for social approaches. Peter Reed and David Pepper make the following statements on this issue:

> "Even if (as is doubtfull) people do wrong only because they don't understand nature's values, how is everyone going to be persuaded to understand those values the way environmentalists do?" (Reed, 1989:69).

> "People will not change their values through being 'taught' new ones. What, then, is to be the real way forward, if it is not to be education? It must be through seeking reform at the material base of society, concurrent with educational change." (Pepper, 1984:224).

The fact that there is a debate going on as to whether environmental problems are socio-politically based or are values based is an encouraging sign for environmentalism. Showing that it has matured beyond seeing problems and solutions to environmental issues as lying in the merely technical and scientific sphere.

Ecosocialists will typically be perplexed with Deep Ecology's lack of attack on capitalism as a source of environmental decay, but they have learnt to accept that most greens focus their critique on industrialism rather than the mode of production adhered to in an industrial society. That may be fair enough, but to seek a change to industrialism is to delve deep into social structuralism, something Deep Ecologists have almost universally refused to do. Prompting Pepper (1993:149) to comment "despite its claim to 'deepness' much ecologism is really superficial by comparison with Marxism's structural analysis of our society".

The social shallowness of Deep Ecology transforms into a positively malevolent puddle when the process of Self-realization is investigated, exhibiting as it does metaphysical imperialism. An imperialism that appropriates the 'other' as ones own, and arrogantly reconfigures an 'others' version of reality.

Another weakness of the Self-realization approach is that there is no guarantee that every one will have the same realization (Reed, 1989). Some may come to realize that because they are part of nature they will automatically believe what they do is both natural and also rightly represents nature (Gaianists and Social-Darwinists might have Self-realized in this manner, and Marti Kheel, 1990, examines this perspective in relation to masculinist excuses for hunting based upon the unity of the hunter and the hunted).

In the process of Self-realization you are silencing the voices of the non-human biotic members of the world with your own self writ vainly into the cosmos. Other beings might not want to be included in the Self of a Deep Ecologist, and I believe that Self-realizationists are taking advantage of the silence of the non-human members of Earth's biota as they expand their own consciousness into the realm of others.

Deep Ecologists accuse Ecosocialists, and other socially aware environmentalists, of ignoring the dualistic hubris of anthropocentrism as the prime causative agent of the world's environmental ills. Conversely,

Ecosocialists accuse Deep Ecologists of not acknowledging that social factors, namely capitalism, classism and poverty are the prime causative agents of environmental damage. This is despite the fact that most Ecosocialists would not claim that environmental degradation would end upon the ejection of capitalism, class and poverty. And is despite the fact that some Deep Ecologists claim to acknowledge the importance of social issues.

If Ecosocialists do not insist that an end to capitalism, class and poverty will lead to the cessation of environmental problems, and Deep Ecologists do pledge to give consideration to social factors then the logical conclusion is that both streams of environmentalism admit that there is no single causative agent of Earth's environmental problems (bar the attitudes of those on the extremes of the debate). Thus a theoretical bridge of sorts seems to have been built between Ecosocialism and Deep Ecology.

However, I would argue that the contribution of Self-realization to this bridge, and to promoting environmentally-benign philosophies is only negative. The strength of Deep Ecology's impact on environmentalism is through its promotion and popular dissemination of non-anthropocentrism. The connections between anthropocentrism/non-anthropocentrism and Deep Ecology and Ecosocialism are examined in the next section.

THE ANTHROPOCENTRISM – NONANTHROPOCENTRISM BARRIER

DEEP ECOLOGY AND NON-ANTHROPOCENTRISM

Anthropocentrism is the lable given to the implicit or explicit state of thought that humans have superiority over nonhuman lifeforms. Humans are regarded as ends in themselves, but plants, animals and the rest of the natural environment are mere means to the human end. Anthropocentric thought is characterized by the belief that humans are the originators and measurers of all value (Zimmerman, 1993). The alternative approach may be labled biocentrism or ecocentrism, and it attempts to do justice to the interests of non-human organisms and collections of non-human organisms by promoting biotic egalitarianism.

According to Deep Ecologists, it is the prevalence of anthropocentrism in society that leads to the environmental problems we witness in the world, and so the key to solving such problems is the eviction of anthropocentric thought. The defining feature of radical environmentalism is its non-anthropocentric focus. Any environmental stream advocating anthropocentric or instrumental environmental remedies lies too close to the dominant social paradigm (O'Riordon, 1980; Pepper, 1984) or the human exceptionalist paradigm (Catton and Dunlop, 1978) to be effective in combating all known environmental ills.

Anthropocentrism is a prevalent tradition throughout mainstream environmentalism, and so radical environmentalists not only have to change the minds of non-environmentalists but also those within the environmental movement who espouse anthropocentric arguments (so-called 'shallow' environmentalists). Shallow environmentalists tend to justify action within environmental issues on the grounds of instrumentalism and utilitarianism. The environment, and all things in it, should be preserved because they are useful to humans and instrumental in the welfare of humanity. Deep Ecologists profess that nature should be protected for its own sake, independent of its use or valuation by humans. Nature, according to the deep and radical way of thinking, is intrinsically valuable.

The argument sounds quite good on the surface. Certainly it seems impossible that the whole environment is liable to be subjected to protection policies and every living species preserved if only utilitarian and instrumental values were allowed to operate. Many of the Earth's species can be considered totally valueless from a human instrumental

point of view. Aldo Leopold (1949) recognised this fifty years ago when he commented about the wilderness in his home state of Wisconsin. Of the 22,000 higher plants and animals in that state, only five percent can be considered instrumentally valuable to humans. Leopold goes on to assert the right of the other 95% of Wisconsin species to exist and that an economic or utilitarian view of nature is incapable of eliciting conservation support for them.

To Deep Ecologist David Johns (1990) the very defining feature of non-anthropocentrism in radical environmentalism and Deep Ecology is sometimes the only distinguishing feature between deep environmentalism and the social or human - human approaches of Ecosocialism, Social Ecology and the like. If only the social environmental movement would broaden their notions of justice beynd humans, a hard and fast metatheoretical bridge will be built. While Deep Ecology has promoted and dispersed biocentrism with much verve and a certain degree of success, Deep Ecologists do not delve deeply into the topic of intrinsic value. They espouse the view that all creatures on planet Earth possess intrinsic value but they find theorizing about the locus of intrinsic value and how it should be manifested through axiology and law too much of a 'rationalist' and 'humanist' endeavour. In other words ethics are anthropocentric. Ofcourse, it has been expressed by this author and others (Dobson, 1990; Rolston, 1992) that the metaphysics and psychologism of unity and Self-realization are just as founded in anthropic metatheory as value theory and biotic rights justice issues.

ECOSOCIALISM AND ANTHROPOCENTRISM

While Ecosocialists may be, and generally are, what radical environmentalists call anthropocentric, I believe there is the lurking ability within socialist philosophy to engage in a metaphysically meaningful biocentric ethic. Orthodox Marxian thought does not bode well for this development, by itself, since Marx's approach to nature was decidedly anthropocentric. Marx made the morally fatal distinction between nature and humanity by ascribing the processes of labour and capital to humans only. Marx saw the accumulation of capital as the process whereby humans could escape the bonds of nature. This process not only alienated humans from the products of their labour but also alienated humans from their natural heritage. Whether Marx thought this was a problem or not (i.e. whether he can be considered an

environmentalist or not) is open to debate [53].

When confronted with the challenge of environmental problems socialists have come up with a distinctively social (and therefore anthropocentric) set of solutions. Ecosocialists would argue that although Marx's sentiment might not have been in the right place (and to sentmentalist Deep Ecologists this is often critical) but that his analysis sure was. It is from the poverty, class and social relations of capitalist industrialism that alienation from nature stems and it is at the door of capitalist industrialism (including the statist capitalism of industrialized 'socialist' nations) that the blame for Earth's environmental destruction should be laid.

According to an Ecosocialist analysis it is proper to consider 'anthropocentrism'—a misnomer and a mal-alligned attempt to identify the cause of environmental problems and formulate a solution to them. One that obviously emerges from an idealist perspective (where ideas by themselves are thought capable of instigating change) of bourgeois liberalism and structural functionalism. The materialist perspective of Ecosocialism would identify that there is no such thing as anthropocentrism as a social, political or cultural force. Anthropocentrism is a unifying concept, uniting humanity as a common evil which is homogenously spread through out society [54]. Deep Ecology holds that humans are equal in their deprivation of the environment. But the actioning of environmental malevolent attitudes is not homogenous throughout society. Bourgeois industrialists are more damaging to the environment than the ghetto-dwelling masses. Does this mean that a rich industrialist is more anthropocentric than a poor urbanite gutter-snipe? Does anthropocentrism propel one to actively scar the landscape and despoil the wilderness? Or is it something more? If bourgeois industrialists were destroying the world for anthropocentric reasons, you would think they would do it in a way that would benefit more humans, rather than just themselves. Realistically, anthropocentrism, if it were a social, cultural and political force that any body paid attention to would positively render environmental problems an endangered species, since poverty, class inquality and malevolent social structures would have been overcome by humanistic philanthropy. The problem, as I see it, is not necessarily anthropocentrism (human-centred attitudes and actions) but egocentrism (self-centred actions and thoughts). Humans are not only unwilling to give up their good life for the benefit of tropical rainforests or freshwater lake communities, they are also

unwilling to give up their good life for the benefit of other humans. Realistically, many a person would gladly sacrifice the welfare of another human instead of surrendering a particular favourite animal, plant or environment that gives them much instrumental joy.

If egocentrism is the prime value and practical activity laying in the way to an eco-friendly humanity rather than the philosophical abstraction known as anthropocentrism then we might be able to identify a way to render it benign. Unlike, neo-classical economics and the Gaia theory, however, it must actually work rather than be a cover for individuals to continuously pursue their own self-interest at the expense of others. The Self-realization approach attempts to do this by appealing to the self-interest of human individuals when it suggests that 'self'-interest is dependent upon 'Self'-interest. It warns people to look after the 'Self' in order that the 'self' shall survive. If people just react as they naturally should to the unity metaphysic, all will be well. To act against the unity will invite a spiralling towards 'Self' and 'self' destruction. Apart from all the theoretical quagmires, noted earlier, that this approach exhibits there are two new points I want to make: 1) The 'proof' of unity as presented to someone through Self-realization will only convince those who have taken the ethical step to caring about other humans in the first place. There is no evidence that the unity of Gaia will start inflicting its global repercussions with exacting precision and within the lifetime of any one individual. Deep Ecologists might not admit to this being true, but they would have to admit that most people (and from the Ecosocialist critique, most industrialists) would be convinced of this. They can spew out pollutants and rip up trees to all their hearts content since, although these things might bugger up the environment for others far away or others in the future, they themselves can buy their way out of any local environmental ills produced by their actions. In other words ethical responses to other humans are assumed by the Deep Ecological metaphysic of unity and its epistemology of Self-realization. Ethical responses whose existence in the modern world of capitalism are dubious.
2) The other point is that if Deep Ecology relies on egocentrism to effect a solution to the environmental crises they are advocating a root contributor to eco-disaster as a solution. No change in values is needed, just a metaphysical inspiration towards unity. Thus Deep Ecology is stuck in the hole of individualism. Aspiring to do no more than utilise the selfishness of people to institute environmentally sound public policy.

Rather than attacking environmentally malevolent egocentrism by incorporating it into environmentalism and then widening the scope of what the ego is, as is the case with unitarianism and Self-realizationism, an Ecosocialist attack would be directed at:
1) formulating ethics based on justice and rights for all; and
2) identifying the social structures that allow the egocentrism of some to plough along unhindered. Whether one regards egocentrism as being biologically or socially driven (or a mixture of both) is reletively unimportant compared to its actual anullment. Once the social structures are in place (and here I am talking of an Ecosocialist state) egocentrism will be dealt a lethal blow.

With egocentrism conveniently confined by social constraints (both direct and moral), we may have dealt a blow to classism, racism, patriarchy, poverty etc in one fell swoop. But alas, things are probably not that easy. While patriarchy and racism within an Ecosocialist state are not topics of this thesis, any set of environmentally damaging values within Ecosocialism is.

While egocentrism is a pertinent factor to be studied in relation to environmental destruction, I believe that anthropocentrism, too, is a worthy subject of analysis. I have alluded to anthropocentrism as being no more than a philosophical abstraction of egocentrism, but really anthropocentrism is a sophisticated set of values derived from or driven by egocentrism. Anthropocentrism depends on the existence of cultural, social, moral and economic factors existing above and beyond the starkness of individualistic egocentrism. Egocentrism is niether the basis for all our actions nor the basis for all the worlds environmental ills. The self-interestedness of individuals is often tempered by the realization that co-operation is needed in order to have one's best overall interests served. These co-operations soon become institutionalized as norms and values in societal structure and personal behaviour. Some of these values are so entrenched that they become metaethical norms with metaphysical backup. Anthropocentrism is one such metaethic. The superiority of humanity over the rest of nature's members flows freely within Christian natural philosophy and western humanist principles. It is self-evident that, by devine scripture or by gradually civilizing itself from nature, humanity has a rightful place of dominance on the Earth. Though at each others throats for much of the modern era, both western religion and western humanism must stand up to be counted when blame is apportioned for our negligent attitude to the environment.

If anthropocentrism does manifest itself through value commitments and practical behaviour as deleterious to the non-human members of planet Earth then the Deep Ecological emphasis on attacking it is justified. We have heard much about the processes by which this is undertaken. But is Ecosocialism able to eschew its anthropocentrism and thereby contribute much more to solving the environmental crisis at the level of value change as well as at the level of social change?

ECOSOCIALISM AND NON-ANTHROPOCENTRISM

Deep Ecology's approach to non-anthropocentrism and intrinsic value has been explored throughout this thesis. Now I examine how Ecosocialism might adopt aspects of intrinsic value theory to come up with a comprehensive biocentric outlook.

To begin with a question; what is intrinsic value, and what makes people think that only humans are the possessors of it? Is it because humans are so intelligent, complex, physiologically or socially sophisticated, able to invent tools, control nature, play football, build monuments or create hokey pokey ice cream? In other words, do such characteristics as mentioned provide a reason to regard Homo sapiens as superior to other species? I think Taylor (1981) provides a suitable rejection of such an argument when he points out that other species possess their own specific characteristics that afford them with survival ability and which humans do not possess. Taylor (1981) asks why these non-human characteristics are deemed inferior to that of human characteristics. Whales do not build cities, bats do not play football and Giant sequoia do not make hokey pokey ice cream. But humans cannot dive to depths of 100 metres or use sonar to catch their food. Nor has it been known for a human to be able to extract water from the ground, ply it with photons and a few minerals, to make lunch and then continue to do this for over two thousand years. Evidently any justification for the superiority of human characteristics over the characteristics of other species rests on pretty shoddy ground. Most of the time it is just a cover for anthropocentric deeds which humans are not willing to give up because of the adverse effect it will have on their material interest.

As McClosky (1980) points out environmental ethicists are committed to valuing any species whatever its characteristics.

In establishing that the value of species is indepedent of their characteristics we draw close to a definition of intrinsic value, but I shall not attempt a formal definition as such - just an elaboration of those principles that surround intrinsic value theory.

While some radical ecophilosophers think that intrinsic values are objective, and so can exist without the presence of a valuer, others believe that there must be (human) valuers in existence for intrinsic value to be prescribed. Take J. Baird Callicot for instance who states:

> "It is my view that there can be no value apart from an evaluator, that all value is, as it were, in the eye of the beholder". (Callicot, 1986:191).

Others, such as Rolston (1988) and myself (Marshall, 1993) indicate that while intrinsic values might involve the human recognition of intrinsic value, intrinsic value is not contingent on such recognition. Intrinsic values are biogenically produced, either by individuals or collections of individuals [55].

Some radical environmentalists take an interesting middle stance between classifying intrinsic values as objective (not requiring an evaluator) or subjective (contingent on there being an evaluator). The Routley's [56] take such a position, as Elliot (1980:26) points out; "According to the Routleys a state of affairs has [intrinsic] value if it is such that it would be valued by some sentient individual if such an individual were to exist".

There is, I believe, a way to get through the objective - subjective barrier of intrinsic value theory. There is a case to be made that each individual exhibits an inherent demonstration of its own self-value. Individual animals, plants, microbes and so on undertake a programme of work in order to survive. This survival is so important to individuals that nothing usually stands in the way of their work programme. In order to effect this work and survive, a certain minimum field of interests are defended by the individual. These minimum interest boundaries might manifest themselves in territorial dispute, resource dispute or behavioural activities relating to finding resources. In reality the transgression of the minimum interests of individuals is rampant in nature, as one individual must transgress the minimum interest boundary of another in order to effect survival.

The fact that an organism undertakes labour to survive is evidence

of the value that that organism puts on itself. "The organism has something it is conserving, for which it is standing: its life" (Rolston; 1993:156). Rolston calls such self-value 'autonomous biogenic intrinsic value'. It is this self or autonomous value that I think satisfies the requirements of both objective and subjective intrinsic value theory. For under subjective intrinsic value theory there needs to be a valuer, and in the case of autonomous value theory there is; namely the organism which is valuing itself. Under objective intrinsic value theory, intrinsic value is not contingent on the presence of a human valuer. In the case of non-human autonomous intrinsic value this is also the case. A hammerhead shark does not need humans around for the shark to engage in a work programme aimed at getting itself dinner in order to survive. The shark is confidently zooming around the ocean without needing a human referencing system of values to justify its actions. It goes about eating fish and exploring its environment because it values its life.

In this process the shark, or any other organism, tends to objectify the rest of nature's biotic members that it comes across. A shark regards a roughy as a meal, a means to survival. A remora regards the shark as a food storage depot, it too objectifies the shark. (This is the same process that has led humans towards their destruction of the planet's biotic and physical environment). In seeing nature only as a means to our own personal ends we too objectify nature's members. We also have a strong tendency to objectify each other through the capitalist economic system, through patriarchy and through a host of other oppressive relationships. The subjectification of those human members previously deemed objects has been a long and hard battle in history. Its completion can not be claimed to have come about until the subjectification of all the member's of the biotic community has been achieved. Until we recognize that our own self-valuation is no different to that of other species. They lack the characteristics to express this self-value in human terms. But the difference in characteristics should not halt the recognition of their intrinsic value.

If Ecosocialists can be drawn to realize this they might begin to understand that labour processes are something that we all do (humans and non-humans alike) and that to objectify nature's biotic member's is to appropriate their labours and act as the bourgeois capitalists of the biotic world.

The community concept as a Marxification of Darwinism indicates that Ecosocialism has the theoretical capacity to recognize individuals as loci of autonomous or self-valued intrinsic value. What has Ecosocialism and the community concept to say about communities as loci of value, intrinsic or otherwise? In discussing individuals as possessors of intrinsic value, we must also examine the individual within their respective communities.

The community perspective acknowledges that communities are actually collections of individuals rather than entities in themselves. In the human realm these collections are given entity status to effect politically and economically expedient policies. In the non-human realm seeing collections as entities is akin to seeing chickens in the clouds. The entity exists only in the abstraction of mind and paper.

Acknowledging this, is it wrong to recognize intrinsic value in disparate and diffuse collections of individuals compared to the tightly enveloped intrinsic value of an individual? Some ecophilosophers like Regan (1983) feel that identifying individuals as the loci of intrinsic value is sufficient to enable the protection of collections or communities of individuals. Most Deep Ecologists would not believe so, and would place intrinsic value on ecosystems, forests, Gaia and the like in order that everything that exists under the umbrella of these integrated unities is protected. The community concept would take a slightly different stance from these two approaches. A stance which again parallels Holmes Rolston's environmental ethics.

Rather than unitarianizing social and ecological communities, indeed the whole of the planet, in order to induce environmentalism and biocentrism within the mind of humanity, the community concept would attempt to respect and recognize collections of individuals (be they forest communities, social collectives or the global community of nations) for what they are in themselves; not entities, but dynamic collections that possess inherently contradictory parts. The dynamicism and the contradictions themselves being a part of the complicated social/ecological structure that intimately influences the livelihood, identities, interests and realities of individuals.

Because the community is not an individual self, but a collection of competing, conflicting selves and groups of selves, autonomous self-evaluation is an irrelevancy. There is no ability for eco-community members to engage in communication to even decide what the community selfhood is and even if there was such an ability, member-member conflicts of interest would preclude any statement of one particular selfhood. Just because a community lacks total integration and is internally disorganized to claim self-valuation doesn't necessarily preclude the community from being valuable. Indeed there is a great need for humans to recognize the value of communities and formulate a community ethic since the community is the context in which the individuals must exist. It is also in the interests of the individual organisms to have the community protected for without it they will not survive [5

In order that individuals can exercise their particular labour programmes, in order that they produce food and shelter enough to survive, they need to be in an interactive social-ecological environment. They need to be in their community context. They need a place to live and work. This they can only do with other individuals, and for many species these other individuals have to be of a particular kind and make up a particular ecological structure or set of social relationships. While many organisms might be classed as multi-contextual, able to live in a variety of communities, no organism can survive out of an appropriate context [58]. To destroy a community is destroy the context of the constituent members of that community.

The protection of communities and the development of ethics that affords communities with such protection is thus a very practical way of realizing the intrinsic values of all community members. Just as collectivity is the practical way of manifesting social egalitarianism and respect for the intrinsic right of individual humans, so collectivity is the practical way of manifesting biotic egalitarianism and respect for the intrinsic value of ecological community members.

Rolston (1988) displays a similar line of thought when he speaks of the systemic value of ecological communities. Ecological communities, he asserts, are too diffuse - and their intrinsic value too smeared - to be autonomously valuable. But because the community is vital to the continued existence of individuals there is 'systemic' value in the community collective. In his 1992 publication he goes on to say:

> "The community connections are looser than the organism's internal interconnections - but not less significant. Admiring organic unity in organisms and stumbling over environmental looseness

is like valuing mountains and despising valleys" (Rolston, 1992:143).

While an attempt has been made to identify the ontology and ethical considerability of individuals on the one hand and communities on the other throughout this thesis, I have so far steered clear of the tricky issue regarding the ontology and ethical considerability of species. I shall attempt, now, to rectify this 'species problem'.

Unlike the Australian ecophilosopher Lawrence Johnson, and unlike most Deep Ecologists and many evolutionary biology philosophers, I understand species not to be hard and fast units of evolution or ecology, but as mere classes of community. The sense of class can be best understood using the community concept whereby species are groups of genetically-related but individualistically inclined individuals. Just as geography often defines the relatedness of a nation's individuals, genetic heritage defines the relatedness of species members. But the relatedness or unity is superficial. On few occasions the genetic unity of a species takes precedence over conflicts of interest. But most of the time interspecific conflicts outweigh the common heritage that species members feel for each other. In advocating preservation policies though, the species may be the most appropriate class of community to focus upon, since although species are abstractions of temporally and spatially dispersed genetically-related individuals, they are in some way representative of the individual species members. And, perhaps more importantly, an individual has a direct interest in the well-being of other members in its species since without them both its social/ecological context and its reproductive success are jeopardised.

THE ANTHROPOCENTRISM - NONANTHROPOCENTRISM BARRIER: SUMMARY AND CONCLUSIONS

Generally it is perceived within the circles of radical environmentalism that Deep Ecology is biocentric in its approach to environmental problems and Ecosocialism is anthropocentric. But there is a case to be made that, as Marx identified nature and humanity as being a part of each other, and as Marx stongly held to Darwin's evolutionism that linked humanity to the rest of the animal kingdom, then the labouring processes of both humans and non-humans is a common feature. The labouring process has become 'class' -ified in human society, but ultimately both humans and non-humans must work to survive. This work is not undertaken in order that an individual fulfill its functional role in

an ecosystem, nor is it undertaken to provide humans with food, beauty or inspiration. It is undertaken because the individual values its own life. It sees itself as an end, in the same way as a human individual. Just as socialism attempts to emancipate individuals from the structural functionalism of capitalist society, so Ecosocialism can now seeks to emancipate the individual from the utilitarianism of anthropic behaviour and the functionalism of systems philosophy.

With regard to the ontological commonality that the community concept of Ecosocialism maintains for all living beings (i.e. they all undertake work in order to fulfill there self-valued survival requirements) it might be appropriate to ask if the community metaphysical outlook leads us specifically not to recognize intrinsic value in the non-living or abiotic components of nature. In other words does the biocentric approach lead to one to value the living members of the biotic community but not rocks, oceans, mountains and rivers and atmospheres? Communitarianism does not necessarily imply that there is no intrinsic value in the physical environment, it merely states that there is an ontological difference between living and non-living things [59]. From Ecosocialist biocentricity abiotic objects cannot be considered part of the biotic community not simply because they are not alive, not just because they do not contain DNA, not merely because they do not possess the thermodynamic characteristics of living things but because they do not undertake self-preservational labour. This lack of membership in the biotic community however does not mean either; A) that abiotic objects cannot have subjective intrinsic value bestowed upon them, and B) that biotic community member preservation policies can proceed without recourse to physical environmental factors, since physical components of an environment possess 'systemic value' and compose part of the contextual ecological environment in which living things exist.

As well as recognizing the intrinsic value of individual organisms, Ecosocialist biocentrism calls for the subjective intrinsic valuing of various classes of communities, most notably the species level and the ecological community level of biotic organization.

THESIS SUMMARY AND CONCLUSIONS

Is nature a united whole? Yes, says the unity metaphysic of Deep Ecology. No, says the community concept of Ecosocialism. The aquarian view of Earth's biotic constituents, even the whole planet - the whole universe - in unity emerges from the western middleclass hippy backlash against the conservation issues that emerged in the 1960s. Rather than asking deep and probing questions into why people do not 'get on' with each other, middleclass American environmentalists relied on the metaphysical/spiritual inspirations of the world's oneness to induce people to be receptive to their moral appellations regarding the havoc of conservation problems. The unity metaphysic was supposedly given the stamp of scientific truth through the theorizing of systems ecologists. But these 'ecologists' themselves were operating under the influence of ancient Greek metaphysical assumptions about the ultimate orderliness of nature and under the structuralist functionalism of bourgeois sociology that attempts to functionalize all intrinsically functionless phenomena. Through systems ecology the harmony, cooperation, stability and balance of nature becomes "a mechanistic, souless harmony" (Pepper, 1984:107). This is not to say that Deep Ecology buys into the mechanicism of systems ecology (and I do not want to find Deep Ecology guilty by association with systems ecology), this is just to say that Deep Ecology's unity metaphysic rests on shaky scientific ground and that Deep Ecology is currently sleeping with a bedmate with whom, by their own standards, they have little in common with regards to values.

Ecosocialism, I think, is traditionally Darwinist (though the abhoration of Social Darwinism is rightfully rampant in the minds of Ecosocialists). That is to say that while nature may appear to be a paradise of balance and harmony to individual human observer's, life is actually pretty much a bummer. Every living thing has to compete, struggle and fight to keep on living (although equal and unequal cooperations make this labouring process a little easier and a little more enjoyable). Some socialists, like all Deep Ecologists, see harmony and cooperation in nature beyond all scientific credibility. Deep Ecologists need to do this because they unify nature and humanity, they biologize humanity and essentialize social relationships into ecological (really physical ecological) concepts. Thus they need a model of nature that suits their vision for a model of society. Socialists do not really need such a model because they believe that individual humans working collectively can construct their own models of society without recourse to a particular metaphysical commitment.

The epistemological procedure for gaining awareness of the unity metaphysic is labled 'Self-realization' by Deep Ecologists. While I call Self-realization an epistemology, it is to Deep Ecologists, more than a way of knowing the unity of nature and humanity. It is a process that summarily invokes a psychological response within humans that compels them towards environmental friendliness. The fact that psychological compulsion towards environmental values can be derived from a metaphysic, rather than through social conceptions of inter-organismal justice is no accidental quirk of Deep Ecology. Deep Ecologists are guided by the belief that the development of environmentally sound values and practices cannot possibly rise within the dominant (rationalist) discourse. I have presented a view. that the primacy of metaphysics as the basis of moral actions is something to be troubled about. As Dobson (1990:59) asserts if the "ethics of Deep Ecology issues 'naturally' from an alternative vision of reality" then Deep Ecology suggests that we should be at once in respect of, and at pains to emulate, natural processes. To by-pass ethics with ontological references, however, is to put yourself at the mercy of not just a particular metaphysical point of view, but the social background that has lead to, and guides that particular metaphysical point of view (and also the unintended political implications).

Ecosocialist analysis would suggest that not every one would be equally amenable to the ecological consciousness of unitarian Self-realization and that even if they were a comprehensive change in personal values would not necessarily (or at all) effect environmental friendliness in society. Certain social (human-human) relationships need to be changed before any benevolent environmental values can take effect.

It appears that both Ecosocialism and Deep Ecology have it within their ranks to make meaningful theoretical compromises on these issues. Some Deep Ecologists are already admitting the importance of some social phenomena and some Ecosocialists are recognizing that a change in social structures towards environmentalism is contingent on collective value changes. The need to invoke metaphysical outlooks escapes many a socialist but if post-Marxism is allowed to inform Ecosocialism and post-Modernism is allowed to inform Deep Ecology then Ecosocialism will abandon socio-economics as the basis of all human associated phenomena and Deep Ecology will abandon metaphysics as the normative basis of all our actions. The spirituality of nature experiences may contribute to the collective value changes that are needed to keep alive an environmental movement whose progress is stifled while the materialist analysis is able to identify those structural

barriers that exist on the road to an environmental society.

Having said this though, the brand of spirituality adhered to by Deep Ecologists, that of Gaianism, is of the same totalizing and universalist nature as many other western sacred traditions. Of all the things to regard as their sacred preserve, trust a bunch of western hippies to pick the whole entire Earth, and then claim that they are an integral part of that preserve. If they claim to live a rich life through modest means then it is appropriate for Deep Ecologists to adopt a modest metaphysic.

ACKNOWLEDGEMENTS

Paul Green: for supervision and academic support,
Sarah King: for listening a lot, for moral support and for the occasional argument.

NOTES

[1] To render nature devoid of struggle and competition would be to take away the very identity of many, or all, of nature's biotic members. But, more important than this, I submit that it would be a practical impossibility to institute such a programme in nature due to the inherent conflict between nature's members. A conflict that must be entered into in order to instigate survival.

[2] Frederic E. Clements was an early 20th century plant ecologist who carried out his research on the Nebraskan prairie. His two main legacies are the quadratic sampling technique (Clements, 1905) and the superorganismic concept of ecological communities (Clements, 1916). Henry Gleason was a British contemporary of Clements, who made the most formidable bid to critique the superorganism concept at the time (Gleason, 1926).

[3] Other community characteristics may be represented on such a spectrum, such as stability or degree of internal organization or tightness of relationships between member species. Wiens (1984) says that the varying states of community equilibrium, for instance, can be represented using such a spectrum.

[4] The pet process characterised by a Clementsian attitude to community ecology is 'ecological succession'. Most people with any natural history knowledge will be somewhat familiar with this process; "a progressive series of changes in vegetation or animal life of an area from initial colonization to the final, stabilized stage" (DOB, 1981). Clementsian ecology sympathizers believe that a whole series of interelated events occur deterministically as succession proceeds. For instance; bioproductivity, diversity, community self-regulation, soil complexity and community stability and complexity are supposed to increase during succession. In recent decades empirical evidence has grown to show that such successional changes are rare - and in modern plant ecology the concept of succession lies battered and bruised almost to its death.

[5] Lynn Margulis advocates such a downward expansion when she indicates that cells are symbiotic associations of smaller components and that human beings are appropriately thought of as communities of cells, organs and matter and energy. But she also expands individualism upwards with her support for Gaianism and the inherent unity of planet Earth.

[6] In both nature and society, these mutualisms are liable to break down due to a change in environmental and/or political conditions.

[7] Spiritual, cultural, psychological, social, legal, altruistic and structural factors, for instance, might act in this manner.

[8] This is not to say that work is always a vice, either for humans or non-humans. Work can contribute meaningfully to the lives of people, animals and plants when the products of their work (both tangible and intangible) are not appropriated by others.

[9] However, this does not mean that struggle and work is not interspersed with long and lovingly protected moments of harmonious and mutualistic co-operation. If I continue to espouse the omni-presence of competition, conflict and struggle - I also admit that for most of us, there are large periods of rest, peace and tranquility. The extent of such moments is, though, a reflection of the degree to which one has appropriated the fruits of another's labour.

[10] Darwin, incidentally, declined Marx's offer. Whether or not it was because he wanted to remain apolitical or because he couldn't speak German is debatable.

[11] See Levins and Lewontin (1985).

[12] Post-Marxists, and most Ecosocialists, would not restrict the basis of struggle and competition to class relations. Racial, gender, ethnic, religeous and (to a variable degree) human nature, are all factors worth examining when conflict is analysed in modern societies.

[13] Reductionism in this context being "the approach to scientific questions that holds that all phenomena to be governed by, and expressions of, a small number of very basic (usually physical) laws." (Peters, 1991:118).

[14] Using the lion example again; under physicalist ecology the safari animals are actually united, even symbiotic, because they rely on interchanging their constituent material in order to survive. But a gazelle does not consider itself in a united or symbiotic relationship, that is for sure. It does not walk up to the lion and politely invite a manifest expression of nature's unity by suggesting to the lion that it consume him. On the contrary it runs the other way, in an attempt to defy the lion a chance to physically unify its body with the gazelle.
The lion, too, would not look upon the gazelle as being a partner in symbiosis, mainly because the uncooperative little blighters keep fleeing away. It is the presence of this predatory association that defines the relationship, that defines the lion-gazelle community - not the fact that gazelles are merely the impasive lunch for lions.

[15] More about this in later sections.

[16] About the science and metaphysics of the Gaia theory see Lovelock (1979), Doolittle (1981), Dawkins (1986), Weston (1987), Goldsmith (1988), Schneider and Boston (1991) and Marshall (1994).

[17] The favourite candidate planet for Gaia's progeny is Mars. Allaby (1989) comments that in the 1970s the two Viking Landers confirmed Mars to be lifeless and therefore there can be no objection to human expansion to Mars. The Viking Landers did no such thing. They were just unable to find Earthlike life in the few inches of dust that they tested at the two particular landing sites investigated. As Viking project biochemist, Klaus Biemann (1978) admits; to say there is no life on Mars would not be a scientific conclusion. We may be able to forgive Allaby's assertion since he is a Gaian, and as such finds it impossible to believe that extant life on Mars could exist, since according to the Gaia concept life exists as a planetary-wide phenomenon. If there is life on Mars it must exist, say the Gaians, in an easily detectable and geographically extensive form. Such is obviously not the case on Mars - hence, Mars must be lifeless. It is of little consequence if scientists are willing to risk their professional credibility on the correctness of their theory suggesting life on Mars is

impossible, but it is intolerable arrogance that these scientists risk the extinction of Martian life on the basis of a theory which suggests that expansion to Mars can proceed with impunity. Even in the absence of life the Martian expansion of Gaia must still be subjected to moral scrutiny (see Hargrove, 1986 and Marshall, 1993).

[18] The link between space expansion and Gaianism is developed in Marshall (1994).

[19] The Apollo moon programme was not merely initiated by the collective curiosity and adventurous will of the human race, but due to a number of interacting social and political factors of 1960s America, including:
-the need to kick start the early '60s economy of the USA into a boom.
-the need to develop rocketry suitable for launching ICBMs at the Eastern Bloc,
-the political mileage to be gained by proving the US's technological prowess,
-the desire for Jack Kennedy to resurrect international prestige after the Bay of Pigs affair. All of these factors are produced due to the community nature (i.e. conflicting and competitive international and intranational relations) of humanity's members, rather than stemming from humanity acting as a united force to explore and expand into the cosmos.

[20] As Pepper (1993) notes; Edward Goldsmith systematizes society (and in the process, advocates the Indian caste system of social organization as an ideal model for an environmentally benign society). Economistic extremists (now repugnantly common in the political world) also systematize society by reducing social phenomena into parts of the 'economic system'. Like systems ecology, systems economics invariably lumps some unrelated individuals together, ignores others, and depicts only a few of the relationships that are known to exist in society (adapted from Peters', 1991, statement; see page 12)

[21] Specific examples of community imbalance, at various scales include:

A) outbreaks of herbivory in which defoliation exceeds 100%, such as the catastrophic changes to fields and corals caused by the population outbreaks of the plague caterpillar (Conway, 1976) and the crown of thorns starfish (Cameron and Endean, 1982), respectively;

B) the lack of stability in North American forest communities and landscapes over ecological time (Peterkin and Tubbs, 1965; Botkin and Sobel, 1975), as well as geological time (Davis, 1975);

C) global mass extinctions in the Cambrian, the Ordivician, the Permian, the Cretaceous and throughout the Eocene can be regarded as cases of imbalance of global and evolutionary importance (Donovan, 1988). Generalised treatments (including theory proposals) of community imbalance can be found in Egerton (1973), Connell and Slatyer (1977), White (1979), Connell and Sousa (1983), Wiens (1984), Chesson and Case (1986), May (1986) and Botkin (1990).

[22] Hierarchy theory presents several levels of bio-ecological organization based on the familiar organism - population - community - ecosystem - biome - biosphere hierarchy, and states that the higher the level of bio-ecological organization, the more impact there is on lower levels.

[23] An interesting point to be put forward here is that Warren and Cheney consider themselves post-modernists, yet they continue to espouse a modernist view by indicating that the only thing predisposing observers to see ecological reality in a particular way is space and time-scale. But postmodernist thought, to me, would indicate that every different observer is liable to construct their own version of ecological reality even if the scale of observation is the same for all observers.

[24] Although formalized in a political way by Immanual Wallerstein (1974) the systematization of the world's economy continues by many ideologues, economists, politicians and functionalist social philosophers - so that viewing the world's economies as a system has now become part of the dominant social paradigm.

[25] Some will point out that nature is revolting against human excesses as they cite global warming, ozone depletion and the toxification of the oceans. But I am unable to see how these degradations to the physical structure of the world are signs that the Earth is reacting to rid itself (consciously or not) of the degrader. The human species may die out in the far future as a result of its environmentally damaging activities (or more to the point - the environmentally damaging activities of a minority of humans), but this will occur only after millions of non-damaging species have been exterminated. If the Earth is reacting to get rid of the human

species, it seems not to be working in a very efficient and selective manner reminiscent of a self-adjusting and equilibrial unitary entity.

[26] See Burrows (1990).

[27] Indeed, a collection of individuals holds more value than one individual.

[28] Along with biocentric equality Devall and Sessions cite Self-realization as one of the "two basic norms of Deep Ecology" (Devall and Sessions, 1985:205).

[29] This is the reason that, from now on, I shall refer to Self-realization with a capital 'S'.

[30] Ecosocialists, including Bahro (1982) might counter such a critique by suggesting that the Eastern Bloc countries were never really socialist in the first place. The state taking over the function of the aristocracy or bourgeoisie as owners of capital, land, wealth and political power.

[31] Such as Grundmann (1991).

[32] Including David Johns (1990) and (1992), who has probably made better established inroads towards building bridges between Deep Ecology and Ecosocialism than I attempt in this thesis.

[33] The eight point platform is discussed in Sessions and Devall (1985) and Naess (1988). The section on population reads like this: "The flourishing of human life and cultures is compatible with a substantial decrease of the human population. The flourishing of non-human life requires such a decrease".

[34] See for instance Ehrlich and Holdren (1971) and Commoner et al (1971).

[35] The use of the term 'mainstream environmentalists' has been calculated to give offence to those environmentalists who would rather not be called mainstream yet continue to put inordinate blame for environmental problems on over-population. If there is one project of environmentalism that most easily falls into the dominant social paradigm it is population control.

[36] For example: Mary de La Valette of the Gaia institute who advocates the taxing of Third World families with more than one child (Valette, 1993), Jim Nollman of Interspecies Cmmunication who so confidently speaks of natural processes, such as disease and starvation, as being capable of rendering overpopulation a thing of the past if we just let diseased and starving people be (Nollman, 1992), Virginia Abernathy of the Vanderbilt University School of Medicine who berates the "liberal" immigration policies of the USA as encouraging Third World families to have babies (Abernathy, 1993) and Les U Knigl of the Voluntary Human Extinction Movement who continously sets out to take away the reproductive rights of poor people without offering them an alternative source of income for not having children (see Knight, 1993, and his advertisements in the pages of Wild Earth).

[37] Though Dawkins (1986) has other thoughts about this.

[38] Recall the appeal to Darwinism in the first section.

[39] An intrinsic value theory utilizing Marxism as a base is attempted in section three.

[40] This spiritual component, according to Sessions (1992), is what gives Deep Ecology its deepness.

[41] On this point it must be acknowledged that the degree to which the working class has been 'sucked in' by bourgeois capitalism (and monetarism in the last decade) is different for different nations. In the USA they never stood a chance, in the UK they are long gone, but in New Zealand the working class has just about cottoned on to the tricks of monetarists and free marketeers on both 'sides' of parliament.

[42] See Eckersley (1986), Eckersley (1989), Gorz (1982) and Bruce-Briggs (1979).

[43] It's fine to be non-materialistic if you can afford to pump petrol into your range rover as you descend upon Habitat, Inc., to pick up that table for your new computer.

[44] This is not to say that the benefit classes need to adopt any more values from the new class than wilderness preservationism, however.

[45] It is important to question whether Self-realization is actually an ethic. It is certainly boiling over with socially-derived values but as a code of conduct the process of Self-realization sets limits on behaviour from what nature/ecological reality 'tells' us. Certainly Arne Naess, Warwick Fox and George Sessions would refer to it as an ontological awareness process or a metaphysical actualization rather than an 'ethic'.

[46] See Naess (1989).

[47] Ofcourse, empirical science is not a full-proof way to understanding the interests of particular species either, but it is a marked improvement on intuition and felt emotionalism.

[48] This refers to one of Barry Commoner's principles or laws of nature; 'everything is connected to everything else'. Others of his are; 'nature knows best', 'everything has to go somewhere' and 'there is no such thing as a free lunch'.

[49] This is what Michael Ohrbach has referred to as the 'cuddly quotient' (see Partridge, 1984).

[50] I steel this phrase from Charlie Manson and Clark's (1988) critique of New Age unitarianism.

[51] The point that socialists would make is that the environmental crisis is not a species generated problem created by the whole of humanity acting in anthropocentric unity, but is generated by particular classes, relations and social structures in human societies.

[52] Arne Naess, writing in Wild Earth, has addressed this issue with an argument indicating that "To be joyfully active in the deep ecology movement is a serious affair. It is ethically unobjectionable not to conmbine it with being active in the peace movement and the social justice movement. We respect our partners in the Green movement, but have "more than enough!" to do where we stand." (Naess, 1993:74). I would agree that one cannot attempt to solve all the world's problems, but I reserve the right to find Deep Ecological principles and policies ethically objectionable if they are shown to be deleterious to either the Earth's environment and/or the wellbeing of the human masses, and to this effect, I believe they are.

[53] See the following publications: Eckersley (1992), Bell (1992), Lee (1982), Tolman (1981), Shifferd (1972), Thompson (1983), Routley (1981), Benton (1988), Lappé and Baird (1987), Jung (1983), and Lee (1980).

[54] Rather than viewing anthropocentrism as a universal, uniformly spread and singularly blanketing value that inspires attitudes and behaviour against, or in negligence of, nature's biotic and abiotic components, it is perhaps better presented as a range of value positions which have differential bases and varying degrees of ecological impact. Thus, there are anthropocentrisms rather than one over-arching anthropocentrism. Anthrpocentrism is just a convenient name (or cover!) for, amomgst other things: a) ethnocentrism (other cultures are sacredly bestowed to care for their bit of the environment, and different cultures have less malevolent effects on the environment whether sacredly bestowed or not. Thus it is only western culture that exudes a valueless approach to our various local environments and this ethnocentrism writ large through imperialistic expansion into the rest of the world is the prime instigator of environmental ills).

b) patriarchy (women and the Earth have always been united and caring about each other. Only since the emergence of patriarchy and its amplification via industrialism and capitalism has the uncaring attitude toward nature been prevalent in human societies).

c) egocentrism (its not that we don't value anything but humans, but we don't value anything but ourselves).

d) chronocentrism (humans are trapped in their own particular historical and temporal framework and they can not see the heritage from where they came, nor can they see the future to which they are heading. To most humans, their past environments were much as they are now.

If this is so, then there is reason to believe that the drastic environmental changes that Greenies keep going on about are only mild afflictions, and the future environment wont be any worse than the past environment).

e) humanism (because humans are not metaphysically invoked to please the will of a deity they can rightly act to directly benefit humans as the ultimate ends in life).

f) materialism (because material possessions are the indicative measure of one's interests being happily supplied, anything not contributing to that materialism - i.e. nature's biotic and abiotic components - is valueless).

g) capitalism (alienation from one's own labour, and this applies to both capitalists and labourers, means that one becomes alienated from one's natural heritage, or one's 'inorganic body' in Marxist terms).

[55] Intrinsic value theorists can sometimes be classified as either holist intrinsic valuers or reductionist intrinsic valuers. Deep Ecologists don't generally get into intrinsic value theory but if they did they would probably be classed as holists. An example of a non-Deep Ecological environmentalist who can be decribed as a holist intrinsic value ethicist is J. Baird Callicot who locates the value of wilderness in it's collective communities (forests, ecosystems, species, Gaia etc). An example of a reductionist environmental ethicist is Tom Regen, who can only see intrinsic values in individuals. Regen (1983:363) believes this will provide an adequate ethic for the protection of holist ecological entities: "Were we to show proper respect for the rights of individuals who make up the biotic community, would not the community be served?" A word of warning, the holism vs reductionism intrinsic value debate is independent of the objective vs subjective intrinsic value debate. In other words objective intrinsic value (and likewise subjective intrinsic value) can cut across both reductionist and holist intrinsic value theory.

[56] 'The Routley's' comprise Richard Routley and Val Routley (now Richard Sylvan and Val Plumwood), two Australian environmental philosophers.

[57] Individual organisms might be said to value their community in that their community is valuable to them. But ofcourse if something is valuable to something else, that does not mean that the first something values the second. Although it might be said that the first something would value the second something if it was aware of the value of the second something.

[58] In fact some individuals, by virtue of their social background or genetic heritage, are quite fastidious about the specifics of their environmental or community context.

[59] Abiotic components of the Earth might be said to have intrinsic value (a value beyond their functional or instrumental contributions to human and biotic communities) since they possess many of the qualifying features that lead environmentalists to recognize intrinsic value in the biotic realm. For instance abiotic objects possess an evolutionary history (which on Earth is indissolubly mixed up with the history of life), they possess unique and peculiar characteristics and they are capable of being destroyed. It may also be argued that rocks and mountains and planets are more than shells for the transfer of matter and energy since they are capable of holding on to and storing these things. We may go further and advocate that matter and energy have intrinsic value, but since these things cannot be destroyed, and the uniqueness of one quanta of energy or one particle of matter is suspect, their qualifications for intrinsic value according to most theorists would be distinctly weaker.

BIBLIOGRAPHY

ABERNATHY,V (1993) 'Toward policy that does least harm', Wild Earth Vol 3, No 3, pp80-82.

ALLEN,TFH & TB STARR (1982) Hierarchy: Perspectives For Ecological Complexity, Chic Univ Pr, Chic.

ANDERSON,JF & RM MAY (1979) 'Population biology of infectious diseases: part one', Nature Vol 280, pp361-367.

BAHRO,R (1982) Socialism And Survival, Heretic Bks, Lond.

BELL,S (1992) 'Socialism and ecology: will ever the twain meet?' in P.Hay and R.Eckersley (eds), Ecopolitical Theory: Essays From Australia, pp207-222.

BENTON,T (1988) "Humanism = Speciesism: Marx on humans and animals', Radical Philosophy Autumn, pp4-18.

BENTON,T (1993) Natural Relations: Ecology, Animal Rights And Social Justice.

BERTALANFFY,Lv (1961) Problems Of Life - An Evaluation Of Modern Biological And Scientific Thought, Harper Torchbook, NY.

BIEMANN,K (1978) 'Search for organics', in Viking Mars Expedition - 1976, MMA, PR Dep't, CO.

BOOKCHIN,M (1980) Toward An Ecological Society, Black Rose, Montreal.

BOTKIN,DB (1990) Discordant Harmonies: A New Ecology For The 21st Century, Oxford Univ Pr, Oxford.

BOTKIN,DB & MJ SOBEL (1975) 'Stability in time-varying ecosystems', American Scientist Vol 109, pp625-646.

BOULDING,KE (1956) The Image: Knowledge In Life And Society, Univ Mich Pr, Ann Arbor, Mich.

BRENNAN,A (1988) Thinking About Nature: An Investigation Of Nature, Value And Ecology.

BROWNELL,B (1950) The Human Community: Its Philosophy And Practice For A Time Of Crisis, Harper and Row.

BURROWS,CJ (1990) Processes Of Vegetation Change, Unwin Hyman, Lond.

CALLICOT,J.BAIRD (1985) 'Intrinsic value, quantum theory and environmental ethics', Environmental Ethics Vol 7, pp257-275.

CALLICOT,J.BAIRD (1989) In Defense Of The Land Ethic: Essays In Environmental Philosophy.

CAMERON,AM & R.ENDEAN (1982) 'Renewed population outbreaks of a rare and specialized carnivore (the starfish Acanthaster planci) in a complex high diversity system (the Great Barrier Reef), Proc 4th International Coral Reef Symposium, pp593-596.

CATTON,WR,Jr & RE.DUNLAP (1978) 'Environmental sociology: a new paradigm' The American Sociologist, Vol 13, pp41-49.

CHENEY,J (1991) 'Review of Arne Naess': "Ecology, Community and Lifestyle: Outline of an Ecosophy! Environmental Ethics Vol 13, pp263-273.

CHESSON,PL & TJ.CASE (1986) 'Overview: non-equilibrium community theories: chance, variability, history and co-existence' in J.Diamond & TJ.Case (eds) (1986) Community Ecology, Harper and Row, NY.

CLARK,N (1988) 'The reenchantment of nature? The politics of New Ageism and Deep Ecology', in JE.Dixon et al (eds) Ecopolitics III, pp39-49.

CLEMENTS,FE (1905) Research Methods In Ecology. Repr (1977) Arno Pr.

CLEMENTS,FE (1916) Plant Succession: An Analysis Of The Developmment Of Vegetation, Carnegie Inst of Washington, Washington, DC.

COMMONER,B et al (1971) 'The causes of pollution', Environment, April, 1971.

CONNELL,JH & RO.SLATYER (1977) 'Mechanisms of succession in communities and their role in community stability and organization', American Naturalist Vol 111, pp1119-44.

CONNELL,JH & WP.SOUSA (1983) 'On the evidence needed to judge ecological stability and persistence', American Naturalist Vol 121, pp789-824.

CONWAY,G (1976) 'Man versus pests', in May (ed) Theoretical Ecology: Principles and Applications, Blackwell, Oxford.

CUOMO,CJ (1992) 'Unraveling the problems of Ecofeminism' Environmental Ethics Vol 14, pp351-363.

DAVIS,MB (1981) 'Quaternary history and the stability of forest communities', in DC.West et al (eds) Forest Succession: Concepts and Applications, Springer-Verlag, NY.

DAWKINS,R (1986) The Blind Watchmaker, Longman, UK.

DEVALL,B (1980) 'The Deep Ecology movement', Natural Resources Journal Vol 20, p299.

DEVALL,B & G.SESSIONS (1985) Deep Ecology: Living As If Earth Mattered, Gibbs M Smith, Layton, Utah.

DOB (1981) Dictionary Of Biology, JM McGregor, Sydney.

DOBSON,A (1990) Green Political Thought, Routledge.

DONOVAN,SK (ed) (1989) Mass Extinctions: Processes And Evidence. Belhaven Pr, Lond.

DOOLITTLE,WF (1981) 'Is nature really motherly?' Coevolutionary Quaterly, Vol 29, pp58-63.

DRENGSON,AR (1987) 'A critique of Deep Ecology', Journal Of Applied Philosophy Vol 4, 223-227.

DRURY,WH & IC.NISBET (1973) 'Succession' Journal Of Arnold Arboretum, Vol 54, 331-68.

DRYZEK,JS (1990) 'Green reason: communicative ethics for the biosphere', Environmental Ethics Vol 12, pp195-210.

ECKERSLEY,R (1986) 'The environment movement as middle class elitism: a critical analysis' Regional Journal Of Social Issues Vol 18, pp24-36.

ECKERSLEY,R (1989) 'Green politics and the new class: selfishness or virtue? Political Studies Vol 37, pp205-223.

ECKERSLEY,R (1992) Environmentalism And Political Theory: Toward An Ecocentric Approach, SUNY Pr, NY.

EDSON,M et al (1981) '"Emergent properties" and ecological research', American Naturalist Vol 118, pp593-6.

EGERTON,FN (1973) 'Changing concepts of the balance of nature', Quarterly Review of Biology Vol 48, pp322-50.

EHRLICH,PR & JP.HOLDREN (1971) 'Impact of Population Growth' Science March 26, 1971.

ELLIOT,R (1980) 'Why preserve species?' in D.Mannison et al (eds) Environmental Philosophy, RSSS, ANU monograph ser: No 2, Canberra.

FAEGRI,K & L.van der PIJL (1971) The Principles of Pollination Ecology, Pergamon Pr, Lond.

FERRÉ,F (1989) 'Obstacles on the path to organism ethics: some second thoughts. Environmental Ethics Vol 11, 231-241.

FOX,W (1989) 'The Deep Ecology - Ecofeminism debate and its parallels', Environmental Ethics Vol 11, pp5-26.

FOX,W (1990) Toward A Transpersonal Ecology, Shambhala, Boston.

FRANK,PW (1968) 'Life histories and community stability' Ecology Vol 49, pp355-357.

FRODEMAN,R (1992) 'Radical environmentalism and the political roots of postmodernism: differences that make a difference', Environmental Ethics Vol 14, 307-320.

GLEASON,HA (1926) 'The individualistic concept of plant association', Bulletin of the Torrey Botanical Club Vol 53, pp1-20.

GUHA,R (1989) 'Radical environmentalism and wilderness preservation: a Third World critique', Environmental Ethics Vol 11, No 1.

GOLDSMITH,E (1988) 'Gaia: some implications for theoretical ecology', in P.Bunyard & E.Goldsmith (eds) Gaia: The Thesis, the Mechanisms and the Implications Quintrell and Co, Wadebridge, UK, pp145-201.

GORZ,A (1982) Ecology As Politics, Pluto, Lond,

GOULD,SJ (1990) The Individual In Darwin's World, The 2nd Edinburgh Medal Address, Edinburgh Univ Pr, Edin.

GRUNDMANN,R (1991) Marxism And Ecology, Clarendon, Oxford.

HALLMAN,MO (1991) 'Nietzsch's environmental ethics', Environmental Ethics Vol 13, pp99-125.

HARGROVE,EC (ed) (1986) Beyond Spaceship Earth: Solar System Ethics, Sierra.

HUXLEY,J (1912) The Individual In The Animal Kingdom, Cambridge Univ Pr, Camb.

JOHNS,DM (1990) 'The relevance of Deep Ecology to the Third World: some preliminary comments', Environmental Ethics Vol 12, pp233-251.

JOHNS,DM (1992) 'The practical relevance of Deep Ecology', Wild Earth Vol 2, No 2, pp62-68.

JOHNSON,LE (1990) A Morally Deep World, ANU, Canberra.

JUNG,HY (1983) 'Marxism, ecology and technology', Environmental Ethics Vol 5, pp169-171.

KEFFER,S et al (1991) 'Process philosophy and minimalism: implications for public policy', Environmental Ethics Vol 13, pp23-47.

KHEEL,M (1990) 'Ecofeminism and Deep Ecology: reflections on identity and difference', in I.Diamond & G.Feman Orenstein (eds) Reweaving The World: The Emergence Of Ecofeminism, Sierra, San Fran, pp128-137.

KNIGHT,LU (1993) 'Efficiency of natural law in limiting human population growth', Wild Earth Vol 2, No 4, pp76-77.

LAPPÉ,FM & JB.BAIRD (1987) 'Marx meets Muir: toward a synthesis of the progressive political and ecological visions', Tikkun Vol 2/3, pp16-21.

LEE,DC (1980) 'On the Marxian view of the relationship between man and nature', Environmental Ethics Vol 2, pp3-16.

LEE,DC (1982) 'Towards a Marxian ecological ethic: a response to two critics', Environmental Ethics Vol 4, pp339-343.

LEIGH,E (1971) 'The energy ethic', Science Vol 172, p664.

LEOPOLD,A (1949) A Sand County Almanac, OUP, NY.

LEVINS,R & LEWONTIN (1985) The Dialectical Biologist, Harv Univ Pr, Camb, Mass.

MARSHALL,A (1993) 'Ethics and the extraterrestrial environment', Journal of Applied Philosophy Vol 10, pp227-236.

MARSHALL,A (1994) 'Gaian ecology and environmentalism' Ecopolitics VIII, Proc of the 8th Ecopolitics Conf, Lincoln Univ, Cant, NZ.

MARTIN,JE (1991) 'Order theoretic properties of holistic ethical theories', Environmental Ethics Vol 13, pp215-234.

MAY,R (1986) 'The search for patterns to the balance of nature: advances and retreats', Ecology Vol 67, 1115-26.

MAY,RM & RM.ANDERSON (1979) 'Population biology of infectious diseases: part two', Nature Vol 280, pp455-61.

McCLOSKY (1980) in D.Mannison et al (eds) Environmental Philosophy, RSSS, ANU, Canberra.

MORRISON,K (1994) 'The sacred in cultural visions of the environment: postmodern political activity', Ecopolitics VIII, Proc of the 8th Ecopolitics conf,. Lincoln Univ, Cant, NZ.

NAESS,A (1988) 'Deep Ecology and ultimate premises', The Ecologist Vol 18, 128-31.

NAESS,A (1989) Ecology, community and lifestyle, Camb Univ Pr, Transl and Rev by D.Rothenberg.

NAESS,A (1993) 'The breadth and the limits of the Deep Ecology movement', Wild Earth Vol 3, No 1, pp74-75.

NOLLMAN,J (1992) 'Responses and non-responses to over-population', Wild Earth Vol 2, No 2, pp76-79.

ODUM,EP (1971) Fundamentals Of Ecology, 3rd edn, Saunders, Phil, PA.

O'RIORDAN (1980) Environmentalism, Pion Ltd.

PAINE,RT (1980) 'Food webbs: linkage, interaction, strength and the community infrastructure', Journal of Animal Ecology Vol 49, pp667-685.

PARTRIDGE,E (1984) 'Nature as a moral resource', Environmental Ethics Vol 6, pp101-130.

PATTEN,BC (ed) (1971) Systems Analysis And Simulation In Ecology, Vol 1, Academic Pr, NY.

PEPPER,D (1984) The Roots Of Modern Environmentalism, Croon Helm, Beckenham.

PEPPER,D (1993) Eco-socialism: From Deep Ecology To Social Justice, Routledge.

PETERKIN,GF & CR.TUBBS (1965) 'Woodland regeneration in the New Forest, Hampshire, since 1650', Journal Of Applied Ecology Vol 2, pp159-170.

PETERS,RH (1991) A Critique For Ecology, Camb Univ Pr.

POMEROY,LR et al (1988) 'The ecosystem perspective' in LR.Pomeroy & JJ.Reynolds (eds) Concepts Of Ecosystem Ecology, Springer-Verlag, NY, pp1-18.

PORRITT,J (1984) Seeing Green, Blackwell, Oxford.

REED,P (1989) 'Man apart: an alternative to Self-realization', Environmental Ethics Vol 11, pp53-70.

REGAN,T (1983) The Case For Animal Rights, Univ Calif Pr, Berkeley, CA.

ROLSTON,H,III (1988) Environmental Ethics: Duties To And Values In The Natural World, Temple Univ Pr, PA.

ROLSTON,H,III (1989) 'Review of Andrew Brennan's "Thinking About Nature"' Environmental Ethics Vol 11, pp259-267.

ROLSTON,H,III (1992) 'Challenges in environmental ethics' in DE.Cooper & JA.Palmer (eds) The Environment Question., Routledge.

ROLSTON,H,III (1993) 'Challenges in environmental ethics', in M.Zimmerman et al (eds) Environmental Philosophy: From Animal Rights To Radical Ecology, pp135-157.

ROUTLEY,V (1981) 'On Karl Marx as an environmental hero', Environmental Ethics, Vol 3, pp237-44.

SCHNEIDER,SH & PJ.BOSTON (eds) (1991) Scientists On Gaia, MIT Pr, Camb, Mass.

SESSIONS,G (1992) 'Radical environmentalism in the 90s' Wild Earth Vol 2, No 3, pp64-67.

SHIFFERD,KD (1972) 'Karl Marx and the environment', The Journal of The Environment.

SHUGART,HH & RV.O'NEILL (eds) (1979) Systems Ecology, Dowden Hutchinson and Ross, Stroudsburg, PA.

SIMBERLOFF,D (1980) 'A succession of paradigms in ecology: essentialism to materialism to probabilism', in E.Saarinen (ed) Conceptual Issues in Ecology, Reidel, Dordrecht, pp63-100.

SIMON,TW (1990) 'Varieties of ecological dialectics' Environmental Ethics Vol 12, pp211-231.

SPETNAK,C (1990) The Spiritual Dimensions of Green Politics.

STREETON,H (1976) Capitalism, Socialism and the Environment, Camb Univ Pr, Camb.

TAYLOR,PW (1981) 'The ethics of respect for nature', Environmental Ethics Vol 3, 197-218.

THOMPSON,J (1983) 'The death of a contradiction: Marxism, the environment and social change', Intervention Vol 17, pp7-26.

TOLMAN,C (1981) 'Karl Marx, alienation and the mastery of nature', Environmental Ethics Vol 3, 63-74.

TROJAN,P (1984) Ecosystem Homeostasis, Junk, Warsaw.

VALETTE,M, de La (1993) 'Malthus was right', Wild Earth Vol 3, No 1, pp79-80.

VISVADER,J (1991) 'Gaia and the myths of harmony: an exploration of ethical and practical implications' in SH.Schneider & PJ.Boston (eds) Scientists on Gaia, MIT Pr, Camb, Mass, pp33-37.

WALLERSTEIN,I (1974) The Modern World-System: Capitalist Agriculture and the Origins of the European World Economy in the 16th Century, Academic Pr, Lond.

WARREN,KJ & J.CHENEY (1993) 'Ecosystem ecology and metaphysical ecology: a case study' Environmental Ethics Vol 15, pp99-116.

WESTON,A (1987) 'Forms of Gaian ethics', Environmental Ethics Vol 9, pp217-30.

WESTON,A (1991) 'Comment on Callicot´s case againts pluralism', Environmental Ethics, Vol 13, 3, 283-286.

WHITE,PS (1979) 'Pattern, process and natural disturbance in vegetation,' Botanical Review Vol 45, pp229-299.

WIENS, JA (1984) 'On understanding a non-equilibrium world: myth and reality in community patterns and processes', in DR.Strong et al (eds) Ecological Communities: Conceptual Issues And Evidence, Princeton, NJ.

WIENS,JA & JT.ROTENBERRY (1981) 'Censusing and the evaluation of avian habitat occupancy', Studies in Avian Biology Vol 6, 522-32.

WILLIAMS,GC (1992) 'Gaia, nature worship and biocentric fallacies', Quaterly Review of Biology, Vol 67, No 4, pp479-483.

ZIMMERMAN,M (1993) 'Introduction' in M.Zimmerman et al (eds) Environmental Philosophy: From Animal Rights to Radical Ecology.