THE POLITICAL ECONOMY OF ECOLOGY

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The aim of this article is to demonstrate that the complex web of events and processes embraced by the term 'environment and resources crisis' are a consequence of the nature of prevailing economic, social and political systems and that resolution of the crisis can only be achieved by the institution of a self-managed socialist society.

We will assume that the reader is aware of the basic ways in which the environment and resources crisis is manifest. The most urgent need of the ecology movement at this stage is an overall theoretical framework, within which the facts we already have can be related to strategies for action. The environmental debate is not mainly about the details of pollution measurements, but about people's rights to choose how they want to live; it is not, for example, about how many parts per million of lead in the air of cities is 'safe', but whether we want to continue breathing lead, given that it is known to be a dangerous cumulative poison and that the technical basis for its elimination is immediately available.

On the facts themselves, German writer Hans-Magnus Enzensberger sees the basic components of the 'ecological hypothesis in the following:

1. Industrialisation leads to an uncontrolled growth in world population. Simultaneously material needs increase. Even with great expansion of production the chances of satisfying needs deteriorates per capita.

2. The industrial process so far has been nourished from mainly non-renewable energy sources. Replacement by new sources such as atomic fusion is theoretically conceivable, but not yet practicable.

3. The industrial process is also dependent on mineral raw materials, above all metals, which are not renewable either.

4. Water requirements have reached a point where they can no longer be satisfied by the natural water circulation.

5. Neither the area of land suitable for cultivation nor the yield per acre can be arbitrarily increased.
6. **Pollution - disequilibriums and disfunctions in the metabolism between nature and human society** - increases.

7. “**Psychic pollution**” - exposure to excessive noise and other irritants - also increases.

8. **Thermal pollution** - the waste heat emitted in all conversions of energy - poses a final critical limit on industrial expansion.

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**Structures and Values**

This poses the main features of the environment-resources crisis; we can now turn to the questions of origins, causes and solutions. There is a continuing and intimate interrelationship between social structures and social ideas and values. On the one hand, the social system and its various structures are not metaphysical entities having an existence of their own: they consist of and are propagated by people and their actions - therefore any talk of changing ‘the system’ as an abstract entity without changing people and without the conscious and emotional activity of people is unrealistic. On the other hand it is clear that the ideas, values and behaviour of people are inculcated in, even forced upon them, in many instances, by the social system and the present order of things. This apparently vicious circle can only be broken by determined and creative parallel attacks on existing ideas structures and values and by projection of alternative ideas, structures and values.

We advance this two-sided analysis and strategy against two one-sided views which are prevalent in the radical ecology movement. There are those who see only the system and its structures and do not pay sufficient attention to the role of ideas and values.

We could perhaps sum all this up by saying that society has both a form (structures) and a content (ideas, values and actions) and that radicals need an integrated analysis and a strategy based on that analysis which take account of both form and content and offers alternatives in both cases.

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**Industrial Society**

Historically, the development of capitalism went hand in hand with the rise of science and technology and in particular with their systematic application to production. It also was related to what has been called the ‘Protestant Ethic’ which adopted certain attitudes to work and the accumulation of wealth and capital making it easier for capitalism to take hold. It is difficult and simplistic to isolate out any one factor as the single cause: what we can say is that a whole constellation of factors operated to determine that capitalist society came into being in some countries ahead of others. At an even wider level there is the factor of the Judeo-Christian tradition which was probably a necessary though not sufficient condition for the rise of capitalism and industrial society. This tradition is supposed to have supported the notion that humanity could and should dominate nature, as against other traditions which either saw humanity as at the mercy of nature or in balance with nature. Again, this Judeo-Christian tradition has both positive and negative aspects and the relative importance of these varies with time. The advance of humanity needed a belief system which could break from fear of nature and helplessness before it. Now, however, the growth and development of industrial society has reached a point where a purely exploitative, dominating attitude to nature creates its own problems and science itself, the condition for the liberation of humanity from the unknown forces of nature, needs to broaden its own perspective and become more ‘scientific’ - i.e. become ‘ecological’.

The importance of these points can be seen when we examine the case of non-capitalist industrial societies. The occurrence of pollution and waste of resources in the USSR, not to mention its co-responsibility with Japan for the continuation of the extinction of the whale, shows that the abolition of the capitalist class and of private profit is not sufficient to ensure the disappearance of traditional narrow economic accounting methods nor the development of environmental awareness. The attitude to nature and to the feasibility and desirability of unlimited growth of material production is often similar in Eastern Europe to attitudes in advanced capitalist societies. This stems partly from similar cultural traditions and partly from a narrow interpretation of marxism itself. While so different in many respects, marxism does share with some other nineteenth century philosophies a superoptimistic view about the possibilities of unlimited material production and the domination of nature. While
recognising the problems of capitalism's totally exploitative attitude to nature, Marx was not, and could not have been, aware of the precise forms of crisis to which this attitude would lead, nor of the particular natural limitations which the process of growth would run up against. Thus Marx cannot supply detailed answers to today's ecological problems and dogmatic reference to and narrow interpretations of his work will lead only to the sort of mistakes to be seen in the USSR.

All that said, it must be added that with all the above problems and the existence of bureaucratic structures and interests, there are still not the entrenched interests of private profit and the organisation of society around private profit. Therefore it is possible that change in the direction of recognising ecological realities will not meet the same degree of resistance. On the other hand, bureaucracies and their self-interests can certainly prevent recognition of problems and slow down action to solve them.

The Political Economy of Ecology

What characterises capitalism, and distinguishes it from the above societies is its organisation around private profit. The fundamental problem of capitalism, in the environmental sphere as in many others, is that social effort is organised around the central principle and criterion of profit rather than around the satisfaction of real human needs. Precisely because it is primarily 'organised' for the one and not the other (of course the making of profit sometimes necessitates satisfying needs) capitalism has always been subject to irrationalities and to regular crises. The ecological crisis is but the latest of these.

Earlier periods of capitalist development saw the gradual transition from laissez-faire to monopoly capitalism. Simultaneously the spread of imperialism helped to produce and certainly to maintain the underdevelopment of the colonial countries, now called the Third World; the continuous existence today of underdevelopment is a large factor in the problems of resources. The period since 1945 has seen the emergence of what has variously been called neo- or late capitalism and has been marked by the long boom which may now be ending. It has also been characterised by the emergence of a large group of non-capitalist countries and by the anti-colonial revolutions, which taken together have meant a shrinking of capitalist spheres of influence and world markets. This has placed certain constraints on capitalist expansion, though many new policies of trade and economics have been developed to surmount the constraints.

However, the key new factor, which provided the necessary conditions for a renewed expansion of capitalism, was neo-capitalism in the metropolitan countries, marked by the general recognition of the necessity for Keynesian methods of management of aggregate demands and consequent extension of economic planning and state intervention into many areas of economic and social activity which had previously been left to the operation of 'market forces'. Alongside this has been a further consolidation of monopoly power in the hands of a small number of large companies, the emergence of multi-national companies and two further factors which particularly concern us here.

Firstly, there has been an unprecedented upsurge into technical development, of such a magnitude that we can properly speak of a scientific and technological revolution or a second or third industrial revolution. Such technical upsurges are common to all periods of economic expansion. What makes the present one different is that it has been brought about by the institutional integration of scientific and technical endeavour with the capitalist state and individual companies, so that the revolution is virtually a permanent one, bringing an almost uninterrupted transformation of the techniques of production. For the first time it has allowed the scale of production and other social activities to come up against some natural limits to expansion; the fact that similar limits are being encountered in the Soviet Union shows that this type of rapid technical expansion is not a characteristic of capitalism alone. Further, under the impetus of this upsurge, our productive and other activities have reached a level where they can significantly affect the environment; the most startling demonstration of this is perhaps the possibility of man-made alteration to climate. The continuous nature of technical transformation means that unless
the direction of technical advance is changed and planned, the environmental effects will rapidly grow in importance, threatening certainly the quality and nature of social life, and perhaps even the biological existence of the human species, or at least a large proportion of it.

Secondly, there has been the creation of new domestic markets by means of a phenomenon which has been called consumerism. This involves conspicuous waste, e.g. in packaging, planned obsolescence, and use of sophisticated advertising techniques to create false needs, and the systematic substitution of individual for collective solutions to real needs. Consumerism appeared in the early post-war years when several capitalist countries achieved a production level capable of satisfying the basic material needs of all people. (That this capability was not translated into reality for many shows that capitalism cannot even achieve redistribution of wealth even to the minor degree needed to ensure adequate food, shelter and clothing for everyone.) Consumerism provided a means of ensuring continuously expanding markets within the domestic economies of the main capitalist countries.

A number of liberal economists, concerned about the disastrous environmental consequences of unbridled capitalism, have identified economic growth as the major cause (e.g. Boulding, Daly, Mishan). This is true as far as it goes, but the key point is that the type of growth, not growth itself, is the cause. Economic growth occurs in ways that are determined by and reflect the existing structures and values of society. In a capitalist society where profitability is the major criterion for deciding in what activities to make new investment (and hence ensure future growth), economic growth very often occurs in ways that are directly damaging to the environment. Barry Commoner has demonstrated that the continuous technical transformation, which is one of the characteristics of neo-capitalist society, has in many cases resulted in the replacement of older materials and technologies by new ones that are more profitable, but also more environmentally disruptive, e.g. the substitution of synthetic detergents for soap, concrete for bricks, aluminium for steel, non-return bottles and cans for returnable ones. Thus pollution and resource depletion have grown even faster than the economy as a whole, and much faster than population.

It is an empirical fact, almost universally acknowledged by bourgeois economists, that growth is essential for the maintenance of full (or nearly full) employment and the avoidance of economic recession; in other words, it is essential for the maintenance of neo-capitalist society. The institutionalisation of government control of the level of aggregate demand has meant that governments always see economic growth per se as a primary, short term policy objective. Growth is obtained by stimulating (or maintaining, as the case may be) ‘business confidence’, in other words by encouraging already existing capitalist economic activities, which are responsible for the environmental problems. For example, one of the methods most frequently used to increase demand and stimulate growth is a reduction in the sales tax on motor vehicles; the theoretically equally valid alternative of stimulating the production of railway rolling stock is never used. The former policy is of course directly damaging to the environment, while the latter would in general improve it. Thus governments and capitalist industry collaborate to produce environmentally destructive forms of economic growth.

At this point it is worth looking a little deeper to see why growth is essential for the maintenance of neo-capitalism. For the system as a whole it has enabled latent class conflict to be bought off by the experience of steadily rising absolute material standards for the majority of workers. This has diverted attention from discrepancies in relative standards, which have remained more or less constant for the last 30 years, and from other undesirable features of capitalism, for example its inability to supply even the basic necessities for the poverty stricken minority, alienation and environmental destruction. Rising material standards are also a crucial component of the process of persuading workers to adopt bourgeois cultural and political values.

Growth is just as important for the health of individual capitalist enterprises as for the capitalist system as a whole. They either grow or they go to the wall. Shareholders in a growing company receive not only large dividends but more importantly they achieve capital gains with bonus issues and a rising share price. If they do not get this, they quickly become dissatisfied and take their money elsewhere; the share price falls and the company becomes vulnerable to a takeover...
bid. Furthermore, the market for a great many products is characterised by oligopolistic competition under which condition it is usually much easier for a single company to increase its market share by expanding the market as a whole than by taking over another company’s share (the relationship of this phenomenon to consumerism is obvious). The result is that the economy as a whole grows.

There is another reason for the drive to grow within organisations in capitalist society and this relates to the individual motivations of managers within the hierarchical structure of a company and the corporate ethos to which it gives rise. This motivation is only distantly related to the need for growth to maintain the position of the company in purely financial terms, as described above; publicly owned authorities like the Electricity and Forestry Commissions are no less committed to growth than a capitalist company. The motivations of individual managers stem partly from their thorough acceptance of the ethos of individual competitiveness that is one of the cornerstones of capitalist ideology. They arise also from a joint commitment, with managers in private industry, to the growth and profitability of their part of the neo-capitalist state-industrial system. For example, the views and motivations of Forestry Commission officers are usually in complete harmony with, indeed indistinguishable from, those of managers in paper, sawmill and woodchip export companies.

Since one of the manifestations of the current economic crisis is a reduction in the rate of growth in Australia and throughout the capitalist system one might suppose that the rate of onset of environmental crisis has slackened. This is not so, for any reduction in the level or environmental impact as a result of lower levels of current economic activity is outweighed by the sacrifice of environmental standards in the effort to boost economic growth by stimulating (environmentally destructive) economic activity. In a time of high unemployment, which is associated with a low rate of economic growth in our present society, companies use the prospect of jobs in a blatant attempt to bribe workers and split the ecology movement, as the Sydney green bans, the Frazer Island dispute and many other examples demonstrate. Perhaps even more insidious are the environmental consequences of policies to mitigate the ‘energy crisis’. Fortunately, this has not yet struck Australia, but examples abound from overseas: Alaska oil pipeline (USA), relaxation of atmospheric sulphur dioxide standards (USA), postponement of a program to eliminate leaded petrol (UK).

We now turn to a more detailed examination of the operation of a profit maximising, competitive economic system, and consider in particular four major aspects which lead to wasteful use of resources and ecological degradation.

The first aspect relates to the time horizons used in decision making. Capitalist investment decisions are made on the basis of achieving a maximum rate of return on the capital invested. The investment of capital in a project brings with it a commitment to meeting the operating costs of the project as they arise, year by year, so a way has to be found of weighing up present investment costs against future operating costs and revenues. This is done by discounting future costs at an annual rate determined by the interest rate and by an additional factor to allow for uncertainty about the future. The effect of this procedure is to make costs and revenues in the present and the immediate future far more important than longer term costs.

The environmental consequences of this can be seen by considering some examples. A company investing in large scale agriculture may well be able to achieve a return that allows it to recover all its investment plus a good profit in less than 20 years. It is then able to invest its money in another activity which could be quite unrelated to agriculture. It need not be concerned if, at the end of the twenty years, the fertility of the soil is totally destroyed. This sort of exploitation seems to be occurring in the cotton growing areas of the Namoi Valley in northern NSW. Similarly companies operating oil wells have an interest in extracting oil as quickly as possible; this will in all probability not be in the interests of the nations whose oil it is. The OPEC countries recognised this truth a few years ago, but the Australian Government does not seem to have done so with respect to Bass Strait oil.

Because the uncertainty about the future is the main factor that influences capitalists in deciding at what rate to discount future costs, there is a positive feedback element in the system. Many individual decisions to use a higher discount rate will collectively cause an increase in uncertainty about what the general
industrial and economic situation will be towards the end of the life of the projects, which in turn will increase the uncertainty for other investors, and so on. Capitalism is destroying itself by this means, as well as destroying the environment. The current economic crisis is having an important effect here, because high rates of inflation mean high interest rates and greater uncertainty about the future and the consequent preference of investors for quick profits regardless of the longer term consequences.

The second aspect is the existence of a multiplicity of decision centres. This aspect has become familiar in the environmental literature as "the tragedy of the commons". This was the phrase used by Garret Hardin to describe the conflict between the interests of every individual profit maximiser exploiting a free, common resource, e.g. clean air, fish in the sea, and the interest of the community of such individuals. Even if the community is unanimously agreed on the need to preserve the resource and does not wish to find alternative outlets for its capital (as described above), each individual will further his own interests by increasing his level of exploitation. The sum of all such individual decisions will result in accelerated destruction of the resource, to the collective detriment of all. The destruction of the North Sea herring fishery by British fishermen is (or was) an example of this process in action. On an international level the whaling industry is somewhat similar, though here the decision makers are large capitalist (or bureaucratic) enterprises which do have opportunities for alternative investment and need have little concern for the preservation of the whale fishery beyond the life of their current fleet of ships.

The third way in which a profit based system brings on environmental crisis is by the neglect of external costs, that is those costs which do not appear on the financial balance sheet. External costs include most impacts on the environment - noise, air pollution, loss of amenity and so on. Capitalist decision making is concerned only with internal costs and, by choosing new production technologies which minimise the internal costs, it has simultaneously brought on a rapid increase in the external costs of environmental disruption. The external cost aspect of the environmental problems brought on by capitalism is the one on which apologists for the system have concentrated in their efforts to reconcile the needs of capitalism with those of the environment. Much ink has been spilt (and paper wasted) in academic arguments about the relative merits of pollution taxes, statutory limits, government subsidies or various intricate combinations of these in persuading capitalists to internalise the externalities and hence protect the environment.

Legislative or regulatory action to implement such procedures is inevitably piecemeal and retrospective; so long as the technical innovation characteristic of neocapitalism continues new products and new processes outside the scope of existing regulations will appear. A good example is provided by the case of non-return bottles. These were introduced following technical developments in the glass industry which allowed bottles to be made with less glass. It then became profitable for soft drink companies to externalise and transform the cost of collecting and washing bottles to the costs of disposing of used bottles. Since this was now an external cost it had to be met by the community as a whole rather than the drink companies, whose profits increased accordingly.

After a few years and much lobbying some governments got round to legislating against non-return bottles (not in Australia, though), but by the time legislation was passed the companies had reaped their profits and the bottles were a permanent addition to the list of pollutants. The point is that criteria for deciding about new products and processes must systematically and fundamentally take account of all the social costs contingent on a given decision, and that until this occurs environmental disruption will be inevitable.

The only solution is to take land and the instruments of production into social ownership and replace capitalist decision making with a self-managed democracy that allows the community to decide about the whole context of its life and work.

Finally, a brief mention should be made of what Joan Robinson has called "the fundamental bias in our economy in favour of products and services for which it is easy to collect payment". This bias can be thought of as the mirror image of the bias towards ignoring external costs. It is a major component of consumerism, to which we have already referred, and finds characteristic expression in the consumerist promotion of
individual consumption of material goods to satisfy needs that could be better met communally. The most striking example is, of course, the spread of the private car and the accompanying decline in public transport services. But the effect is also seen in the preference of developers for office blocks and luxury housing rather than hospitals, schools and community housing, or in the fact that commercial subdividers give scant attention to careful planning with the needs of residents in mind - capitalism seldom includes a market for quality planning of urban estates.

**Alternatives for Australia**

We must first dispose of the widespread belief that the environment movement is inherently middle class and can serve only middle class interests. Of course it is true that up to now the majority of environmental activists have had middle class backgrounds. But the fact is that workers and low income earners have in the past experienced the most severe effects of pollution and environmental degradation and it is likely that their position will further deteriorate. The effects of industrial pollution are at their most severe inside the factories producing the pollutants; the most intense pollution associated with energy production and use is the silicosis and pneumoconiosis to which underground coal miners so often fall victims. The effect extends outside the workplace to the most polluted areas round the factories; because air pollution and noise are most severe in these areas, land and house prices are lowest and it is here that the poorest members of society are forced by their economic circumstances to live.

Immediate measures to reduce pollution will (and must) involve the expenditure of funds by companies which will be passed on in the form of price rises. Similarly, realistic energy and resources policies must involve price rises to levels which reflect the true long term value of the resources. Since these price rises will fall with equal if not greater weight on basic necessities than on luxury goods, they will bring severe hardship to the poorer members of society. It is essential, therefore, that the ecology movement integrate its demands for sound environmental policies with the wider demands of the whole workers movement for a radical redistribution of income and wealth within society.

If this connection is not made, we can look forward to one of two equally undesirable alternatives. One is the relegation of the environment movement to an ineffectual fringe, haggling over the minutiae of pollution levels while present patterns of industrial activity continue and expand in an essentially unaltered way, promoted by the active collaboration of right wing trade union bureaucrats with the employers. The actions of the Reece ALP Government in Tasmania exemplify it completely, for example, as does the stand of the leadership of the Vehicle Builders' Union on changes to the car industry.

The second alternative we must avoid is less imminent, but potentially a far greater danger. It consists of the development of an authoritarian government introducing increasingly repressive controls on the pretext of saving the environment. We can be sure that in such a society, while certain immediate threats to the environment might be alleviated, all the decisions will be taken in the interests of a small ruling elite and that the resolution of any of the other problems to which we referred at the beginning of this article, if it occurred at all, would be entirely incidental. This sort of society may seem extremely remote to people in Australia. Yet in the U.K. during the miners' strike of 1973-74 (which led to the downfall of the Heath Government), regulations were made by that Government restricting the number of lights that could be on in a house at one time, and the idea of using "energy police" to enforce this was canvassed in a semi-official way. Of course this event was a response to a political crisis, not an ecological one, but the circumstances (shortage of energy) are similar so the response could be also.

In Australia, one of the best known advocates of solar energy has asserted in an unpublished memorandum that the sort of crash research and development programme he advocates could not take place within our present legal and democratic framework and that society should be placed on a war time basis. Despite our conviction that capitalist society can never solve the environment crisis, in the long term, we cannot be certain this sort of ecological fascism might not produce a form of quasi-stability that would enable the problems to be held at bay, for some time. In terms of strategy, it is crucial that this danger be recognised, which makes it essential to analyse the political implications of policies
advocated by spokesmen such as Ehrlich: a correct analysis of the facts of the environmental destruction is not enough, although it is an essential preliminary.

This authoritarian or even fascist solution is also a distinct possibility on a global scale, with the imperialist countries enforcing even more harshly the inequalities between rich and poor nations. This could lead to forced continuation of under-development, to keep resource prices low and even to export of polluting industries and waste products. It could also lead to the use of military force to secure vital raw material sources; such action by the USA against the OPEC countries in the Persian Gulf area has already been widely advocated within the USA.

It is important for radicals to realise that such a solution could well be 'sold' to the people of the rich countries, or even actively supported by sections of them, in the absence of an attractive radical alternative.

The Radical Alternative

The radical alternative is marked above all by its **totality** in that it sees the need for substantial changes in both the structures and values of society, and moreover in the need for these to change together and in a related way. This perspective certainly does not mean that radicals should withdraw from ongoing campaigns and efforts to change ideas and values and even some structures within the system - and this may include changing the values and behaviour of people within the movement as well as experimenting with social and technological alternatives. But it does mean that we proceed from the view that the causes of the crisis are not mere surface phenomena that can be 'fixed' by technological adjustments of a minor kind or by 'patching up' the social system. That said, it is still essential that we have detailed alternatives in all the various areas of environmental concern.

The first requirement for an adequate strategy is a fairly clear idea of our alternative social and technological model. We cannot in any way predict the details of how an ecologically sound society would organise itself or what technologies it would or wouldn't use. But we can start to sketch some of the essential outlines of what is needed and some ideas for appropriate technologies.

At the most general level we need to project a model of an alternative society in all its aspects: structures, dynamics, values, ideas. This model should be seen to be both desirable and ecologically necessary, and should link up with the concerns of people in other areas of social and personal life. And precisely because an ecologically sound society requires a change in the basic dynamic of society - from organisation around profit to organisation around the satisfaction of democratically determined social and human needs - it also fits in with the demands of people and the needs of society in such other areas as relations between the sexes (women's liberation), control on the job (workers' control) and in the locality (self-management of the local area by its residents).

With the change in the basic organising principle of society also must go a change in the various power and institutional structures of society, from the smallest unit of social life, the family, through the various hierarchical structures of power in workplaces, schools and other institutions, right up to the level of national government and decision making. All this is best summed up in the concept of a self-managed socialist society.

Such a society can overcome the conflict between individual and collective needs by replacing the competitive and individualistic nature of present social relations, which stems from cut-throat competition in the marketplace of the economy, with cooperative attitudes which in no way need conflict with individual self-development and freedom.

All this would not of itself lead to an ecologically sound society, although it is the essential prerequisite of one. Self-managed socialism operating in the above ways would allow the rational use of resources to provide adequate living standards through collective ownership, control (decentralised as far as possible in each case) and use of goods, services, labour saving devices and technology. Freedom of information and a social effort to find the information and develop the tools essential to restoring the appropriate balance of humanity and nature is essential and also requires the removal of vested interests who at present make information hard to obtain and harder to disseminate. Only with this freeing and dissemination of knowledge will people be in a
position to make ecologically sound decisions.

In these ways, the ecological, social and spiritual desolations of modern capitalism, particularly the excesses of consumerism, can be overcome, not by a return to primitive pre-industrial life styles, but by the rational use, control and development of all appropriate elements of modern science and technology.

Things which then become possible include organisation of people in local 'communes' of varying sizes (eg. around the suburban block in cities), with each commune collectively owning the various tools and labour-saving devices which are needed in the numbers which are needed, so that people have access when they need it. If the numbers of cars parked along suburban streets at any one time (save peak hours) is any guide, we need only about 10% of the cars which at present exist, leaving aside any improvement in public and person-powered transport. A similar figure probably applies to such things as washing-machines, lawn-mowers etc.

Similarly there is the possibility of a rational, integrated transport system based on appropriate use of mass transport, cars, bicycles, walking etc.

To satisfy environmental and resource considerations, society will have to institute a social audit which takes account of all costs and benefits, not just the traditional economic ones. This is probably best achieved through widespread economic democracy which includes that in the workplace but also consultation of the public from the conception and genesis of a product, through production, distribution and exchange.

Further, self-managed socialism would make possible a vast reduction in work hours, both through improved efficiency because the talents and capacities of all would be tapped, and through abolition of consumerism and unnecessary production.

So the radical ecology movement should not project a society of want and scarcity, but of rational satisfaction of needs and liberation from unnecessary work, together with selected growth in new directions and in new areas not considered legitimate for 'growth' by traditional criteria - eg. growth of the human personality and increased richness of all dimensions of social life.

The above alternative model for how things could be done is important in breaking the ideological hold of the system over people. This hold expressed itself in people's belief that the present order is the best or the only one possible, and in concealing from them information about what is happening and about what is possible.

However, projection of this model on its own is not enough, since people do not learn simply by having the 'truth' preached at them, but in large measure have to learn through their own experiences. Therefore a radical strategy requires two other components: a 'transitional program' and a program of immediate demands based on people's immediate needs and on the struggles which are thrown up everyday by the people themselves.

The basic idea of a transitional program is to project demands and initiate struggles which people see as reasonable yet which the system finds it very hard to contain. An example is the car industry versus an integrated, publicly owned and used transport system. The building and running of such a system would provide jobs for the workers in the car industry and existing transport facilities, especially if we take account of the possible lowering of work hours.

There remains the problem of immediate demands and struggles. Clearly the existing problems and struggles of people around environmental issues should be of concern to radicals. The current economic crisis which is likely to continue and grow, makes it imperative that much creative thought be given to this question. We point to two possibilities based on recent events:

a) The collapse of Leylands motor factory in Sydney. If at the time that car workers were losing their jobs and the factory was closing down, the environment movement had tried to link up with the workers and suggest that they demand the Federal government nationalise the company and turn its productive facilities to the making of public transport vehicles with the factory under the democratic control of the workers, the workers may or may not have responded. But it is clear that this demand would go some way to satisfying both the immediate economic needs of the workers as well as ecological needs.

b) Considering the present levels of unemployment, the ecology movement could link up with the unions and the unemployed to demand that the government set up environmentally sound industries. One example of this would be a waste paper recycling industry.