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comments, not quotes

PERSPECTIVES ON ENVIRONMENTAL POLITICS IN  
OVERDEVELOPED AND UNDERDEVELOPED COUNTRIES \*

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## I. INTRODUCTION

I am writing these lines overlooking a landscape familiar to some four million of the 37 million predicted to visit Spain in 1978: the Mediterranean with Benidorm to the south and Altea to the north - and to the west the slopes, gently climbing, culminating in beautiful mountain peaks. This was orange and almond and olive country, and still is to some extent although much is sold out to villas and bungalows. Down on the flat lands the soil is good and the water sufficient, higher up at least sufficient to sustain the ubiquitous olive trees, the symbol of the Mediterranean region. There is sunshine 300 days a year; there are vistas of incredible beauty, and people are beautiful: masters of living, sweet and gently like the slopes, courteous, hard working, always wanting to please. And so easily misunderstood by foreigners who think "mañana" is an ever receding point in time and not a promise to do one's best, as quickly as possible, "and please come by and have a chat and see how the work progresses, but do not try to pin me down too precisely in time."

The other side of the story is also well known: a fishing village of some 5,000 inhabitants that twenty years later receives millions of tourists, depleting the water to the point that it has to be turned off many and painful hours every day; polluting everywhere, sending tons and tons of waste and garbage of all kinds through a sewage tunnel out into the Mediterranean creating acres and acres of pollution at the sea level, in the sea, on the ocean floor; the Benidorm-Altea road which must be one of Europe's big killers, and so on. For the Northern European it is somehow strange to see that Latin tourists not only accept this but even seem to enjoy it - or at least to feel that a vacation is like that, a general pollution of cars, people, garbage, overtaxing nature, depleting water, polluting the sea - that this is holiday.

And yet, or still, there is no doubt that the good more than outweighs the bad, at least for the time being, and for most people, foreigners and locals. But the question that is put all the time is the following: could one not have foreseen this, could one not have done some planning for a real sewage system, started digging new wells before the drought strikes, improved the garbage collection and processing before it piles up, done something about the road before the tragedies accumulate? In short, why was there no environmental politics, leaving alone environmental management? One answer to this, of course, is that necessity is the best master - it mobilizes energies and scarce resources, particularly when it also hits those most responsible for the decisions. In other words, when a municipality as a totality is hit, not only the poorest sections, some of the same mechanisms that kept farmland fertile for centuries, millennia in this region come into action: the need for measures of self-preservation, not to preserve some abstract future generation, but to preserve oneself. It might be interesting to know how many households without water would be the political equivalent of a dry kitchen tap in the house of the city councillor ---

The most interesting aspect, however, is that the most developed in the sense of urbanized sector of this eco-system is worst hit; and the poor farms and villages in the hinterland by and large emerge unscathed, except when nature is particularly hostile or water is siphoned off by big landlords for their purposes. The overdeveloped segments are victims of their own over-consumptive style, taxing nature out of any proportion; the under-developed segments may be victims of nature or social exploitation; in the worst cases of both as water is tapped out of the hinterland and ends up in the bellies of the foreigners in the inflated cities.

As it is stated in an UNCTAD report:<sup>(1)</sup>

"-/ in a developed country environmental/difficulties in development and production can be relatively easily compensated by imports of food and other necessities from surrounding regions or even from other countries, in developing countries such possibilities are much

more limited. Hence a smaller amount or degree of pollution or degradation of the environment can have tangibly greater development and economic consequences. In developing countries the pollution of a river and the killing of its fish may often lead to famine of coastal tribes whereas the extreme pollution of the Rhine or the Great Lakes would not have a similar consequence for the neighboring population".

Thus, not only the tourists but sometimes also others in rich countries are sufficiently rich simply to move away, an option often denied people in poor countries even though much of the migration in those countries has environmental causes - and consequences.

So, what should one have done in a region like this one, mentioned as an example, where the over- and underdeveloped are very, very close to each other, the former preying on the latter in very many ways, but the resources flowing into the region being so plentiful that the latter also experience an uplift in their material standard of living? It is not necessary to draw on this particular illustration for any details, however, for the general problem is relatively clear: how will environmental politics and management as these are evolving today, affect the problems they are supposed to solve, the problems of the environment in a broad sense?

#### Two levels of problems, two styles of approach.

One way, now, of trying to dig into this problematique is by means of two simple dichotomies, one making a distinction between shallow and deep (understanding of) environmental problems; the other making a distinction between two very different approaches to environmental problems, here termed the alpha and beta approaches.

As to the shallow/deep distinction: there is a surface and a core to the eco-systems. The surface is visible although it may be difficult to analyse and measure adequately, and is conceived of in terms of what might be called the book-keeping or accounting approach to nature. Resources are divided into renewable and non-renewable and

the depletion of the latter, and of the former beyond the capacity of replenishment through natural processes, are signs that the system is "in the red". Fundamental here is the concept of a "resource": that which enters into an economic cycle, ie. man-made modifications of the ecological cycles provided by nature herself. The concept is anthropocentric, and plays up to the interests of homo oeconomicus, particularly, and to homo faber; only in the second run to homo ludens and homo videns, human beings who play with nature, or who have an aesthetic appreciation of it. Obviously, a system "in the black" is - what? One that is not in the red? But whether it is in the red depends on the "demand" for resources. Hence, there are at least two approaches to putting a system "in the black": by demanding less from nature, and by regenerating the non-renewable. Restraint, modesty, respect for nature's own mechanisms and recycling would be the key pointers to a sound eco-policy.

And then there is the second big heading in the environmental book-keeping: pollution, which operates the other way. Whereas resources are goods, pollutants are bads, and the system is in the black when they are below a level of tolerance, in the red (this time for danger, not for deficit) when those levels have been exceeded. In short, the approach is one of inverse book-keeping. Knowing that many of the pollutants are carcinogenic nobody would argue against the necessity of this type of inverse book-keeping; the point only being that it is not sufficient, regardless of the amount of cleaning-up engaged in.

For there is also a core of the analysis of eco-systems, without any pretense that the workings of eco-systems are properly understood (or even understandable), nor - indeed - that this very shallow presentation does anything like justice to it. However, the basic points in this paper come later; what is mentioned here is only some preparatory work to arrive at those points.

It will be assumed that the term "maturity" relatively well summari-

zes an aspect of eco-systems that belongs to this analytical core.(2) Another term would be "invulnerability". However, of basic interest here would be the mechanisms whereby maturity or invulnerability obtain, and they are divided into two classes: diversity and homeostasis, brought about by the symbiosis of the diverse parts. At the first glance they may seem to be antithetic to each other: would not a simple system with few components do better? What ecology teaches us is just the opposite: it is in the highly complex (a key word here) and symbiotic interplay between very diverse components, in some kind of very complex balance, that invulnerability may be found. One reason is obvious: an environmental factor detrimental, even lethal, to one of the components might wipe out the whole system were it a single component system: in a diverse system it might affect only a part and it might reconstitute itself. On the other hand, it should also be noted that precisely this characteristic of maturity/invulnerability can also lead to a rigidity, a kind of ultra-stability that is invulnerable, but also unamenable to change. One might perhaps talk of over-maturity.

As to the alpha/beta distinction: this refers to two ways of organizing social systems (socio-systems), not to two ways of looking at them, in terms of structure.<sup>(3)</sup> In the alpha structure relations are vertical, those at the top condition those lower down, interaction, particularly lower down is characterized by marginalization, fragmentation and segmentation. In the beta structure relations are, or at least can be, more horizontal, conditioning is mutual, interaction is characterized by participation, togetherness, integration. Examples of the former would be bureaucracies and corporations, or universities and other big research organizations; of the latter would be small villages, clans, tribes, families, friendship circles, and so on. But as these examples indicate a beta structure may easily become vertical at least in the sense of having a boss, or pater familias, a cacique - in which case it may be referred to as a gamma structure!

There are now two important theses about alpha and beta structures of some significance for eco-politics and eco-management; for the broader and for the more specific approaches to the environment.

First, alpha has no size limitations, beta does. In the latter there is participation by the whole person and relatively direct interaction among all participants, at least potentially. But the alpha structure is not operating with such structural limitations. For that reason alpha can grow and grow and is the ideal structure for a society bent on expansion: all that is needed to expand is to add one more branch laterally or one more layer at the bottom. Beta cannot go on growing; for if it does a core will have to emerge to "coordinate", to take care of communication, and the interaction links in many pairs, triples etc. of participants will become thinner and thinner till at last they vanish. The interactive capacity of any one human being simply is limited

Second, a society based on alpha structures will tend towards uniformity, a society based on beta structures towards diversity. The reason for this is that an alpha structure will tend to fill a social space as it has no built-in limitation. In early modern European history state-building, conquering the local small pyramids of the feudal system is a case in mind, and the logical economic counterpart is the nation-wide corporation with the same monopoly on production and distribution as the state has on the production and exercise of ultimate power. In private capitalist countries this is approximated through oligopolies and monopolies; in state capitalist countries this is done in a more consequent manner, not only with absolute monopoly inside the national territory, but also by trying the corporation and the state so closely together that the two alpha structures actually coalesce.

It is clear who produce the standards of uniformity in an alpha structure: the bureaucrats with their laws and regulations, the capitalists with their rules for intra- and inter-factor substitution

(terms of exchange, how much salary to pay to whom and for the commodities, the manufactured goods and the services, etc.) and above all the researchers/intelligentsia with their striving towards universal knowledge. Since these three define the standards by which governmental and non-governmental alpha structures can expand intra- and internationally, they will have to have considerable power in alpha- and consequently to prefer it to other structures. They want uniformity, for the uniformity is the key to their extension of power. As alpha grows only the size changes, the rules defining the interaction inside the structure can remain the same, with minor modifications at most. This should be compared to a society based on many beta structures: whereas the single beta structure may be extremely uniform, even to the point of being oppressive, the set of beta structures is diverse for each one of them will be subject to the variations in the participants and the environment and adapt, more or less successfully, to these variations. Each structure, when left alone, will develop its own rules to regulate power, production and reproduction, and knowledge. As is well known, the whole science of anthropology bears testimony to the tremendous diversity of the human experience and societies.

Before we now proceed to the obvious task, trying to relate the shallow deep and the alpha beta dichotomies, we also have to bring in the dichotomy mentioned in the title of this paper: overdeveloped vs. underdeveloped. There are many ways of defining this. Thus, one approach, and a major one, would be in terms of consumption (of material and non-material goods): underdevelopment means underconsumption, consumption below an acceptable floor or minimum; overdevelopment means overconsumption, consumption above an acceptable ceiling or maximum. This concept would be tied to the concept of basic human needs, and could be used to discuss consumption of material satisfiers (such as food) as well as non-material ones (such as togetherness ).

However, in this context we shall make use of another definition,



focussing on structural development, seeing overdevelopment in terms of excess of alpha relative to beta, and underdevelopment in terms of a deficit of alpha relative to beta. This means that neither a society consisting only of an alpha structure, with all beta elements eliminated, nor a society consisting of any number of unrelated beta structures are seen as developed: they are both mal-developed, although in different ways. By and large one may say that many of the "least developed countries" (LDCs) in the world could benefit from more alpha structure, and many of the "most developed countries" (MDCs) from less of it, leading to a conception of an intermediate optimum range. It would be wrong to pretend that we know anything precise about the borderlines of this range, but that should not be a source of worry since it does not affect the reasoning to be developed in the following sections.

#### On the relation between problems and approaches.

It is obvious to the reader what we are driving at with our two distinctions: the alpha structure will tend to tune itself to the shallow approach, and the beta structure to the deeper approach. Why should this be so?

First, a very basic difference between the two approaches should be pointed out. The alpha approach takes the form of agencies and ministries, of laws and regulations, of law suits, of university departments, even faculties of environmental science; in short of a tightly interlocked web of bureaucrats, capitalists and researchers in search of an environment "in the black".<sup>(4)</sup> The approach is according to the logic of alpha-dominated society: verbally explicit, organizationally specialized, professionally trained and adequately licensed. The beta approach to "environmental management" differs from all of this. It is hardly even an approach: it is implicit, simply based on the closeness of the small beta unit to the environment and the tradition, often imperfect, of relating to the environment so that depletion and pollution are kept below acceptable limits -- essentially by respecting the code of nature at its best, which we assume is written in

terms of diversity and homeostasic symbiosis. The beta people might have no vocabulary for all this. But they have a tradition - if they did not humankind would have disappeared long time ago. The astounding fact is that we humans have not only survived but also multiplied, hence the wisdom of the past must have been relatively adequate. And by that is simply meant the following: through intuition, or simply through lack of ability to interfere more profoundly with nature - natural science being so underdeveloped - nature's own mechanisms were by and large left intact.<sup>(5)</sup>

Not so with alpha. First of all, it can be argued that most of the major environmental problems of today, such as the threats to the ozone layer, the greenhouse effects, the possible impact on the ice-caps, large-scale desertification, are of alpha's own doing: they would have been impossible had it not been for that particular system of cooperation between bureaucrats, capitalists and researchers/intelligentsia - and far beyond narrow national borders, eg in the transnational corporation - that is so characteristic of our period. This is even more true when it comes to the type of environmental problem known as war: only alpha structures endowed with many resources would have been able to exercise the type of ecocide today associated with the Indochina wars.

Second, alpha has its own interests to pursue, and by and large they can be summarized in a simple manner: the continued growth, or at least survival, in the competition against other alphas. Or - if that is not possible - at least the continuation of alpha as the dominant structure of society; in other words the common front against beta. (Betas may also compete, eg families, friendship circles and communities for the allegiance of some members, but in a minor way: they cannot expand much having a natural limit). One very special type of alpha, then, would be the environmental agency with strong linkages to other bureaucracies, to the corporations and to the research establishments. This will be developed more below, but the point is simply this: any approach chosen by alpha will have to be

compatible with the alpha logic. The budget approach with its black and red is compatible: it stipulates constraints and issues warnings. But in doing so it also indicates in what direction expansion can proceed: in the direction where there are no depletion/pollution warning signs, at least not as yet. But not only that: budget figures in the red are also signals of concrete recycling and cleaning-up tasks to be done, ie. of business opportunities for those who want to invest in a better environment, with the good chance that bureaucracy will pay for some of the investments, at least the research investment.<sup>(6)</sup> To see this more clearly, however, let us proceed more systematically.

#### On the limitations of alpha for eco-politics.

It is customary to see the environmental agencies/ministries/research institutes etc. as responses to an environmental crisis, as part of the solution, not of the problem. The stand taken in this section is that it may also be very fruitful to see eco-politics according to the alpha logic as part of the problem, perhaps not as a major part but nevertheless as a part - and potentially as a major part if the alpha approach is permitted to stand in the way of and to overshadow other approaches. To explore this let us apply the ecological principles of maturity to the environment management agencies themselves, simply asking the twin question: what about diversity? and what about homeostasis/symbiosis?

As to diversity: it is in the nature of the modern bureaucracy of any kind that it attempts after some experimentation to converge, asymptotically, towards the approach, the correct approach; and through the intergovernmental machineries, in this case the United Nations Environment Programme at the world level and the regional agencies at sub-global levels, towards the universal approach. Very much effort would be needed to prevent an environment bureaucrat (an "ecocrat") from thinking in terms of universal standards for environmental book-keeping, complete with ratification by all governments, detection, apprehension, adjudication, conviction and sanction machineries,

including (in the future) the possibility of appeal to a world environment court. As will be clear later we are not necessarily arguing all out against this; the point here only being that this is in the logic of the system. But would that not be excellent, a triumph of rationality?

No. What it would mean would be the imposition of one set of standards and structures on the whole world in order to deal with extremely complex and diverse matters. The uniform approach would permit, and indeed facilitate, the easy transfer of bureaucrats from one position in the machinery to the other - much like the mobility open to a British subject trained in law within the British Empire - or even within the former British Empire, the commonwealth, today.<sup>(7)</sup>

It will also facilitate the operation of capitalism everywhere, or any other economic system bent on large-scale exploitation of nature, be it for use or for exchange. The mobility of the capitalists would be facilitated as the managers would know what the legal standards to be respected are; they are universal or at least regional. And it would be a triumph for the environment researcher whose standards would be the same universal standards, and whose methods, whose paradigms would be universally proclaimed as the way of thinking and acting about eco-politics. His or her mobility would also be guaranteed - as the bureaucrats flow along the gradients from the centers generating rules to the peripheries where they are applied and the capitalists along the economic cycles, the researchers would flow along the knowledge cycles of the world, between places producing data and places producing theories about these data, generating universal "truths".

Obviously, with one such approach, the approach, canonized as the universal approach, the ecological principle of diversity (in the machinery for environmental management) would no longer be respected. The whole system would be extremely vulnerable, and the more so the more perfect it is, ie. the more the same rules have been codified and accepted all over the world. At this point some might object that

these rules are science based according to objective canons of research, and the work of researchers identifying resources and pollutants from both stock and flow points of view, entirely capable of carrying out this enormous global bookkeeping called for by so many of the other trends in the world: industrialization, urbanization, population growth, etc.<sup>(8)</sup> It is edifying, then, to reflect on the often quoted figure to the effect that "90% of all researchers who ever lived, live today" - such being the production of scientists and presumably also of science, in our generation relative to the rest of the history of humankind. Unless we assume that the quality of science is of a completely different kind than in earlier periods - an assumption hard to reconcile with the general trend towards mass production both of scientists and science - the inescapable conclusion would have to be that not only 90% of all science ever produced (assuming constant productivity), but also 90% of all errors produced by scientists, are produced by our generation. Concrete by this means that the higher the level of consensus the higher the probability that the same error is committed all over the world.

Think back ten years or so: would we have felt that the knowledge base developed at that time was adequate for any kind of eco-management? Even if we had felt so at that time, would we feel today that the feeling was warranted, knowing the knowledge-production that has taken place in the meantime? If so, who are we to be arrogant enough to assume that the end of the 1970s has the answers - is it not rather likely that in ten or even five years hence we will look at today's knowledge base and say "my god, how could they have failed to see that - - -". In saying so we are not thinking so much of the well documented tendency to underestimate the world's resources - a factor that has itself contributed to techno-optimisms, "we shall always find something more somewhere", of the Herman Kahn type - and to underestimate the toxicity of the products produced. There is a natural tendency of any group to slant the image of reality so as to favor its own position, and this also applies to those who are concerned with the dangers of depletion and pollution. They will gen-

erally not underestimate the extent to which the system is exposed to actual or potential threats. Their vested interest in continued growth or at least continuation of their machineries for eco-management might lead them to overstate their concern, and this might interfere with those canons of scientific objectivity mentioned above.

However, these are minor concerns and such systematic errors can usually be detected and corrected for, like the personal equation of an astronomer relative to his telescope. The real source of "errors" - and this may be a misnomer - lies in the choice of paradigms. Two examples have already been hinted at: to choose the shallow approach, and the disinclination to contemplate the possibility that the alpha style of eco-management might itself be part of the problem, not only of the solution.

Why should the shallow approach be preferred by alpha style eco-management? Because it fits the alpha structure like the glove a hand. Resource and pollutant accounting will give work to bureaucracies for centuries to come and at the same time give the margins for safe conduct for the economic systems dominating the world at present. Researchers will come in as the servants supplying tools of identification and quantification. Consensus can be built around the approach precisely because it is shallow; its defenders will refer to it as "realistic". Theories to the effect that the budgets might look impressive while at the same time diversity is reduced and nature's homeostatic mechanisms are eroded, in other words that maturity is reduced, will be referred to as exactly that, as "theories". The analogy with keeping a patient symptom free with biochemical means while at the same time destroying the capacity for homeostasis in the body is tempting. Illich talks of iatrogenic diseases; (9) maybe time will come to talk of "ecocratically" induced environmental disturbances, or of ecocratogenesis? In that case one formula might be an inclination to transform one type of pollution into another, ultimately having the pollution show up as thermic pollution, possibly even in faraway places, e.g. places not under any

real national jurisdiction so that nobody is accountable, at least not in the first run (the oceans, if possible outside the EEZs). Another possibility is to push it on to future generations.

The need for consensus-building is of course not unique to alpha structures; it may be found in beta units as well. But as the latter have no pretension towards universalism the only danger would be that all such units around the world by some fluke should develop a latent consensus. The likelihood would be very low indeed; the corresponding likelihood for alpha structures very high - to the point of certainty, at least as a goal. The success of an alpha structure is often measured precisely in terms of the consensus it is able to obtain. Exactly for that reason arguments to the effect that consensus should not be seen as a goal, that a much more diversified approach be attempted, that it is madness to increase the vulnerability of the total global eco-system by monitoring them, even by tinkering with them, the same way everywhere will be seen as theoretically fascinating and then be totally disregarded because they do not fit the structure.

And that is the second point alluded to above: the failure of the system to see itself as part of the problem. The whole theory of bureaucratization enters here and leaves us not too optimistic about the self-correcting ability of those systems. Rather, the bigger they are the more vested interest will there be in system maintenance. Internationally, the machinery, the total energy involved in ratifying a convention will not inspire its undoing. Often the most one can hope for would be that the systems suffering from giantism would sink into oblivion; that if they cannot change they can at least become less relevant -- like one might hope for in connection with military structures. However, it should of course be pointed out that this argumentation is still for the future. What is said here is not that the eco-management machineries as they are known at present do more harm than good, only that they will tend to do so in the future when the knowledge base becomes increasingly irrelevant to

the new problems that will arise, or even counterproductive, at the same time as the machineries will be increasingly arrogant and jealous of other approaches and try to outlaw them as "non-scientific" or to incorporate them, rendering them innocuous.

Then, as to homeostasis symbiosis: the basic thesis would be that the alpha structure itself does not have any built-in regulatory device that will prevent it from growing, having no competitors. Rather, it is like the cells in a tumor as opposed to regular cells. Here we are not thinking so much in terms of the general tendency of all bureaucracies to fight for an expanding share of the monetary and personnel budgets of a government, but rather of the specific mechanisms that will tend to guarantee alpha eco-management continued growth. Thus, it is assumed that in any eco-catastrophe there will always be something far from unpleasant to the ecocrat - something not too different from a war or even the threat of war to the military man. It will call for his best abilities, it will test his machinery. If the machinery fails that will be an argument for strengthening it, and if it succeeds this can also be turned into an argument for strengthening the machinery (we managed this one, but the next catastrophe may be worse).

However, it is in the linkage to other parts of alpha-dominated societies that the major destabilizing mechanisms are found. And the basic point would be this: it is not the task of eco-management to reduce the pressure on nature; the task of eco-management is to make it possible to increase this pressure by showing where the pressure can be put and how to dampen the effects. The task of eco-management is to define the course of safe conduct for continued expansion by not only putting up danger signals (resources below, pollution above acceptable limits) but also by indicating where and how nature is underutilized, where and how one can proceed further, even much further. It is not the task of alpha eco-management to put any brakes on the general system of expansion, just as little as it is the task of an arms control agency to bring about disarmament. It



is control, not change of the system that is on the agenda; a task eminently suited for the general state-corporation (uneasy) alliance formula that has characterized Western development in general<sup>(10)</sup>, and its present (more or less) social democratically dominated period in particular, tilting the point of power gravity more towards the state. For this reason environmental agencies will be particularly popular with social democrats - because they are so compatible with their whole way of thinking - at the same time as they will be regarded with some scepticism by the corporations until they discover how they can best make use of them.

With this the scenario for the future is set. More and more eco-management will be called for and be put into practice, nourished by occasional eco-catastrophes. The ecorats will try to dampen the shouting by non-establishment, even anti-establishment, eco-maniacs by a dense network of nationally and internationally ratifiable rules and regulations. Corporations will at first be hesitant, then heed the rules, protesting that they are taxed far beyond carrying capacity. But they were quick to discover that if he who pollutes has to pay one may also pay in order to be permitted to pollute, and calculate the costs of fines etc. much like parking fines into the product, pushing it over to the consumer. Rational resource management will by and large be in their long term interest, they are not so stupid as not to know of the "tragedy of the commons". However, willingly or not they will also overstep and transgress, thereby creating more ecocatastrophe that in turn will create more eco-management that in turn will pave the way for more expansion - just as for the arms races.

In saying so it should also be remembered that the relation between these two agencies may not only be one of structural similarity, but also one of cooperation. Knowing how to protect the environment against deterioration is also knowing how to destroy the environment - a knowledge that can be put to military use. It is then assumed that the major barrier against the use of natural disequilibria as weapons,

given the giant destructiveness of our age, is our lack of knowledge so far of how to bring them about - the earthquakes, tsunamis, massive desertification, holes in ozone layers, thermic pollution. The efforts in this direction by the US during the Vietnam war - defoliation, deforestation - are of course children's play relative to what is in stock for us if this is sufficiently encouraged.

To conclude: it is certainly naive to assume that the alpha approach to eco-management will solve all our problems; whether it will turn out to do more harm than good remains to be seen. The alpha structure is in itself anti-ecological; it behaves according to an anti-ecologic rather than according to an ecologic. We have tried to indicate how the built-in lack of diversity and lack of homeostasis/symbiosis will have effects similar to the ones observed in systems more often exposed to ecological analysis: increased vulnerability and the tendency of one species/component to encroach on others, dominating and incorporating or destroying them. Let it only be added that this tendency will be exacerbated to the extent that the values and general perspectives of those who staff the alpha approach will tend to be compatible with the approach itself. And it will: most members of most systems tend to value to what they have to do as members of a system, to believe in it, in other words - unless the systems are coercive, like penitentiaries. The perspective of uniformity in standards and expansionism belongs to another family, so to speak, then the perspective of diversity and equilibrium (even interpreted as a dynamic, moving equilibrium). The alpha approach engenders an anti-ecological spirit, trying to compensate for this through remedial measures. And in this contradiction the system and its participants are caught, for good and for bad, and in the longer run mainly the latter.

#### On the limitation of beta for eco-politics.

From the circumstance that the alpha approach is full of contradictions it does not follow that the beta approach, its negation in many ways, is contradiction-free, producing only good results.

Basically the beta approach, practised implicitly by humankind for millennia and more explicitly by the commune people of our generation, eco-conscious as they are, to the point of advanced eco-philía, is based on a very simple principle: responsibility for most or much of the economic cycle. This means, that nature, production and consumption are woven together in a cycle known, even visible to the participants in such a way that the depletion of the nature and its pollution through production and consumption wastes are kept below an acceptable level simply because those who are the consumers depend on their immediate nature, or "environment" as it is called today. They themselves suffer the consequences.

One way of bringing this about is through the ancient institution of the farm, or a group of farms known as a village: nature, production and consumption are all within a very limited geographical extension so that both depletion and pollution effects are relatively visible. The fragmentation of responsibility through highly extended eco-cycles, escaping from the consequences of environmentally detrimental action, are not built into the system; that came with the alpha mode of organization.

At the same time a society (as opposed to a set) of beta units is also more ecologically correct in its structure. There is diversity, as pointed out above, making it possible to develop an environmental practise more custom-tailored to the exact requirements of that precise environment. There is homeostasis symbiosis in the sense that the whole beta logic limits the size - there may be many interacting beta units, but each one is limited in size. Together they constitute something much more similar to mature eco-systems, and this is strengthened by an ethos less reflecting uniformity and expansion.

So, is this not perfection, Rousseau's paradise, or something like that? What could be the limitations of this approach?

The basic limitation is the dependence of the whole system on nature.

Alpha creates dependency of the periphery on the center, in casus for eco-management. The centers want this dependence; the centers want to show that they can undo some of the "negative externalities" suffered by the periphery. Beta, based on the self-reliance of each unit, does not engender center-dependency. But the units are not so able to absorb the shock resulting from nature's own disequilibria, or the great variations of nature with space and time, the asymmetries in economic geography and the cyclical variations, the droughts and hurricanes. Beta does not create eco-catastrophes, at least not on the same scale as alpha can do; but if the catastrophe is there one single beta unit maybe less able to absorb the shock. They may need outside assistance, and solidarity with neighboring beta units may not be sufficient.

In addition beta is also capable of creating mini-catastrophe. Countless are the farms and the villages that have overtaxed their land even when this is not due to the alpha structures on which feudal and capitalist formations are based. The mechanism alluded to above of suffering the consequences of eco-mismanagement brought about by oneself is not infallible, partly because of limited knowledge and insight, partly because of the temptation not to respect implicit and explicit knowledge because of need or greed or both, partly because of adverse variations in the environment: nature may be as inconsiderate to humans as humans to nature!

And then there is the third and rather basic limitation: we no longer live in a beta world. We live in a world where alpha structures play an important role, a world where the beta mechanisms of a fishing village which may have eked out an equilibrium with non-human nature for centuries is upset by pollutants discharged by the upstream industry or by the breeding ground for fish being destroyed by trawlers, and so on. Beta is too weak, too easily overrun by such factors. The obvious response, to sneak into the factories at night pouring shells and sand into the machineries would be denounced immediately as criminal by alpha laws and rules, whereas it takes lots of politi-

cal action to mobilize authorities to protect beta units living in harmony with nature from man-made onslaughts that are "non-intended". The system is as biased in favor of alpha at the expense of beta as it is biased in favor of humans at the expense of animals and non-human nature in general.

The case for the alpha/beta mix in eco-politics.

Having said something about the limitations of either approach the obvious question becomes: can these two approaches be combined? Will that combine the limitations of either, or the positive aspects of either - or will it add one and multiply the other? Nobody knows the answer to that, nor will there ever be one unambiguous answer for there are so many possible formulas of combination for the alpha and beta approaches to eco-politics and eco-management.

Thus, take as a point of departure a society dominated by the alpha approach to the point that the limitations and harmful effects indicated in the section above start becoming really visible. Suppose further that alpha is highly disinclined to abdicate and incapable of undergoing any basic change. What would be the role of the beta approaches still surviving in some pockets of traditional agriculture and artisan production, and in some communes of younger vintage? Probably that of the guerilla in a territory occupied by a conventional (alpha type) army, exposing the errors of the alpha approach, raising popular consciousness, practising the alternative in ecologically liberated zones wherever possible, showing how superior organically cultivated food is to the chemical variety even when the toxic factors are (supposedly) controlled through eco-management. The slogan would be "strengthen beta, push alpha back, modify alpha".

Then, take as a point of departure a society dominated by the beta approach, also to the point that the limitations and harmful effects indicated in the above section are really visible - particularly the third one (the other two have usually been visible for a rather long

time span). What would be the role of an alpha approach in this kind of setting? There are many answers.

First, an obvious one: to serve as a network of communication between the beta units so that they can better learn from each other - in other words, alpha as a medium in which beta can better communicate. To take the fishery village example above: a modest alpha is one that says "we have such and such facilities, would you beta units like to elect representatives and come together and exchange experiences?" (the arrogant alpha being one that either ignores them or imposes on them a standard solution developed in alpha isolation from concrete social reality). In this setting the beta units **might be capable** of working out their rules of conduct to avoid a "tragedy of the commons" among them.

Second, alpha eco-management could try to restrain other alpha forces -- some public, some private to use that worn-out dichotomy -- that exercise the strongest pressure on the environment: corporations that want to turn good soil for common food-stuffs into commodity production or sites for industrial production, governments cooperating with them "to earn badly needed foreign currencies", etc. In other words, the eco-alpha as a guerilla force inside the general alpha environment of big business, big bureaucracy and big research. This is a role that some of the consumer agencies have been playing quite well, although it may also be argued that what they do is essentially to train the population to become better, more skillful consumers, not to become more **self-reliant** in any sense.

Third, an alpha approach would try to do some careful work in the direction of book-keeping and standard-imposition, but would keep it very flexible, revising it, and working in close cooperation with people groups (which is not the same as close cooperation with political parties and parliamentarians, nor limited to actionist groups). A major aspect of this work would not be so much to give to the standards legal force as to raise the general consciousness about

environmental matters. And for this purpose it is of major significance that people themselves become better equipped to monitor the environmental quality by carrying out simple tests themselves, e.g. on the foodstuffs they are more or less forced to buy, the air and water they have to consume, and so on - something similar to the family thermometer with which individual states of health, as a process, can be monitored to some extent.

We let these do as examples. Obviously the first case sets an agenda more relevant for overdeveloped countries, the latter more relevant for underdeveloped countries. But most countries today are mixtures of both aspects so the agendas should blend, as the alpha and beta approaches should, in general, into a more diverse, and hence more ecologically sound, pluralistic approach. And this seems to be what ecodevelopment<sup>(11)</sup> should be about: not only development of the man-made part respecting the ecology of the non-man-made part, but a development itself according to ecological principles. The basic assumption would be that only the ecologically mature can engender ecological maturity, and that from ecological immaturity, also in social organization, follows precisely that.

#### Conclusion:

It is now night, the lights from Benidorm beckon at a distance, the throngs of people, the piling up of garbage, the lack of water are at a comfortable distance. A hue of orange red is visible to the west, over a little valley, one of the creases in the slopes: a forest fire, another consequence of the heat and lack of rain, of nature's vicissitudes and of man-made erosion. The alpha approach has not yet been mobilized fully to come to grips with Benidorm, and the local beta approaches - villagers with water in buckets, some fire brigade elements - prove insufficient relative to the forces of nature. Both cases of environmental deterioration are due to a mixture of man-made and non-man-made factors, the former being stronger in the former, the latter stronger in the latter. An impotent alpha will blame the

calamities of Benidorm on nature, on lack of rain an impotent beta the calamities of the village on human beings, on lack of foresight, planning. Both are a little right, but mainly wrong.

Introduce into this a full scale environmental agency. Let it clear up the garbage, bring in water, regulate the roads. The predictable consequence is obvious: more tourists, eco-management being a small price to pay for the foreign currencies and the taxes wanted by the government, and the revenue wanted by business, big and small. Hence more problems, more eco-management, and still more expansion. But the water has to come from somewhere for the villages, their ground-water gradually being tapped. More and more of the people will seek work in the tourist city, as waiters, sales girls and boys. The villages will become depopulated, the centuries old terraces deteriorate further, agriculture gradually disappear, food will have to be hauled from increasingly distant places. The sprawling tourist city will continue to sprawl until one day tourists wake up and discover that the place simply is no longer attractive. It is just one city like all the others. It conforms to no image of holiday at all; it is the kind of unholy place one leaves to go on holiday. So there is a crisis, contraction sets in, unemployment becomes rampant, the villages are incapable of re-absorbing the people because of the deterioration.

Conclusion: How easily eco-management may become eco-mis-management unless deeper causes are looked for - whether the country is over or underdeveloped.



## N O T E S

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The best source book, with all kinds of information about Benidorm, is Gaviria et al., Benidorm, Ciudad Nueva, Editora Nacional, Madrid 1977 - full of information and proposals.

1. See V.M. Kollontai, "Overview of Environment and Development", UNCTAD Expert Meeting 13 - 18 May 1974, "Impact of Resource Management Problems and Policies in Developing Countries on International Trade and Development Strategies."
2. For the concept of maturity, see Perspectives in Ecological Theory by R. Margalef, Chicago, The University of Chicago Press, 1968, pp. 37 - 44.
3. This is developed in some detail in Hohan Galtung, on Alpha and Beta and Their Many Combinations", Subproject Visions of Desirable Societies, of the GPIID Project, Geneva, conference held in Mexico City, April 1978, published in Spanish by CESTEEM 1979 and in English, by Pergamon Press 1981.
4. It should be noted that this differs from a marxist vision by having the bureaucrats and the researchers/intelligentsia join the capitalists in the elite/dominant classes.
5. Huston Smith, in "Accents of the World's Philosophies", Humanity no. 50, pp. 7 - 19 makes the point that control of nature (as opposed to control of other men and oneself) is the Western speciality - making for Western natural science, which in turn makes for deeper penetration into nature, but not necessarily for harmony, balance, maturity. Also see Hohan Galtung, Social Outer Limits, paper prepared for UNEP, Nairobi, 1977, pp. 24 ff, papers, Chair in Conflict and Peace Research, University of Oslo, 1978.
6. For analysis of motivations etc. underlying the campaigns for a better environment, see Johan Galtune, "The Limits to Growth"

and Class Politics", Journal of Peace Research.1973, pp 101 - 114 also in chapter 11 in Essays in Peace Research, Vol. V, Ejlers, Copenhagen, 1981.

7. To see the advantages British intellectuals are reaping from the imperialism of their fathers, read the advertising pages in some British papers for academic staff for all the universities and colleges in the former Empire.

8. The environmental impact statements would be the forms that this activity takes, at present.

9. In the Medical Nemesis

10. See Johan Galtung, Tore Heiestad and Erik Rudeng, "On the Decline and Fall of Empires; The Roman Empire and Western Imperialism Compared", Papers, Chair in Conflict and Peace Research, University of Oslo, 1978; also published in Review, 1980, June issue.

11. For more on this concept, see the special issue "Eco-development" Vierteljahresberichte, Forschungsinstitut der Friedrich Ebert Stiftung, December 1977, particularly articles by Ignacy Sachs and Taghi Farvar (the latter on "Ecodevelopment in Western Iran").