Lafaye C., Thévenot L., « An Ecological Justification? Conflicts in the Development of Nature » in *Research in the Sociology of Organizations*, 52, 2017, pp.273-300.

An ecological justification? Conflicts in the development of nature

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Abstract

There are a number of conflicts today involving groups and individuals as regards nature in its various forms. The aim of this article is to examine how these give rise to changes in the forms of critique and justification that underpin them. Based on various points of disagreement as to how nature should be developed, three possibilities of change have been put forward for examination according to the importance of the transformations required: a) integration of the model into existing orders of justification, b) development of a new order based on the same model, c) serious adjustment of the underlying common matrix of orders and the basis it offers for appreciating injustice.

"We have studied the permafrost, fur-bearing animals, the Manitounuk sound, the region's peatland, the Arctic char, the caribou, the beluga, spawning beds, the eider duck, the tundra, the sea water, lichens, and humans. No hydroelectric project ever incorporated environmental knowledge so extensively."[1]

The invocation of nature

Matters of nature, and the cause of nature, are increasingly invoked in relations between humans. What consequences does referring to these natural beings have on the dealings of human beings in society? Is there not behind it a new front masking well-established interests:

[1] *"Grande Baleine : endiguer la méfiance", Québec science*, October 1991, cited in Barbier (1992b). An initial version of the research presented here was proposed for reflection to a group presided by Marc Augé as part of the preparation of the *XIe plan* (EHESS, September 1992). We are particularly grateful to the research by R. Barbier (1992a and 1992b), E. Joly-Sibuet and P. Lascoumes (1988), who allowed us to consult his as yet unpublished article *"Les associations de défense de l'environnement, pivots essentiels de la politique publique"* (Lascoumes, 1992).

hunters defending their hunting grounds, on the pretext of "maintaining the balance of an ecosystem"; fishermen ensuring that their hobby can continue by loudly claiming "that a right to the environment should be recognised as a basic human right"? It is possible to detect the interests of broader social groups, or institutional actors, with the resources of nature being at the center of the struggles that oppose them. The social sciences are particularly inclined to this type of interpretation, since they are very suspicious of any explanation referring to natural phenomena. As a result it is important to examine the social processes of naturalisation, taking care to use language that is stripped of references to a mythical environment.

The first part of this article looks at this confrontation between actors under the cover of nature. However relevant the prospect of strategic action may be, it cannot account for the way the invocation of nature offers a transition from the specific to the general. The sociology of social movements has clearly noted the possibility of building a collective movement on critical positions that make reference to nature, and ecologically-centred political mobilisation has been analysed from the same perspective. But what, in fact, are the collective forms constructed in this way? Are they identical to those created by feelings of solidarity concerning social rights? How can common projects go beyond private interests and give substance to the collective interests of actors?

To shed some light on these questions, close scrutiny is needed of the way references to the environment facilitate a transition from the personal to the shared, the specific to the general. To this end, we draw on the conflicts provoked by the development of nature (i.e. human projects involving installations or rearrangements), considering the opposing arguments put forward in such cases. We propose to put these very diverse arguments in order, successively considering three possibilities of varying compatibility with tried-and-tested forms of the collective. They are presented in order of the scale of the development

project concerned, as well as the argument frameworks that refer to a common good and thus constitute political rhetorics. First, we consider the possibility that nature is aligned with a number of tried-and-tested, legitimate orders of justification. This movement shows the pervasiveness of these orders as well as their dynamic openness, since new resources are absorbed at the cost of classifying the environment in long-established forms of the common good (Boltanski and Thévenot, 1991). However, certain arguments and types of proof and tests suggest a different movement, in which the enhancement of nature focuses on the creation of a new order of worth, an ecological worth meeting the same demands as the previous types of worth. Interest in the forms of invocation of nature is sharpened further by a third type of elaboration containing an inherent radical challenge to the political and moral vernacular shared by the different forms of justification previously studied.

I. The cover of nature and confrontation between actors

The implementation of major development projects brings actors of three different types face to face: a centralised State and its extensions in the form of regional and local authorities, or a public sector enterprise, which decides that work should be undertaken to develop an infrastructure (a motorway, tunnel, high-speed train line, dam, etc); local elected officers keen to defend the interests of the local community (farmers, winegrowers, local businesses and hotels), especially the interests of an elite of notable personalities, and who are dependent on electoral deadlines; and associations which, to consolidate their social basis, strive to criticise the project in the name of the environment. Whatever references any party makes to nature, is it not the case that every development project launch leads to the same confrontation between actors with divergent interests?

1. – Actors with many voices

While it may be effective to summarise conflicts based on a map of actors with their own logics, such an approach involves a simplification that is detrimental to any explanation of the environment's status in these conflicts and the specific turn that can result. Proof of this can be found by paying attention to the diversity of voices that can be heard from each actor-type.

Protean defence associations

The diversity of voices is particularly clear in the case of environmental defence associations. Their actions can cover at least three different directions reflected not only in the reasons stated in their arguments, but also in the type of resources used.

The first direction, militant and critical, was the hallmark of the ecological cause in the 1970s, with protests against an industrial logic and technocratic power that prevented information from reaching the public and thus being included in the democratic debate (Simmonet, 1979). The model of the anti-nuclear movement is an excellent embodiment of this militant, critical direction (Nelkin and Pollak, 1981; Touraine et al, 1980). As Alain Touraine and his co-authors clearly demonstrate, the campaign against nuclear power is rooted in a rejection of industrial values and challenges to the idea of progress, denouncing an authoritarian, repressive State and attempting to go beyond unproductive debate and establish itself as an alternative political force channelling democratic demands. Yet it was not until the late 1980s, and in part separately from the anti-nuclear movement, that this direction became rooted in the French political arena through the electoral influence of political parties representing the environment[2].

[2] On the process of setting up an ecological party, cf Boy (1990a). Also, studies on the sociography of Green leaders and voters show that ecological leaders have certain similarities with other partisan elites (they are primarily men, of mature age, with a well-developed educational and cultural background, from the middle and upper echelons of society), but are set apart by their lower social dispersion (more middle class members than in other groups) and a higher cultural capital, making the Greens a genuine party of intellectuals (Sainteny, 1990). Green voters are younger, better-qualified, more often single or cohabiting without being married, but the proportion of women is hardly any higher than in other political parties;

Although it can be fed by the same type of civic justification, a second mode of action often replaces the first just described, when the association engages in action to ensure compliance with laws and regulations (Alphandéry, Bitoun and Dupont, 1992, p. 83). In a setting with a smaller central government whose involvement has been lessened by decentralisation, associations tend to act as substitutes for the state: they closely monitor decision-making processes in town and regional councils and act as an administrative police force, identifying breaches of the law and taking legal action (Lascoumes, 1992). Associations engaging in this type of "managerial ecology" approach often criticise the government for not doing its job of making sure that the law is respected, and thus burdening them with too much work.

Finally, in a third direction, the association is involved in decision-making circuits, occupying a position as an expert advisor and issuing opinions based on scientific measurements. This direction is characterised by a capacity for expert assessment and independence, with a focus on the production of absolutely scientific information.

There are doubtless associations routinely engaged in just one of these modes of intervention, and individual actors who always take the same approach in all circumstances. Extreme cases exist of associations entirely taken up with a managerial logic because like an in-house union, they have been put together from scratch by a government and local authorities that want to deal with a "responsible" representative (Lascoumes, 1992). But frequently, that very actor – institutional or otherwise – changes the direction of his action, suggesting that we should take the specific logic of each of these directions seriously, without reducing it to a mere front for an underlying interest.

its social membership comprises a high share of members of the intellectual professions and a large number of public sector employees (Boy, 1990b).

The many languages of government

Another important actor, the government, can also make several voices heard. Its dispersed nature is a well-known phenomenon today, particularly as a large number of government departments work on any given project or on policy implementation. Some research has emphasised public sector agents' capacities to come to arrangements and make accommodations for the external parties they deal with (Dupuy and Thoenig, 1985); others have concentrated instead on the existence of corporate logics at work in French government (Jobert and Muller, 1987; Muller, 1990; Thoenig, 1987).

This article is more directly interested in a third approach, focusing on the study of systems of thought and action, and the analysis of the main languages, essentially conveyed by government, that arise from policies that concern the development of the natural environment (Barouch, 1989). The first language identified is regulatory language, which is often considered synonymous with government (Chevallier and Loschak, 1982). In the illustrative case of the development of the river Cisse in France's Centre region, this language is objectified in an ordinance of 1834 by France's King Louis-Philippe which proposed the detailed regulation for how the river can and should be developed, a policy which remained in force until the early 1980s. The second language identified, essentially used by County Agricultural Departments (DDAs[3]) and County Amenities Departments (DDEs[4]), is technical language. This language concerns engineers, and takes a single view of the river – as a channel of flowing water – that ignores its other social functions (fishing, leisure). It is expressed through formulas appropriate for calculating the river's flow rates, sections and gradients with a view to recalibrating the river bed. The third and final identified language comes more from industry and agriculture than from government: it is economic language,

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[3] *Directions départementales de l'agriculture* (DDA)
[4] *Directions départementales de l'équipement* (DDE)

which considers the river as a resource whose use must be optimised. To improve water flow and prevent the river from overflowing, walls were constructed and diverted courses dug. The government is increasingly sensitive to this language in matters of natural resource management and environmental management (Godard, 1980). This is particularly true in the case of a public company like the French electricity operator EDF, which justifies its nuclear programme on the grounds of commercial necessity (Wieviorka and Trinh, 1989).

2. – The generalisation of interests

Paying attention to the diversity of voices heard from each institutional actor involved in developing the environment means taking into consideration the constraints affecting each argument put forward and the acceptability of proposed modes of action. The association of action and interests defended on the basis of a particular form of the common good is a key issue in conflicts concerning the environment.

A contrario, this is clear in the name "lobby" given to a group of actors: a lobby of market gardeners or winegrowers wanting to divert a proposed motorway route, a lobby of shopkeepers and hotel owners putting pressure on local officials and park management to encourage tourist development, a hunters' lobby protesting against the establishment of nature reserves. The term indicates that interests are shared by a range of individual actors and are thus collective, without relating them to a more general common good. For this reason, as no other legitimate order of worth exists, we measure the influence of the lobby-actor by the number of individuals it can mobilise into a pressure group (75,000 hunters in the Bordeaux area, compared to 1,000 association members), whereas reference to a common good and the associated use of resources offer other ways to assess the influence of an argument or a cause.

The question of the lobby group clearly shows a generalisation of the interests defended[5] and their connection with a form of the common good. Examination of the actors and the interests driving them should thus be extended to the study of the options open to them for advancing a cause. And that is where the question of the environment becomes fully meaningful and specific. The hunters' and fishermen's lobby provides a particularly enlightening example in its penetration of the French political scene, with the accompanying attempts at generalisation, particularly visible in the successive names used for their lists of candidates: *Chasse, Pêche et Traditions* (Hunting, Fishing and Traditions) for the European elections of 1990, and *Chasse, Pêche, Nature et Traditions* (Hunting, Fishing, Nature and Traditions) for the French regional council elections of 1992. This movement, which attracts up to 10% of voters in certain French counties, claims to be "truly ecological" and defines itself in its slogan "Nature is our culture[6]". The discourses of its candidates are built around the idea that hunting and fishing activities, which are rooted in centuries-old traditions, express in-depth familiarity with nature and can better contribute to the protection of nature than European directives, which are considered technocratic.

II. Nature in the polity

The organisation of a polity can no longer ignore environmental concerns today. From the local resident who loses out because of a development project to the Rio Conference of 1992, and the large number of demands from associations, politicians' speeches and scientists' statements in between, the ecological argument is becoming more and more insistent. As this list shows, it can encompass the most local elements – a private home, a public garden, a valley, a site – as well as the most general entities – the planet, the ozone

[5] A group or social system can only be considered as a set of actions defined by the pursuit of strictly individual interests in a reductive sense; it always assumes at least one common action or shared goal (Reynaud, 1989).
[6] *La nature est notre culture*

layer or the biosphere; ultimately the Earth comes to be defined as "a biosphere of ecosystems, a specific set of specific places whose specificity is vital to it" (Berque, 1990). This capacity to relate specific things to general entities is characteristic of the instruments of legitimate justification forged by political communities.

1. – From defence of private goods to a concern for the planet

Let us first consider the capacity for radical change which can be found in the environmental argument: an action in the immediate environment can trigger a chain of repercussions, to the point of endangering the whole planet.

A private good

The tiniest surroundings of a property, estate or little garden surrounding a suburban house can itself have the status of being part of the natural environment and thus be worthy of respect, and property owners make use of the environmental theme to defend their personal assets. In response to a development plan proposed by a Paris suburb town council, a group of home-owners join forces to defend their common interest. Their letters to the Mayor set out in detail how each will personally be affected by the proposed plan: for one, a vegetarian lifestyle will be lost, for another botany-related pastimes will be disturbed, for a third it is retirement plans that are affected. The stated aims of the association set up shortly after this correspondence, in addition to defending the interests of the home-owners concerned, include a statement that claims the association supports "protection of the environment, the heritage of the area and residents' quality of life" (Barbier, 1992b, p. 61). In this understanding, environment, heritage and quality of life tend to be restricted solely to the protection of private property. The same is true in the case of the Environmental Defence Association formed by people living near the Montchanin waste disposal site. They are fighting to prevent their assets from losing value due to the significant nuisance caused by storage of chemical

waste nearby (Lascoumes, 1992, p. 190). In these two examples, the common good defended is simply the sum of private goods, even though the terms environment, heritage and quality of life, which are often used in these debates, allow for a shift towards more general concerns, on which there are few elaborations.

These kinds of associations are often criticised for displaying NIMBY (Not In My Back Yard) syndrome, with selfish claims lying behind a deceptive appearance of concern for the environment. What is disputed is actors' capacity to adopt a view that is more general and that goes beyond merely defending their personal assets. Their exclusion from debates generally stems from government, developers, local officials (Lascoumes, 1992, p. 192), and sometimes other associations. For example, an association defending the interests of property owners affected by a development project in a Paris suburb is refused support by another, longer-established association that works for the preservation of historical monuments, as it considers that the property owners are expressing selfish interests and are only taking action because their personal assets are under threat (Barbier, 1992b, p. 63).

The good of a small group

The demonstrators who marched through the French town of Libourne in the spring of 1990 to protest against a proposed new motorway along the valley of the river Isle brandished signs saying "Hands off my environment[7]". The president of one of the associations formed to challenge the project emphasised the threat it posed to local quality of life, peace and quiet, and even to wild mushrooms (Camus and Lafaye, 1992, p. 12). The environment referred to here no longer relates to the defence of private property or goods as in the previous case, but here designates a sort of local common good specific to a small community, but still far

[7] *Touche pas à mon environnement*

removed from a planetary cause. This common good includes other people, but other people who are not far away. It is not defined in great detail and assumes limited points of reference concerning things such as a shared practice, which does not need to be established as a higher common good, one that goes beyond the group's collective good.

Extension of the common good

The process of extension towards ecological worlds than go beyond simply private goods or the common good of a small group is clearly illustrated in campaigns to protect a given site or environment. For example, consolidation of a dune helps to protect the coast (Lafaye, 1992), and elimination of a waste disposal facility contributes to protecting the soil, "a living, dynamic environment" that is "a fundamental element of the biosphere" (Mathieu, 1992, p. 59). In France's Alsace region, an association formed to defend the Goeftberg site, which was threatened by a high-voltage power line, broadened its action by participating in the preparation of an official "biotope decision" to protect the area (Lascoumes, 1992, p. 199). The extension is clearly visible in the case of pollution caused by the increasing volume of air traffic, which is broken down into three levels: pollution affecting an airport's users and the people living nearby, regional pollution that contributes to the risks of smog, and global atmospheric pollution that is responsible for the greenhouse effect and the destruction of the ozone layer (Lamure and Vallet, 1990).

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This transition from the local to the general is clearly perceptible in the demands of environmental defence associations, which use a global view mainly to protest against the government-defined framework for negotiations concerning a major public development project. In such cases, the aim is less to talk about the repercussions of intervening at the local level, and more about adopting a viewpoint that can limit the environmental damage caused. The government is often accused of carving up infrastructure projects into several operations

before they are submitted to public consultation, which makes expression of an overall point of view impossible. The associations opposing plans for the Somport road tunnel between France and Spain took court action against the public inquiry, which "chopped" the project into kilometre-long sections, with no overall study of the environment, in a zone bordering a regional park (Lascoumes, 1992). In a similar example, a group of associations named CARDE[8] actively campaigned so that the South-East TGV high-speed train line would not be discussed section by section, in step-by-step negotiation with the winegrowers or market gardeners, but on the contrary that it would be considered in its entirety, in a single public inquiry.

This extension involves extension of the fabric of associations. Associations of property owners, users or local residents join up as coordination groups or liaison committees, encouraging the development of a broader position that can bring in actors and entities beyond the boundaries of the neighbourhood. This was seen in the case of CARDE defending an overall position on the South-East TGV train route, against residents' or property owners' associations which in some cases are actually members of CARDE. But this "total view" strategy does not always succeed. A last-minute change to the route took the new train line closer to the Tricastin nuclear power plant, to spare a vineyard region and avoid a member of parliament's district.

Generalised consequences in the future

The ecological argument also helps to connect an immediate action to the longer-term future of the planet. The shifts in scale brought about through the schema of generalised consequences are not only spatial, but also temporal: every action engages the future, both our

[8] *Coordination associative régionale de défense de l'environnement*

own and that of future generations. The ecological argument thus facilitates a constant to-and-fro movement between past, present and future.

Criticism of the rising number of motor vehicles, encouraged by a policy that supports the building of more motorways, is based on this rise causing higher carbon gas emissions, which in turn causes the greenhouse effect which ultimately leads to climate change. But the solutions adopted to help reduce traffic can have equally unforeseen consequences for the long term, for example when such solutions involve the expansion of nuclear energy. This was noted by France's Interministerial Group on the greenhouse effect in a 1990 report. The example of radioactive waste is another good illustration of the ability to set ecological arguments onto extremely long timescales. Some waste, in the low and medium-level categories, is placed in facilities whose security is guaranteed for three hundred years; for the rest, i.e. high-level waste, "no country has solved the problem of its permanent storage, because no-one can know what will become of such waste in the coming millennia, or take a gamble on the discoveries that may be made and might make it possible to shorten their toxicity period (…) Never before in History has a people, for the purposes of its own immediate comfort, imposed such threats on future generations" (Mathieu, 1992, pp. 91-92). The high uncertainty over the state of knowledge reinforces the spread of this schema. One example concerns the ban on submerging radioactive waste in the ocean: the international convention recently signed by thirteen countries stipulates that this ban may be lifted in fifteen years if scientists have managed to demonstrate that immersion is a better ecological solution than inland processing and storage (reported by French newspaper *Libération*, 23 September 1992).

The generalised consequences schema is most actively kept alive by associations promoting scientific and technical information. Whether their scope of intervention is local, regional or national, these associations establish connections and mediations between a one-

time, local action and its global impact, as well as between the here-and-now act and long-term effects. Associations that concentrate on nuclear questions are active agents for this examination of consequences: a simple defect in a reactor could put part of the planet in danger, just as stored nuclear waste is a threat for future generations.

2. – The ecological argument and its adjustment to the available forms of the common good

But is the ecological argument, which has a demonstrated capacity for transitions between the particular and the general, an appropriate support for a new principle of justification and evaluation? Before identifying the elements that can provide a basis for what could be an ecological polity, we need to examine the relationship between arguments referring to the environment and other ways of evaluating action that offer more stable justification frameworks. Is it not the case that in many real-life situations the ecological argument tends to be enrolled, or even absorbed, by such frameworks? The conflicts and protests that arise around most development, infrastructure or urban planning projects will be used to explore this question.

Respect of domestic heritage and quality of life

It is a common feature of every major development and infrastructure project that at some point in its preparation, there will be mobilisation against it on the grounds of respect for the sites concerned, attachment to the local area, or attention to the past. Use of these types of argument, in which criticism most frequently translates into arguments for maintaining the status quo, or pledges for a return to an earlier, presumably better state, indicates the relevance of a principle of justification based on the respect of traditions and a notion of trust that is anchored in the domestic order of worth. Yet far from working against this justification framework, a whole set of arguments focusing on the defence of the environment can also be

hosted by such a matrix. The following examples illustrate how ecological arguments can be integrated into the repertoire of domestic forms of justification.

In one example, the president of an environmental defence association that opposes the construction of a new motorway links quality of life with respect for local citizens' habits, defining the environment as a "green", "concrete-free" and "well-kept" village. Quality of life here has meaning outside the constraints brought about by progress and urban planning (Camus and Lafaye, 1992, p. 15). This view, with its total focus on having roots in a small local area, is echoed in a number of reflections that treat ecology as a central concern. Barbier (1992b, pp. 15-19) presents an enlightening summary. The authors reviewed - Illich (1973) and Simmonet (1979) – both start from a criticism of the world of industrial development and replace that world with an ecological world conferring dignity to local matters, the community, and its roots. They consider these factors to be a requirement for regaining harmony between Man and Nature through his particular ties to the local community: "Small is Beautiful". But for these authors, the community-based dimension of the ecological polity cannot, as Barbier so rightly notes, be reduced to a strictly hierarchical domestic community; in certain aspects, it also appears as a democratic collective that is rooted in a local area.

It is often through reference to the concept of heritage that environmental protection concerns can be integrated into a justification based on the respect of traditions. Some resolutions entered in a public inquiry register make this type of reference explicitly. One local resident reminds the Mayor of his duty to preserve and enhance the town's natural heritage, and another points out the regional council's policy of supporting towns and villages that are careful to protect their architectural heritage (Barbier, 1992b). The term of heritage, which is not generally used to refer to private assets, is very widely used: at a consultation meeting, a Mayor objecting to one of the motorway routes proposed by the technicians from the Amenities department highlights the damage it will do to the natural heritage of the region

("superb sites", "high-quality landscapes"), its winegrowing heritage ("the edges of the Saint-Emilion [vineyards]", "the Côtes de Castillon slopes"), and its architectural and historic heritage ("old houses from the 12th century") (Camus and Lafaye, 1992, p. 40). The concept is also a way to integrate into a continuum both locally-focused treatment of environmental issues (such as the questions raised when drawing up land zoning plans) and an approach to much more general problems concerning the "shared heritage of humanity" (Barbier, 1992b, pp. 50-51).

However, there are limits to the incorporation of ecological arguments into the register of justification based on respect of traditions and bonds of trust, as this register cannot absorb all related concerns. In one example, a Mayor whose motorway plan clashes with the ambition to "restore an identity" to his town cannot bring himself to include "little birds" and "green trees" in this identity, and falls back on the argument of the residents' "historical roots" for a domestic call to order (Camus and Lafaye, 1992, p. 14).

From the ineffable beauty of a place to the harmony of the landscape

Protests against the development or infrastructure projects often lead to environmental concerns being integrated into a type of evaluation based on attractiveness. Two distinct approaches can be identified.

The first involves references to man's private, ineffable relationship with a nature he finds moving. For example, the Mayor of a town affected by a new motorway route mentions the natural beauty of a site – where two rivers meet – and the threat that hangs over this beauty, expressed through the metaphor of the bulldozer. Or at a consultation meeting about the same project, a speaker glowingly evokes the infinite charm of harbour at Libourne, shattered forever by the prospect of the future motorway bridge (Camus and Lafaye, 1992, pp. 14 and 41). Elsewhere, objections to the TGV high-speed train were based on the same

contemplation of a site's beauty, considered all the more remarkable as Cézanne painted there (Barbier, 1992a, p. 6). In these brief examples, the inspired order of worth is fully operational: the singularity of the emotion experienced while contemplating the landscape is immediately intelligible to everyone, and thus takes on a general import that justifies its preservation.

The second figure that draws on attractiveness is further removed from an expression of a personal relationship with nature. Rather than the incorporation of ecological arguments into the inspired order of worth and its associated mode of evaluation, this figure reflects a sort of compromise embodied in the harmony of the landscape. The chosen example concerns a major project that disturbs one's special relationship not with a place, but with uncertain "beings" – in this case blue dumpsters placed directly on the ground next to a machine shed – which are accused by local residents and the village Mayor of being ugly, and spoiling the site as well as the environment (Barbier, 1992a, p. 4). This emphasis on harmony cannot tolerate any presence that is of poor taste and that stands out, such as these blue dumpsters. Demanding harmony in the landscape finds forms of objectification in French national legislation, which includes defacement of an area among the defined types of spatial pollution: the law of May 2, 1930 governing the protection of natural monuments and sites of a historical, legendary or picturesque nature; the law of January 3, 1986 on the development, protection and enhancement of the coastline; the law of January 9, 1985 on development and protection of mountain areas, the law restricting billposting, etc. (Mathieu, 1992). The concept of harmony allows for transitions between the vocabulary of balance, which is a constant reference in ecological arguments (the planet as a balanced system, see below) and the standard or classic vocabulary of attractiveness.

Celebrating nature, and celebrities: media coverage of the ecological cause

The ecological cause tends to become part of the fame-based order of worth and related mode of evaluation when its supporters seek to attract public attention by using the media, publicity campaigns or personalities whose fame can attract wider attention to their actions. Lascoumes (1992, p. 232) observes that environmental defence associations are keen to make their action "visible" by seeking to raise public awareness. He gives the example of a Breton association set up to oppose plans for a new boulevard that threatened to fill in part of the local town harbour: in the end a press campaign, TV programme, and collection of photographs that won an international prize obliged the Mayor and the local Prefect to drop the proposals. In the Clarée valley, which was under threat from several projects, media reports on a primary school teacher who wrote a best-selling book called *La soupe aux herbes sauvages* (Wild herb soup), about life in the area and her campaign against its destruction, contributed to the valley's classification as a protected natural site. In another location, the same result was achieved by an association thanks to well-known members of its support committee and the production of press files, photographs of its demonstrations, and petitions (Camus and Lafaye, 1992, p. 12).

But attempts to generate media coverage for an ecological cause also have their limits if the scale and relevance of the individuals involved are not properly evaluated. This was the case for one association protesting against a motorway in the Isle valley, which unsuccessfully appealed for support from French national ecological celebrities such as Brice Lalonde, Haroun Tazieff and Jacques Cousteau: raising the profile of the cause defended can fail because of a mismatch, notably in scale, between the cause itself (destruction of old houses, noise pollution) and the fame of the celebrities the association seeks to enlist.

The commercial value of ecological goods

Market valuation that makes a direct reference to an ecological cause is not unproblematic (Rémond-Gouilloud, 1988). Beings of nature resist efforts to consider them as commercial goods, even though the amounts of fines (for transgressions) can help bring them into the domain of prices. In terms of ecological damage, a stag costs 20,000 francs and a sprig of wormwood 8,545 francs (Jouve, 1991, p. 257); in terms of "recreational value", the added value of being able to see cranes in a natural park in Arkansas is estimated at 50,000 francs (Prescott-Allen et al., 1986; Angel, Glachant and Lévèque, 1992). The same difficulties arise when evaluating the cost to a community of pollution that is caused by a business. The creation of a market for pollution rights is designed to bring the question of pollution into the market order of worth, leaving each polluting agent free to choose between the cost of anti-pollution measures and the price of a pollution permit. This policy, which has been introduced in the US for water, air and lead in petrol, requires a large enough volume of trading partners for the market to be considered fair (Gastaldo, 1992).

The fact that a given element of the environment can be approached in several different ways sometimes encourages its incorporation into a market mode of valuation, because it offers a measure of equivalence. This applies to the Bordeaux vineyards, which have been spared by motorway routes. Are they are part of a heritage that must be preserved, a public good formally defined as such in a ministerial decree, or are they an economic good with high commercial value? The latter approach was the one chosen by the engineers from the Amenities department, who can produce a detailed ranking of wines based on their price per barrel, and thus set clear boundaries for zones to be left uncrossed by the motorway; producing such a ranking would have been more difficult based on the vineyards' status as a public good, since such a status only involves two categories (classified, or unclassified), as would have been considering them as part of the national heritage of France, as no differentiation would have been possible at all (Camus and Lafaye, 1992, p. 27). For the same

motorway project, woodlands had a similar experience: being associated with natural areas, they were near the top of the rankings, but since the technicians in charge of the studies identified them as farmland, their commercial value was comparatively lower than the value of vineyards and kiwi orchards.

Industrial efficiency and the technical approach to the environment

One of the most common justifications given for major infrastructure projects refers to technical progress and development aims that require certain areas to be "made more accessible". Supporters of this industrial form of justification often sweep aside the demands of ecological concerns on the basis of their being unimportant: "The motorway isn't very pretty but you have to move with the times" (ibid., p. 14). However, a trend which has also developed is one in which ecological concerns are internalised into technical arguments. In such cases environmental questions are seen as constraints that must be taken into consideration if the infrastructure or development project is to be viewed as "sustainable."

One example of this absorption of ecological concerns into the technical mode of valuation is found in the multi-criteria analysis used in feasibility studies of most infrastructure projects. This method is said to reduce the incomparability between extremely heterogeneous data, and is thus appropriate for complex negotiation situations because it incorporates all the various arguments put forward into a common valuation scheme (Montgolfier, 1975). This is the type of analysis used by the technicians from the French Amenities department's technical studies centre to compare different route proposals for a motorway. Environmental matters are treated as constraints that must be taken into account along with other constraints (cost, traffic, etc), and mapped. They are listed as a series of variables (the physical surroundings, the biological environment, important monuments and

sites, etc.) that are themselves divided into more sophisticated indicators (Camus and Lafaye, 1992).

Internalisation of ecological concerns in the technical mode of valuation reaches the limits of its usefulness in the comparison of different route proposals. The exercise of adding up the criteria included in the study (cost, traffic, environment) to determine the optimum route – an operation generally performed by the local authorities concerned – is criticised by the technicians from the Amenities department, who constantly repeat that not all constraints are created equal.

The environment at the centre of the democratic debate

In recent years, the democratic debate has become increasingly attentive to ecological concerns. There's been growth in the number of laws passed that aim to protect the environment and parties claiming ecological motivations have appeared on the political scene and achieved recognition in France's regional elections of April 1992.

But it is undeniably through associations that democratic and civic demands best incorporate environmental concerns. This is the theory of Chibret (1991) who argues that the environmental activities of French associations are conceived of as a way of serving the public good, through an implicit link between associative action and public action, which can go as far as wanting to bring about a decline in State action. The same theory is defended by Lascoumes (1992, p. 156), who sees environmental defence associations as the pivots of public policy, due to the work they do in training and making proposals for public action, monitoring law enforcement and reporting violations. Criticism of the legality of action that is harmful to the environment, use of court proceedings, challenges to public inquiries, and complaints (which are especially strong in the case of major development projects) that

consultations are just for show, are all indications of this civic engagement with ecological action.

These examples show that the ecological argument is prepared to adjust to tried-and-tested justification frameworks, and their corresponding mechanisms. Nonetheless it is clear that these frameworks cannot contain them completely, and they are constantly overspilling. There is much evidence to suggest that the ecological argument is in fact a new polity in construction.

2. – A green order of worth?

Can ecology constitute a new principle for judgement and justification of action? Does it express a common good that is irreducible, in that it cannot be reduced to other forms of the common good? To test the validity of the hypothesis of a green polity (or "world"), we need to confirm that the ecological argument can be a foundation for a critique of competing principles of justification, and that it applies a specification of the political bond upon which which a legitimate agreement can be founded.

A critical lever

Many justifications have as a basis an environmental theme, not only in order to point to the failings and weaknesses of other modes of evaluation, but also to challenge the legitimacy of these justifications for guaranteeing the common good and to discredit them because they do not provide a valid basis for evaluation.

Seeking legitimacy by calling on public opinion, which as we have seen can be a channel for the ecological argument when environmental problems are raised, is harshly criticised, notably by networks of associations. Ecology as an image can be violently criticised from the perspective of an ecology that is rooted in practical action. Communication

campaigns and prestige operations are accused of wasting some of the money needed for clean-up or maintenance operations on nature reserves (Lascoumes, 1992, pp. 184-185).

While the market mode of evaluation occasionally tries to attribute value to ecological goods, at other times its legitimacy is called into question. The Channel tunnel offers several examples (Toison, 1990). Some of the partners (the DDE and an association with close links to the regional council) complained that the developer, to save money (or perhaps to lose less money) had had no scruples about dumping rubble from the worksite close to the place of extraction, even though that location was partly "classified" and partly "registered" as protected[9], thus contributing to its disfigurement. A market order of worth was also involved in another matter relating to the Channel tunnel. Since the existing quarries had hiked up their prices when Eurotunnel arrived, the company made them bid against each other for contracts. The landscape suffered the consequences: the arrival of competing operators led to the creation of more quarries and the installation of new transport infrastructures. Finally, speculation on land close to the tunnel put natural zones under threat. More generally, there is a suspicion that ecological processes, which are characterised by a long term view, are diminished by economic language (Barouch, 1989) and by the more limited time horizon of market modes of regulation (Godard, 1980).

The principle of industrial justification founded on the future and technical progress, which as we have seen can encompass environmental issues, is also a principle that is virulently attacked. The idea of an environment that needs defending is embodied in criticism of the industrial mode of production and productivism (Lecourt, 1992), and ecological intellectuals are constantly criticizing modernity and industrial development. The ecological criticism of the 1970s was a protest against the existence and growth of a society of

[9] Different obligations and levels of protection exist for these two categories in France

technicians, and the older nature protection associations were challenged by politicised movements (Simmonet, 1979). Even today, in infrastructure operations, ecological activism is always against people who promote progress, speed, modernisation and greater access; it feeds on criticism of technocracy and challenges technical choices. It is considered impossible to reduce the reality of natural environments to technical language (Barouch, 1989).

The public interest-based mode of evaluation, which is the principle of public action, does not escape this ecological criticism. Generally, institutional structures are considered powerless to solve ecological problems (Godard, 1980) and, in matters of development of natural environments, the regulatory language deriving from legislative work usually seems inappropriate (Barouch, 1989).

As we have seen, environmental concerns form an active resource for questioning and challenging a certain number of specific points regarding the legitimacy of other modes of evaluation and justification for expressing the common good. This critical capacity suggests that ecology can found a new common good and establish a principle of justification that answers the same constraints as longer-established principles.

The framework of a new polity

Attention to the environment and its protection can establish an order of worth between the people and things that inhabit the green polity. In this polity, what has worth is what is ecological, and the ecological person is one who by his actions proves his concern for the environment and contributes to its protection. The adjective "green" is increasingly used to signify worth. It is used for objects at least as much as, and possibly more than, people: keeping a "green space" in an area that is being urbanised, or the regional policy of a "green belt" around the Parisian agglomeration (Barbier, 1992b, p. 71). Something that is ecological or green is something that is clean, biodegradable or recyclable, as opposed to something that

pollutes. Polluting is associated with a state of unworthiness. The "green car", also known as the "clean car", has a catalytic converter meaning that it pollutes less and uses "green" fuel.

In the green polity, worthy beings are not necessarily people, groups or institutions; they can be natural elements such as water, the atmosphere, the air, or the climate that must be protected from pollution, or generic beings such as flora and fauna. Unworthy beings are beings that pollute such as smog, exhaust fumes from vehicles, plastic which is non-recyclable, but also a number of beings that embody worth in the industrial polity: concrete, which is potentially responsible for immense, non-biodegradable ruins (Mathieu, 1992, p. 31), nuclear power plants which are endangering the planet, and motorways that contribute to pollution in the atmosphere and can disfigure the landscape. Some unworthy beings such as waste can change status and become worthy once they are recyclable. Some consumer goods can also gain worth in the green world if they are classified as ecologically friendly and demonstrate lower levels of pollution over their lifecycle than other products in the same category.

In the green polity, the difficulty faced by the ecological order of worth and mode of evaluation is establishing an equivalent that can make beings commensurable. This equivalence is achieved by other modes of justification (through trust in the domestic space, prices on the market, votes in the civic world, efficient performance in the industrial world, etc). An effort to construct such a general equivalence is visible in attempts to define thresholds for air pollution, water pollution, noise pollution, etc. and exposure to a certain number of identified risks. One illustration of this effort is a study conducted by the French Living Standards Research Centre CREDOC[10] at the request of the *Commissariat Général du Plan* (France's national economic planning commission) to define "indicators for the quality

[10] *Centre de Recherche pour l'Étude et l'Observation des Conditions de Vie*

of urban life and the environment". In the introduction to this study, its authors state that managers must have instruments to aid decision-making and evaluation of the measures applied (Hatchuel and Poquet, 1992, p. 5). The fact remains that the indicators proposed oscillate between measurement of a rate (rate of carbon gas emissions, for example) and assessment of the inconvenience caused by such emissions (percentage of individuals who declare they suffer ill effects from air pollution). However, the thresholds are often at the extreme ends of the measurement instruments' detection ranges and require very costly equipment. Analysis of pesticide pollution, for instance, needs mass spectrographs that cost a million francs (Montgolfier, 1990).

Green worth appears to be insufficiently equipped as yet to be extensively used in ordinary justifications and then put to the test[11]. It lacks the necessary classification instruments for decentralised implementation, which must meet two requirements: accessibility to all, in order to guarantee its critical capacity; and the ability to link evaluations or local decisions with a general need. To allow a new order of justification to emerge, each party must put their most ordinary everyday actions to the test according to a specifically ecological art of prudence, only a few of whose precepts are currently known.

III. From the polity to the ecosystem

We saw earlier that ecological arguments can adjust to tried-and-tested orders of justification, or alternatively give substance to a new order, a "green polity" which although specific does not undermine the shared vernacular. But we would not be doing justice to environment-related conflicts if we failed to acknowledge the points on which ecological arguments depart from that vernacular. Although they are scattered and disparate, the signs of

[11] The social sciences contribute to this instrumentation, and as a result their ability to incorporate the cause of nature is in question (Latour, Schwartz et Charvolin, 1991).

divergence from a framework that determines both legitimate political orientations and ordinary justifications are clear enough to be taken seriously.

1. – The boundaries of the referent community

A focus on justification leads the people involved in judgement to separate their actions from private interests to prove the extent of the common good to which they are contributing. One of the principles of the vernacular shared by the different forms of justification thus lies in a referent community made up of humans of equal worth who can make their voices heard and raise questions about orders of importance that would break away from this *common humanity* (Boltanski and Thévenot, 1991). This common humanity is not abstract, as it must be fulfilled in a critical capacity; failure to exercise this capacity is one of the major sources of a feeling of injustice. Confining criticism to a body of experts or a restricted community (whatever the nature of its boundaries) violates this requirement and leads to accusations of misuse of power. However, reference to nature can break with this principle in a totally different way from the modes that frequently trigger a feeling of injustice –an inverted mode for how the referent community might be extended.

Future generations

The ecological arguments referring to future generations involve people who cannot make themselves heard. The referent community must therefore extend further than the community of living people, to include future generations. If this community is understood as an abstract reference for a hypothetical agreement, this extension is not a problem. However, if the human community is to be actualised in an effective critical capacity that puts the action taken to a *test* of judgement, this extension is certainly problematic[12]. Yet this test is precisely

[12] As Brian Barry (1978) and Peter Wenz (1983) note, the Rawlsian theory of distributive justice encounters a similar difficulty, not in its Kantian component which authorises this extension of the referent community, but in its Human

what is demanded in the ordinary sense of justice, differentiating it from formally universalist theories of justice (Thévenot, 1992). Relations between generations cannot be tested in this way, because there is a lack of symmetry.

One solution consists of attributing rights to future generations. But this instrumentation cannot be realised as a simple extension of an individual's rights. It involves attributing these rights to collective beings through the creation of "generational rights" (Weiss-Brown, 1987). To bring future generations into present disputes, use of representation mechanisms is also proposed. The State is arguably a good candidate for this representation since it already defends its living citizens, but another possibility would be mediators like the Swedish ombudsman (ibid.). In either of these constructions the representative is not easily challenged by the people represented, yet it is a vital element of the critical dynamic.

Equivalence by heritage

The idea of "humanity's common heritage" which took shape in the 1960s before later spreading into the "global cultural and natural heritage" is another elaboration intended to address the link between generations.

The concept of natural heritage carries an intrinsic instability because it associates two semantically opposed terms. Heritage as an appropriated good, integrated into the familiar order of the heritage group, contrasts with the wild, non-appropriable aspects of what is natural (Godard, 1990). This elaboration can be seen as a work of compromise between two forms of temporality associated with two of the orders of worth into which nature can be inserted: one based on engenderment and transmission, the other constructed by a commitment to the future. In the ecological perspective, investment in the future is no longer

component that sees justice as a rational cooperation between mutually vulnerable actors. On the question of future generation, see also Barbier (1992b).

considered solely in the light of the expected return; it now involves a limitation of the space of possibles due to its impacts on the perpetuation of goods inherited from the past.

The concept of heritage can also be used to establish an equivalence based not on a given collective at a particular moment in time, but on the lineage of past and future beings that are made equivalent in relation to this heritage, and thus consolidate a new being, the "heritage group" (Godard, 1990). This can be viewed as indicating a return to a Roman law category, very different from a category of goods subject to trading (Thomas, 1980). But other questions are possible concerning the "equipment" of this equivalence for heritage by appropriate technologies[13].

A community that extends beyond humanity

Yet the biggest disruption that the ecological question causes to the vernacular of a common sense of justice results from an extension of the referent community beyond the human race. Reference to nature leads to a broadening of the list of beings involved in the assessment of what is just. Many conflicts have involved associations that are not defending people or groups, but speak for animals or plants generalised into species, or composite entities such as biotopes. These associations mainly concentrate on rare or endangered species of plants or animals: birds including birds of prey, animals threatened with extinction due to hunting such as bears and elephants, fish affected by trawler nets such as whales and dolphins, certain trees such as fir trees, and certain types of mushroom. The protection of an entire species means setting up reserves and reintroducing species that are locally extinct, for example the lynx, but also involves action aimed at the entities causing the threats. One example is found in the *Association Truite-Ombre-Saumon* (Trout-Grayling-Salmon

[13] Michael Mackenzie sees hydraulic agriculture technologies as examples of "material relations" with posterity through the "heritage of an infrastructure constructed in the past and maintained" (1985, p.64), and contrasts this "common project" approach with a cost-benefit approach.

association) set up by salmonid fishers, which is in fact a consortium of fishing associations. It differs from these latter associations in that its action is not confined to fish farming: it addresses questions of waterway pollution, and monitors industrial and agricultural installations that discharge effluents into rivers (Lascoumes, 1992, p. 196). The *Société herpétologique de France* (Herpetological Society of France) is concerned with the protection of batrachians and regularly puts pressure on the Public roads and Motorways' technical studies department. Because these associations need to connect a specific area of initiative with a general species, they are often characterised by a national field of intervention and operate in networks with a large number of local correspondents. This work is continued at the international level by the International Union for Conservation of Nature and Natural Resources, which works in liaison with the United Nations Environment Programme and the World Wildlife Fund (Mathieu, 1992, p. 72).

The dignity of non-human beings

The deviation via defence of non-human beings can contain the clearly-understood interests of a community of humans. But certain ecological arguments go further than this "surface ecology" and following Arne Naess, demand for "deep ecology" involving the consideration of non-human beings in their own right (Devall and Sessions, 1985; Tobias, 1985). The referent community required for evaluation of the common good thus finds itself extended, and ceases to be defined by a shared humanity. The generality that ecological arguments confer on animal and plant species is translated into terms of dignity. This perspective retains the language of justice or morality and extends it into "environmental ethics", which differ from a systemic approach that we will discuss later.

One elaboration of this kind consists of extending rights to animals. The oldest such extension concerns pets, making it part of the domestic framework of justification which

concerns the relations of mutual trust with animals that are kept in the home (while clearly distinguishing them from humans). But this order of worth cannot classify relations with all animals. The moral framework of utilitarianism, however, offers this possibility on account of the equivalence it assumes in the sum of the pleasures and pains experienced within a community of agents. Following Bentham's suggestion, Singer developed this broader version of utilitarianism, railing against a "speciesism" that gives undue precedence to the interests of the human race (Singer, 1975). There are precedents to support the extension of the community represented to include more than just human beings: the world of law is already inhabited by legal persons that have no human form and yet have rights (Stone, 1974). That being the case, why not "make natural perimeters subjects of law" (Hermitte, 1988)? An official decision for the protection of biotopes can be interpreted in this way: it sets out a management committee supposed to represent the biotope comprising Mayors, hunting federations, associations for the protection of nature and well-known scientists (ibid., p. 250). This mechanism can give rise to bans on removing hedgerows or spraying chemical fertilisers, or restrictions on tourism activities.

In addition to the consideration of rights, extension of the community can be considered in terms of ethics. Paul Taylor suggests that the "earth's community of life" should be defined on the basis of recognition that plants and animals have a "good of their own", which makes it possible to assess "their point of view" (Taylor, 1986, pp. 67, 101). In contrast to a community of "moral subjects", "moral agents" have duties, even if they also have an ability to form judgements. This distinction is not to be confused with humanity, since certain humans, when very young or very sick, are considered not to possess such moral agency. This dignity attributed to living beings is associated, as in the case of humans, with recognition of their individuality. Such a demand for individualisation is normally satisfied in dealings with pets, but is not easily generalised, and Taylor suggests using a statistical construction of the

mean (ibid., p. 69) which is somewhat reminiscent of the social morality of sociology in its infancy. This approach through individual dignity contrasts with the consideration of species as basic entities, founded notably on the concept of genetic inheritance (Johnson, 1983).

Beyond the debates on the categories that can extend the referent community, the crusade for animal rights has grown to a considerable scale in the United States (Jasper and Nelkin, 1992), as measured not only by the number of participants, but also by their strong commitment to the cause and the in-depth changes they have made to their lifestyle: a very strict diet, boycotting all consumer goods with any trace of animal matter, and in the most remarkable cases, refusal to use a car because of the threat it poses to clouds of mosquitoes, which inevitably would be crushed against the windscreen (Herzog, 1993).

2. – From the natural order to balance in the system

The various modes of bringing humans and other beings in nature closer together call into question the divide between the natural order and a social or political order. This divide is reflected in the differentiation between fields of knowledge and their methods by separating the arts of language, rhetoric and grammar from the sciences of nature. These "essential features of civilisation, independence of the social order and its opposition to the natural order" are being challenged (Moscovici, 1977, p. 515). Yet the aim is not to return to those forms of integration found in classical cosmologies which considered nature as an intelligent organism, against which mechanistic representations of the Renaissance were erected (Collingwood, 1960 ed.). We have also observed the limitations of integrating the social and natural order on the model of an industrial polity, the policy of which Saint-Simon constructed, a polity that includes nature as constituting a social bond only through the dignity of the work done to control it. Contemporary figures of integration owe more to cybernetics and evolutionary biology.

The "order of nature" was a point of reference for Ernst Haeckel when he coined the term "ecology" in 1866. This populariser of Darwin's ideas in Germany then proposed a plan for a political ecology founded on scientific knowledge of man's relationship with the world and the fundamental respect of this order of nature (Deléage, 1991). However, the concept of the system offers a different language, allowing different types of integration of humans and non-humans. It can represent interdependencies between beings of various kinds: human and animal populations, flora and abiotic elements such as soils, climates, etc. The ecologist Tansley created the concept of the "ecosystem" as a reaction against the organicist view, in order to incorporate abiotic physical factors (Acot, 1988, p. 123). Similarly, in his founding article of 1942, Raymond Lindeman argued that it was impossible to differentiate "a biotic community" from "its abiotic environment" in order to be able to assert that "the ecosystem is hence regarded as the more fundamental ecological unit" (Lindeman cited in Acot, p. 129). Thermodynamics specify interrelations between elements in the system in terms of energy, as shown in Lindeman's analysis of a lake ecosystem, or the articles published some fifteen years earlier by Transeau on the energy efficiency of a cornfield. The foundation of modern ecology is based on a general economy of nature, conceived in terms of thermodynamics (Deléage, 1992).

The vocabulary of the system lends itself to a representation of flows and impact accounting. This leads to the measurement of input/output efficiency that connects the system to a harmonious state of balance, or a state of imbalance. The instigator of a project affecting the environment can thus offer to "compensate for damage to the ecosystem" by creating ecosystem-friendly projects in other zones (Camus and Lafaye, 1992). Ecologists can provide unexpected support for a major infrastructure project (e.g. the TGV high-speed train) because "by taking some of the clientele away from cars and planes, the TGV leads to a favourable ecological balance" and "local inconveniences, which do exist, become acceptable" in view of

this overall balance (Barbier, 1992a). When considered in terms of this balance, it may turn out that "a vineyard has no ecological value". Draining a pond or marshland, destroying a copse, spreading fertiliser or weed killer in a field, or pouring chemicals into a river deplete their flora and fauna, and this depletion can have drastic consequences for the biological balance of a region, a country, or even the entire planet (Mathieu, 1992, pp. 75-78).

3. – Biological integration: the biosphere

References to the movement of life and biology open out onto other forms of integration, notably providing a foundation for a temporal dimension that is often present in debates on the environment[14]. The "biocenosis", a term invented by Möbius in 1977 to designate all animals and plants combined into a single "community of living beings" (Acot, 1988, p. 113), becomes the "biosphere". It is not surprising that Vernadsky, the author of *La biosphère* (1929), considered nowadays as a forerunner of the "Gaia hypothesis" (Lovelock, 1986), was accused of Bergsonian vitalism by his fellow Soviets (Grinevald, 1987, p. 216).

The reference points of biological evolutionists support one type of argument in particular which is foreign to the classic systemic form of integration. It emphasises the diversity of species, by drawing on the opportunities that diversity allows in terms of evolution. The importance attached to endangered, vulnerable or rare species is here justified by their potential role in a future evolution made unavoidable by necessities of adaptation. The concern for diversity is the source of a focus on conservation reflected notably in arrangements such as parks, nature reserves, conservation areas, etc. The role thus assigned to

[14] Collingwood saw temporality of evolutionary biology not as a generalisation of the methods of the life sciences, but rather as resulting from the opposite movement : the return of a historical approach on which these sciences are based, by analogy between the processes of the natural world and the vicissitudes of human affairs as studied by historians (Collingwood, 1960, p. 9).

diversity and the singularities of forms of life may be combined with a culturalistic attitude aiming to maintain the specificity of peoples and traditions.

Reference to the life sciences also helps to make a connection, in relation to ecological arguments, between temporality and a synchronic form of adjustment expressed in an organicist or holistic vocabulary. Reference to a global level (Grinevald, 1987) as the unit of development, the biosphere or Gaia, can contribute to a blending of the three models of integration (polity, system, evolution). The overall level symbolising the state of the system is a kind of higher common good, useful for assessing the relative importance of beings. In this perspective, not only can the vineyard appear less important than the high-speed train; the human race can appear less important than the myriads of insects that are so precious for a well-balanced biosphere. In light of an "ultimate reality in biology", neither molecules, nor cells, nor organisms, nor their populations can have any long-term independent existence (Jouve, 1991, p. 79). This is where a range of "deep" eco-political philosophies collide headlong with the frameworks of political and moral humanist philosophy, as seen in the daring conclusions of Naess and Lovelock regarding the need for a decrease in the human population[15].

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Is integrating nature into policies based on a shared humanity, with the civic order of worth in first position, compatible with the intelligence of the bonds developed in an

[15] By analysing the components of this political ecology, Luc Ferry (1992) showed similarities with past criticisms of modernity, resulting in his view from a common renunciation of the definition of man as an anti-nature being. As Bruno Latour (1993) highlighted, Ferry's critique of the *Contrat Naturel* by Michel Serres (1990) fails to do it justice on at least one major point. The "objective morality" advanced by Serres is certainly not a scientists's morality, but contributes to his concern to grasp the link between the objective and the collective, and a parallel between the movement of the law and of science.

ecosystem[16]? Tension arises whenever the ecosystem is used for evaluations in eco-politics. Representation of the connection between humans and non-humans in terms of a system does not meet the same needs as the critical dynamic of orders of worth and how they put things to the test. The systemic approach offers an overall picture for an all-seeing, all-knowing agent. It lends itself to an evaluation concentrated in the hands of experts who are deemed to have the required ability to construct and manipulate this representation, establish the measurements needed to draw up a report, and show any "unwanted side-effects"[17]. Strange shifts in evaluations are produced when forms of good, based on the vocabulary of action, are mixed with a form of balance, associated with the idea of the reproduction of living things. Having previously been considered a major danger for natural parks against which humans should *act*, forest fires are sometimes treated in the United States as agents that can help to preserve balance through the regeneration of species, and this approach, like the commercial form of balance, tends to encourage a *laissez-faire* attitude[18]. We draw no conclusions from these shifts in terms of policy, but note the concern to enhance our understanding of various modes of human engagement with non-humans and the distributions of competence that this implies.

[16] Constance Thévenot, a child having reached the age of reason, was "elevated to the rank of junior forestry officer" in a 1992 operation by the French Agriculture and Education ministries, with remittal of a certificate for her dual capacity to "be an active citizen respecting nature around her" and "study the natural ecosystems of her region".

17 The concept of the "unwanted side-effect", whose rhetoric was dissected by Albert Hirschman (1991), can be compared to a confusion between treatment of events through the form of the system and through action (Thévenot, 1992, p. 252).

[18] What should we make of the teaching given to the schoolgirl named earlier concerning the following proposition: "Predators are useful because they kill old, sick animals"? The intention is clearly to extend what is considered too small a range of animals that are popular with children because they are not nasty. Expressing the value in terms of utility supplies an appropriate connection for integration into a happy balance of life, leading to a proposition that is disturbing due to its suggested resonance in a human world, through a transposition facilitated by the adjectives "old" and "sick".

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