

Chapter Seven

Enclosing the Global Commons: Global Environmental Negotiations in a North-South Conflictual Approach*

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With the ongoing negotiations around the international agreements on climate change and biodiversity, humankind is entering a new area. For the first time, we are involved in the collective management of *global* ecological crises.

A 'global ecological crisis' is a crisis the causes of which are diffuse and the effects of which are universal. From the economic point of view, a global crisis differs greatly from *local* crises. In local crises, such as river pollution, traffic jams or soil erosion, local agents are usually directly accountable for damages to local victims (frequently the same individuals). Thus the economics of externalities, moral hazard and other microeconomic concepts are suitable to deal with the problem, at least theoretically, and even practically, for monetary compensation may be organized. We are dealing here with a 'stabilized universe', where people agree upon basic goals, duties and rights (Godard 1993). By contrast, in the ecological global crisis, the 'culprit' may be nothing less than a *model of development* encompassing whole continents, and 'victims' may be in other continents with different lifestyles. We are here in a 'controversial universe', involving debates about national models and international justice.

In this chapter, the climate agreement negotiation will be used as a life-size experiment, with some consideration given to other contrasting experiments: the ozone layer crisis and the biodiversity negotiations. The focus will be on the aspect of 'North-South' conflict, and we will consider economic tools not only as theoretical means to deal with our subject, but also as objects for our study. In fact, we are witnessing the birth of a social object: the political economy of global environment.

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THE OZONE LAYER NEGOTIATIONS AS MODEL

The 'acid rains' problem may appear as the first global ecological crisis dealt with in international relations. In fact, the problem was merely international, and could be considered as a peculiarly long-distance example of local pollution. It was discussed at the Berlin G7 Summit (1985) and led to international agreements implying national regulations covering the height of chimneys, catalytic converters and so on.

The ozone layer depletion problem was the first real global ecological problem *stricto sensu* - or at least it was the first to be seriously considered. This may be because the first potential and actual victims were Australians - that is to say, people living in an advanced capitalist country. From the sociological and economic point of view, Australia is a northern country. Once the cause of the Antarctic ozone hole was identified as the dispersion of CFC and other gases in the atmosphere, mainly in the geographic North of the planet, the crisis became an international North-North conflict. Moreover, the appearance of Antarctic ozone layer depletion increased consciousness of the absolute necessity to 'do something'. As a result, since the first Vienna agreement (1985) new international decisions are being taken yearly to counter this threat (Montreal 1987, London 1990, Copenhagen 1992). This life-size experiment proposed a kind of model for subsequent negotiations:

1. Attention to a global environmental crisis is first aroused by voices in the scientific community. Actually, the threat of a crisis is not perceived before it is voiced by scientists. Moreover, scientists do not immediately agree either on the causes or the effects. The point (in the ozone layer depletion crisis) is the fact that the very scientists who agree that CFC emissions are the causes of Antarctic ozone hole insist that some twenty years are needed between the emission of CFC in the northern hemisphere and its arrival above the Antarctic. Thus, hard decisions are to be taken with a weak knowledge of the potential consequences. We are thus in the realm of Limited Rationality *à la* Herbert Simon. In this case, Limited Rationality implies the implementation of the *Precaution Principle*: When the future effect of a present cause is uncertain but may be highly damaging and then irreversible, it is wiser to act immediately in order to suppress the cause until we know better.
2. The Precaution Principle is not a standard cost-benefit analysis: the cost of doing something is uncertain, the benefit is between null and gigantic, with a radical uncertainty *à la* Knight. Moreover, the benefit (in that case avoiding general exposure to skin cancers) is mainly a benefit to other generations. Thus the subjective aversion to the specific risk (for oneself or for one's children) weighs on the decision. (Future) victims have to find a speaker before a first move may be undertaken. And these speakers must have a voice that may be heard.
3. It is not sufficient that victims complain; it is necessary that 'culprits' feel accountable. Contrary to the 'no-bridge' principle of general

equilibrium theory,¹ the authors of global externalities have to feel sorry for the unfortunate and unwanted effects of their practices. The acknowledgement that future generations of Australians have a right to be protected from UV-rays is a social innovation, for, as Coase would put it, they had no explicit property right to a protective ozone layer. Of course, this new 'human right' is more easily acknowledged by Europeans and North Americans when they realize that they are affected by the same problems.

4. Since there exists no 'market' between generations and not even between nations for a global common such as the ozone layer, since there exists no world regulation and no world government, the solution appears as an agreement between nations about their commitment to avoid environmentally damaging practices at the national level. Since, in the present case, the 'culprits' are all likely to be in the 'sociological North' of the planet, the agreement is negotiated between economically advanced countries.

Here is the rub. Most, if not all, less developed countries have no other dream than to imitate the model of development that precisely led to the global crisis. The difference is that the agreement is signed *before* they may have enjoyed the benefits of the now prohibited practices (in this case refrigeration). Hence their objection: it may be necessary that we (southern nations) feel 'accountable' when we are as developed as you (northern countries) are now, but there is no reason why we should have to accept at once this new regulation which you ignored at the time of your take-off and industrialization. In the ozone layer protection debate, India and China lost no time in raising this objection, as they will do later. Here again, the ozone case proposes the following model.

5. Once the agreement is reached in the North, the South protests, and a new negotiation begins. We enter the realm of international relations. The power of the North (military, technological, financial) may be tremendously superior to that of the South, but it is not easily mobilizable in the specific conflict.² Countries such as China and India have a powerful weapon: their power to obstruct. They may refuse to sign, so they have to be induced to sign, for example, through some financial proposal, such as technology transfers at concessional conditions.
6. It must be emphasized that the problem arises from the principle of *sovereignty*. The State, the national State, is the only effective power that can create new entitlements, new regulations where natural or traditional property rights do not exist and may not exist. Even if an ecological crisis could be solved through market regulation of a new

1 In the standard microeconomics of GET, preference sets of agents are independent of the satisfaction of the other agents: there is 'no bridge' between various *homo oeconomicus* other than exchanges of commodities and money.

2 The concept of 'issue-specific power' was introduced in the field of International Relations by W M Habeeb (1988). It was introduced in the analysis of environment international negotiations by de Campos Mello (1992).

field of property rights (and this is far from obvious), the market and the rights have to be created. Up to now there is no possibility for this to occur other than by sovereign decisions of the States concerning their own citizens and territories *and* a 'free' agreement between sovereign states about the global commons.

The 'North-South' aspect of the problem then arises from the fact that, when a 'Universal' principle is agreed upon between sovereign States, the economic consequences may differ in the extreme according to the initial positions of different States, and more precisely according to their historical level of development.

Since we are talking of 'Commons', let us recall the great European crisis of the 14th century. At that time, given a particular technological paradigm and a particular set of social relations in the countryside, demographic pressure appeared to exceed the productive capacities of the land: hence the extreme sensitivity of the whole population to a new epidemic of the plague. Europe lost more than half of its population and, when two centuries later it recovered its 1340 level, the social and technological system of land use had dramatically changed. A new entrepreneurship had developed among new direct land holders (not necessarily land 'owners'). In order to secure a more efficient use of the land, village commons had been 'enclosed' and efficient farmers had the titles. The problem was that non-efficient peasants, who used to have the commons at their (inefficient!) disposal, were merely 'proletarianized'.

The European crisis of the 14-16th centuries may be understood as an economic, social, demographic and ecological crisis, and the 'enclosure movement' (origin of the 'bourgeois revolution') as a part of its solution. The present global ecological crises, which are crises of global commons, may imply some 'global enclosure' as part of the solution. A proletarianization of 'less efficient nations', that is an exclusion from access to world market and modernity as a result of this new barrier to entry, may then appear as a counterpart of that solution. Hence the North-South aspect of the political economy of global commons.

THE BIODIVERSITY NEGOTIATION

Much less discussed than climate change in the process on the way to Rio, the Biodiversity convention suffered from a fuzzy definition of its scope. Yet it turned out in Rio to be the unexpected battlefield which witnessed the complete defeat of US Administration by the coalition of all other countries, from the closest (Canada) to the farthest (Malaysia) but in such a way that it appeared as a victory of the latest... In fact, the Biodiversity battle expressed in a caricatured way the North-South character of the global environmental negotiations.

Biodiversity is *not* the diversity of 'big' animals. This diversity is already dealt with under the Washington Convention (1975). The biodiversity here considered is the diversity of living stock, that is diversity of microscopic species, and diversity of genetic stock within species, both of them

constituting the 'germoplasm', the raw material of the pharmaceutical and seed industries, and of biotechnologies. By extension, the debate on biodiversity has to deal with the diversity of the ecosystems in which 'biodiversity' can exist.

The concept of 'diversity' itself has to be qualified. Since we are not concerned here with aesthetics (once again, this is the scope of Washington Convention), the 'value of existence' of biodiversity is based on *unknown* diversity, or more precisely on the diversity (and proliferation) of unknown germoplasm. The fact that the scope of what is to be protected is unknown is not a weakness, but constitutes the very value of this 'global common'. In fact, biodiversity is the common immunization system of global life and of life-connected industries. Just as the human immunization system creates randomly at any minute antidotes for external aggression which are not yet existing, and selects from its stock an available response when a specific aggression appears, in the same way unknown biodiversity is a preexisting condition for stabilizing reactions within global life, organized or not by humankind. Of course, biodiversity becomes an economic common good when this reaction is organised by human activity.

Take as an example maize seeds, the basis for corn cropping. Maize was selected in a centuries-long process, thousands of years ago, in the area of Tehuacan in Mexico (Gay 1984). This process of selection was the result of the *techné* of Mexican peasants, but its precondition was the huge unknown variety of the genetic stock in the meso-American countryside.³ Though the varieties of maize selected by peasants were highly specialized by comparison to the wild ancestors of maize, the biodiversity within 'peasants maize' remained very wide. Moreover, the maize of the Indians' crops went on interfering with wild seeds of the same family, within a half-wild, half-cultivated (but 'handicraftly' cultivated) ecosystem.

By contrast, maize seeds produced by agribusiness and pharmaceutical firms are highly selected. In the 'edge-varieties' (the type of seeds with highest performance) which are used in the majority of modern cornfields in advanced capitalist countries, the biodiversity is extremely narrow. When a new aggression arrives (as has occurred) such as bacterial or viral aggression, the few selected seeds may be unable to react, and the only solution is to find, in a 'rich' ecosystem (from the biodiversity viewpoint), the genetic element which, by being added to the edge-seed, could solve the new problem. These 'rich' ecosystems are by definition in the *non-industrialized* areas where peasants' maize and wild maize still survive.

As we may notice, tropical rainforests are not the only reservoirs of biodiversity. Any area where there used to exist natural biodiversity and which was only exploited through picking or peasants' agriculture, but not through standardized and industrialized agriculture, is likely to present unknown useful germoplasm. Surviving biodiversity is thus the by-product

³ The difference between *techné* and *logos* as two forms of social knowledge (*techné*: empirical, implicit; *logos*: systematized, explicit) is developed in Marglin and Marglin (1990)

of surviving ethnodiversity. Thus it is not by some geo-historical luck that most biodiversity reservoirs, just like copper mines, are in the 'geographical South'. It is by the definition of biodiversity that these reservoirs are mainly in the sociological South (that is, the less developed countries). And it is quite likely that the useful aspects of this unknown biodiversity could only be detected by the R & D activities of pharmaceutical firms in advanced capitalist countries. In one sentence: biodiversity, as a raw material, is in the South and the industries that use it are in the North. We are back to the crudest, sixties-style dependency theory type, North-South conflict. Hence the very simple position of US Administration, presented in the Rio negotiation and in the GATT 'intellectual property protection' negotiation: *any molecule in a forest or a peasant's field is free, any molecule identified by a laboratory is subject to royalties*. And of course the South's position was just the reverse: *biodiversity being a localized natural resource belongs to the country in which it is present* (like oilfields). *The identification of the use-value of a molecule being a product of science, it should become a human common good*.⁴

In this debate, Europe was quasi absent. The EC report to UNCED did not address the real issue, and confused it with some enlarged Washington Convention. France proposed the constitution of some 'world natural parks' protected by some Green Helmets of UNO. This was an unacceptable proposal for 'enclosure' of biodiversity, subtracting such parks from common use and from the sovereignty of nations without any financial compensation. The proposal was the more unacceptable because France proved itself to be unable to protect its own 'rich' ecosystems (Marais Poitevin, Pyrenean Bears Reserve) against powerful lobbies (intensive agriculture, hunting, motorways).

Here there appears to be some paradoxical contrasts with our real 'enclosure' paradox. 'Enclosing biodiversity' means torrid 'efficient' modernized agriculture on some territories in order to protect the capacity of adaptation of all the rest! But clearly peasants and capitalist timber firms may think of other uses for these territories. A global regulation protecting biodiversity appears to deny the right to modernize. Thus the strongest opponents in the South will be the 'productivist elites' of newly industrializing countries: timber exporting Malaysia, the ranching-supporting governors of Brazilian Amazonia. On the other hand, indigenous people, who 'protect biodiversity at the risk of their own life' (according to a leitmotiv of Rio Global Forum of the NGOs), represented a potential ally for conservationist proponents in the North: either ecologists... or pharmaceutical firms (Hetch 1992, Hetch and Cockburn 1989a, 1989b).

These strange systems of alliances (quite noticeable in the support of the British singer Sting for the Amazonian friends of Chico Mendes) blurred the debate, until it finished in Rio with United States refusing to sign a convention tailored to a productivist compromise between elites of North and South. The convention acknowledged some property rights of

⁴ A joke heard around the GATT negotiation and the NGOs was that alternatively patents on maize should be paid to Mexicans with compound interest over 3000 years!

States over 'their' biodiversity and the necessity for biotechnological transfers to the South at concessionary conditions. Thus, it represented a 'victory' of the South. But in reality it was an acceptable compromise for the elites of both side:

- The firms in the North were acknowledged to have the right to put a patent on living stock, as a condition for financing R & D on biotechnologies.
- The States in the South were acknowledged to have a right to a new kind of royalties on their territory, on condition they agreed not to 'exploit' designated areas.

The losers were indigenous people (who were not recognized as the 'gardeners' of biodiversity⁵) and the most radical ecologists who were dubious about the development of biotechnologies. Actually, that issue was the occasion for the only major split in Rio in the Global Forum of the NGOs. But the George Bush administration refused to sign! As a result, all the choreography of 1970s anti-imperialism arose in favour of the Convention. Demonstrations raged in Rio streets against 'patents on living' and imperialist offences against sovereignty over 'our' forests. Canada signed, then Japan, Great Britain, and all Europe. The Rio Conference turned out to be a diplomatic Viet Nam for the Bush administration. Later, the Clinton administration signed the convention. A great deal, however, remains to be interpreted in this rather fuzzy text, in particular its consistency with the conclusions of the Uruguay Round regarding intellectual property.

THE CLIMATE CONFLICT

The Greenhouse Effect is certainly the clearest, the most spectacular, the best studied, and alas the most dangerous of North-South conflicts around global commons. It clearly illuminates most features of the 'ozone model' of a Controversial Universe which we presented earlier in the chapter.

- The first warnings came from scientists (in fact, from Arrhenius at the end of 19th century) much before any effect could be felt.
- When some indicators that *could* be associated with global warming appeared (spectacular droughts, typhoons, together with a small increase in average temperature in the last decade), some 'victims' were able to associate their problems with the scientists' warnings.
- The global crisis was addressed when ecological movements developed in industrialized countries, criticizing the northern way of life as the cause of the crisis.
- The 'solutions' proposed to the debate implied an agreement between sovereign States, involving national policies. The agreement seemed

5 In fact, indigenous people may be granted part of their rights through private agreements, such as in the negotiations between US pharmaceutical firms and Chamans in Guatemala.

to be within reach between northern countries, but soon it appeared that some proposals had an 'anti-South' bias.

Yet there are important differences with our two first examples:

- Contrary to the ozone crisis, the victims are mainly in the 'social South'.
- Contrary to the biodiversity crisis the burden of necessary policies would lie mainly on northern countries.

As a result, the North-South conflict will present a very strange picture: some northern states will try to convince other northern states and some southern elites to take measures mainly in favour of southern people!

We shall insist first on the 'in favour of whom?' aspect of the debate, for it was hidden by the more pragmatic debate 'who is to take the biggest share of the burden?' Yet neither economics nor international relations could ignore the question of 'interest'. In order to outline this, let us have a brief summary of the scientific aspect of the debate.

There was a quasi consensus in the International Panel on Climate Change (IPCC 1991) that, for a doubling of CO₂ concentration in the atmosphere (or equivalent quantities of other green house gases – GHGs), the rise in average temperature would be 3°C ±1.5°C. This large uncertainty for a physicist is not so relevant for international relations, because a rise of +1.5°C would already be a major problem (and +4.5°C an inconceivable crisis)!

Uncertainty also exists on *when* such a concentration would be reached, but, at the present rate of emissions, it is agreed that it was a question of more or less near a century.

What would be the effects of a +3°C increase?

We do not know exactly, and it is better so. As in Rawls' *Theory of Justice*, we are in a situation of distributing initial endowments and setting up the new rules of the game.⁶ According to Rawls, at this stage of the collective search for a 'fair' mode of regulation, it is better not to know who would gain the most, and stay under a 'veil of ignorance' (Rawls 1971).

For instance, for a doubling of CO₂ concentration, the increase in temperature during the northern summer on the Baltic sea would be less than 4°C (and less than world average) according to the numerical simulation of the French *Laboratoire de Meteorologie Dynamique*, and it would be more than 8°C (much more than world average) according to

6 The reference to Rawls is not artificial. The Rio debate was really an attempt to define an international ecological regime as fair as possible, and the words 'fair' and 'fairness' were certainly among the most frequently used. Here we need a terminological definition. In the International Relations theories *à la* Keohane-Krasner, the word 'regime' is used as a set of 'rules of the game', or 'mode of regulation', according to the usual terminology of the French Regulation Approach and sometimes of WIDER papers (eg Marglin and Schor 1990), while 'regime' usually denotes the *resulting trajectories* of the working of rules of the game. Since the languages of International Relations is invading global ecological debates (see Porter and Brown 1991), we shall use indifferently 'regime', 'mode of regulation' or 'rules of the game'.

the British Meteorological Office. Rain would increase in the Mediterranean basin according to the Geophysical Fluid Dynamics Laboratory at Princeton, and it would decrease according to the BMO! Philippe Roqueplo, who monitored the scientific debate with the eyes of the model-maker and of the sociologist, outlines the reluctance of many policy makers to clarify the regional distributions of global warming. In fact, the 'veil of ignorance' induces global *preventive* policies (involving North and South). On the contrary, the knowledge of who would be 'the winners and the losers' (from global warming) would foster an *adaptive* strategy of the losers and may exempt the winners from any solidarity (Roqueplo 1993:140).

Yet the fact that we don't know the *physical* effects does not entail our not knowing who would be economically the relatively 'worse losers'. In fact:

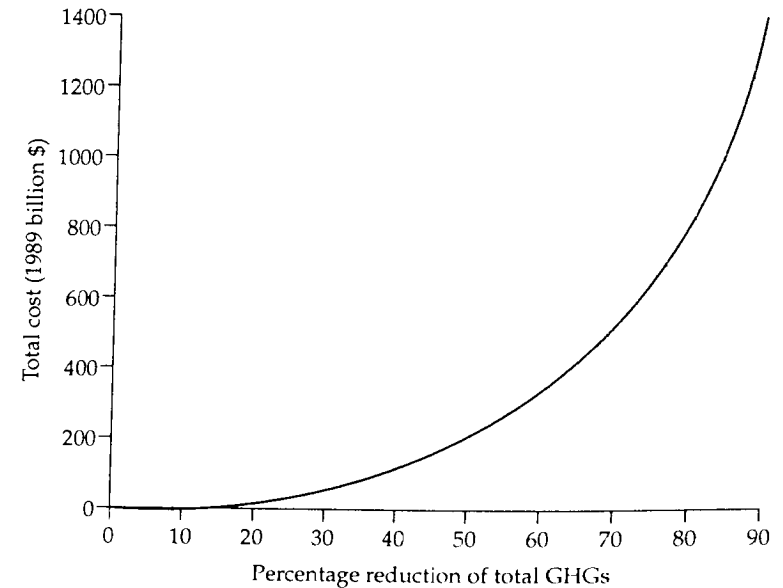
- First, weather will be globally wetter, but water will be less useful on the ground, for it will evaporate faster, or will erode the soil more violently. This 'tropicalization' of the world is likely to be detrimental to countries of the geographical South relying heavily on agriculture and with a large peasant population.
- The sea level will increase (through dilatation) by some 30–50 cm – a disaster for countries with large seashore populations: deltas, islands and so on.

Clearly, most victims are *de facto* in the 'social South': India, China, Bangladesh, the Maldives because of the sea-level rise; Southern America and Africa would join the list because of changes in conditions for agriculture.

By contrast, a country of the North like the US, though being a powerful agricultural country but with only one semi-desert delta, has a weak 'interest' in fighting the greenhouse effect. That was perfectly illustrated in a quite standard economic analysis by Nordhaus (1990). Admitting a doubling of CO₂ in 40 years with a green house effect of +3°C, Nordhaus first identifies its cost (for the US) with the fall in production in various sectors, principally agriculture. The latter being of less and less importance in US economy, the cost will be very low (–0.25 per cent in expected GDP). Then he discounts this cost at a rate of 4 per cent. Not surprisingly, such a low cost will justify few anti-GHG actions, even in the US where marginal economies are exceptionally cheap, as we shall see. Nordhaus evaluates the curve of cost of reduction of GHG emissions as rapidly growing: US\$5 per ton of carbon at the level of –13 per cent (by comparison to the baseline), US\$100 per ton at the level of –45 per cent. In his words, it would be 'unwise' to seek for more than a marginal reduction (–13 per cent). An ecotax of US\$5 per ton of carbon, that is 58 cents per barrel of oil, would be 'cost-effective'.

Nordhaus' argument is extremely interesting. By characterizing any effort greater than this very low level as 'foolish' and 'unwise', he laid the basis for the future position of the United States. Moreover, he indicates in a caricatured way the flawed approach of classical economics.

- He assumes a 'no bridge principle' between the 'satisfactions curves' of states, as microeconomists do between individuals. Thus, eco-



Note: Figure shows the estimated total long-run cost of different levels of GHG reductions. The calculations assume 1989 levels of world output and prices and 1989 levels of GHG emissions per unit output.

Source: Nordhaus, 1990

Figure 7.1 Cost of greenhouse gas reduction

demographic crises at the southern borders of the North are considered as 'no-cost' for northern countries. Such a statement is the more surprising in that Nordhaus proposes migrations as normal forms of adjustment to climate changes, as if ignoring the fact that 'economic migrants' are currently fired on at borders such as Tijuana. The 'No bridge principle' (that is, the idea that a country, and especially a leading country, should or may ignore the interests of its neighbours) is certainly unsuitable for international relations. Nordhaus clearly underestimates the costs *in the North* of a crisis in the South.

- He also overestimates the costs of prevention from global warming. His figures rely upon the instantaneous cost of GHG and energy saving policies, ignoring the economies of scale induced by a global regulation policy and the autonomous energy efficiency improvement.⁷
- The discount rate is an acceptable index for one individual's preference for the present. Is it an acceptable rule *between* present and future generations, that is, when there is no possible market with a co-contractor? This is precisely what is denied by ecologists and social philosophers such as Hans Jonas (1990). Their *Responsibility Principle*

⁷ On this debate about the long-term energy (or GHG) efficiency of techniques, see Hourcade 1993.