Globalization and Sustainability

Sachs, Wolfgang

Publication date:
1999

Document Version
Publisher's PDF, also known as Version of record

Globalization and Sustainabilily

Wolfgang Sachs

DEPARTMENT OF DEVELOPMENT AND PLANNING AALBORG UNIVERSITY

DEVELOPMENT RESEARCH SERIES
RESEARCH CENTER ON DEVELOPMENT
AND INTERNATIONAL RELATIONS (DIR)

WORKING PAPER NO. 71

Research Center on Development and International Relations (DIR)
Aalborg University
Denmark
Development Research Series
Working Paper No. 71

ISSN 0904-8154

Published by
DIR & Department of Development and Planning
Aalborg University

Distribution
Department of Development and Planning
Secretariat, room 36
Fibigerstraede 11
DK-9220 Aalborg East
Phone + 45 96 35 84 19
Fax + 45 98 15 65 41

Lay-out and wordprocessing
He He

Print
Centertrykkeriet and UNI-print 1999

The Secretariat
Research Center on Development and International Relations
att: Secretary Marianne Hoegsbro
Fibigerstraede 2
Aalborg University
DK-9220 Aalborg East
Denmark

Tel. + 45 96 35 98 10
Fax. + 45 98 15 32 98

E-mail: hoegsbro@i4.auc.dk or jds@i4.auc.dk
Homepage: www.i4.auc.dk/development

Globalization and Sustainability

Wolfgang Sachs

Symbols are the more powerful the more meanings they are able to admit. They actually live on ambivalence. The Cross, for instance, counted both as a token of victory for conquerors and as a token of hope for the vanquished. That ambivalence raised it above the fray; a single clear message would have meant that it divided rather than united. The same may be said of the image of the blue planet, now a symbol unchallenged by either Left or Right, conservative or liberal. Whatever their differences, they are all fond of adorning themselves with this symbol of our epoch. To fall in with it is to announce that one is abreast of the times, in tune with the world, focused on the future, truly prepared to set off into the new century. In this picture are condensed the opposing ambitions of our age. It is hoisted like a flag by troops from enemy camps, and its prominence results from this plurality of meaning. The photograph of the globe contains the contradictions of globalization. That is why it could become an all-weather icon.

No sooner had it become available, in the late 1960s, than the international environmental movement recognized itself in it. For nothing stands out from the picture as clearly as the round margin that sets it off from the dark cosmos. Clouds, oceans and land masses gleam in the wan light; the earth appears to the observer as a cosy island in a universe unfriendly to life, holding all the continents, seas and living species. For the environmental movement the picture's message was plain: it revealed the earth in its finitude. That circular object made it obvious that the ecological costs of industrial progress could not be shifted forever to Noplace, that they were slowly building up into a threat to

all within a closed system. In the end, the externalization of costs belonged to the realm of the impossible. In a finite world, where everyone was affected by everyone else, there was an urgent need for mutual care and attention, for more thought about the consequences of one's actions. Such was the holistic message – and, certainly, it was not without some effect. Since the days when a few minorities launched their appeal so full of foreboding, the image of the planet as a closed system has steadily gained currency and even recognition in international law. The conventions on ozone, world climate and biodiversity prove that the perception of the earth's bio-physical limits has attained the supreme political consecration.

For some time, however, ecologists have no longer had a monopoly on the image. At various airports, in the endless passageways between check-in and exit, a well-lit publicity board has been visible in recent years that strikingly expresses a different view of globalization. It shows the blue planet pushing itself on the observer from its blue–black background, with a laconic text: 'MasterCard. The World in Your Hands.' The hurrying passengers are being told that, wherever they fly in this big wide world, they can count on the services of their cards and slot themselves into a global credit and debit network. The credit-card empire stretches out across all frontiers, with purchasing power in any location and accounting in real time, and its electronic money transfers ensure that the traveller is always provided for. In these and numerous other variations, the image of the planet has turned since the 1980s into an emblem of transnational business; hardly any company in telecommunications or tourism – not to speak of the news industry – seems able to manage without it.

This has been possible because the picture also contains quite a different message. In its detachment from the pitch-black cosmos, the terrestrial sphere

stands out as a unified area whose continuous physical reality causes the frontiers between nations and polities to disappear – hence the visual message that what counts is perhaps the boundaries of the earth, but certainly not political frontiers. Only oceans, continents
and islands can be seen, with no trace of nations, cultures or states.

In the picture of the globe, distances are measured exclusively in geographical units of miles or kilometres, not in social units of closeness and foreignness. The satellite photographs generally look like renaturalized maps, seeming to confirm the old cartographical postulate that places are nothing more than intersections of two lines – the lines of longitude and latitude. In marked contrast to the globes of the nineteenth century, which sharply delineate political frontiers and often use different colours for different territories, any social reality is here dissipated into morphology. The earth is depicted as a homogeneous area offering no resistance to transit – or only resistance caused by geographical features, not to human communities and their laws, customs or purposes. Every point of the hemisphere turned towards the observer can be seen at the same moment, and this simultaneous access of the human gaze suggests the idea of unobstructed access on the ground too. The image of the planet offers the world up for unrestricted movement, promises access in every direction, and seems to present no obstacle to expansionism other than the limits of the globe itself. Open, continuous and controllable – there is an imperial
message too in the photographs of the earth.

The image symbolizes limitation in the physical sense and expansion in the political sense. Little wonder, then, that it can serve as a banner for both environmental groups and transnational corporations. It has become the symbol of our times across all the rival world views, because it brings to life both sides

of the basic conflict that runs through our epoch. On the one hand, the ecological limits of the earth stand out more clearly than ever before; on the other hand, the dynamic of economic globalization pushes for the removal of all boundaries associated with political and cultural space (Altvater and Mahnkopf 1996). The two narratives of globalization – limitation and expansion – have acquired a clearer form over the past three decades and fight it out in both the arena of theory and the arena of politics. The outcome of this struggle will decide the shape of the new century.

The Rise of the Transnational Economy

Since the mid-1970s, when the Bretton Woods system of fixed exchange rates gave way to floating parities determined by the market, the world economy has witnessed the collapse of boundaries in a process that started slowly but has gradually speeded up. Of course, the quest for raw materials and markets had for centuries been impelling capitalist companies beyond their national frontiers, but only in the last few decades has an international order been created that works programmatically

towards a transnational economy with open borders. Whereas all the first eight GATT rounds since the war dismantled more and more tariff obstacles to the exchange of goods, in line with the traditional ideal of free trade, the last of these, the Uruguay Round, and the newly constructed World Trade Organization have laid the legal foundations for politically unregulated movement of goods, services, money capital and investment right across the globe. The Uruguay Round, concluded in 1993, drew more widely the circle of freely tradable commodities and also deregulated 'software products' such as planning contracts, copyrights, patents and insurance. Controls on the movement of capital, allowing easier inward and outward financial flows, have been progressively removed over the past 20 years,

first in the USA and Germany, then in the mid-1980s in Japan, and finally in the countries of the South. In order to make foreign investors feel more at home everywhere, the WTO (and the OECD with its provisionally stalled multilateral investment agreement) have imposed on each state an obligation to accord at least the same rights to foreign as to domestic investors.

A Utopian energy is at work in all these initiatives. This can be seen in the ever more frequently declared intention to create a 'level playing field', a global arena for economic competition in which only efficiency counts, unfettered and undistorted by any special local traditions or structures. All economic players are supposed to have the right – at any place and any time – to offer, produce and acquire whatever they want. Up to now, this free play of the market has been hindered by the dizzying diversity of the world's social and legal orders, which have grown out of each country's history and social structure. The aim now, therefore, is to wrench economic activities from their embeddedness in local or national conditions and to bring them under the same rules (if any) everywhere in the world. There should be no blocking, weakening or interfering with market forces, because that leads to efficiency losses and suboptimal welfare.

This Utopian model of economic globalization also features the earth as a homogeneous area, to be crossed at will by circulating goods and capital. Only supply and demand, and in no case political priorities, are supposed to speed up or slow down these flows and to point them in the right direction. The world is conceived as a single huge market-place, where factors of production are bought at their cheapest ('global sourcing') and commodities are sold at their highest obtainable price ('global marketing'). Just as in satellite pictures of the planet, no role is played by states and their particular laws; places where people live are

foreshortened to mere locations of economic activity. And yet, to the continual annoyance of the neo-liberal heaven-stormers, societies everywhere prove sluggish and resistant. The globalizers thus have the onerous task of adapting base reality to ideal model; their mission is tirelessly to overcome obstacles to the free flow of commodities and thus to make the world comprehensively accessible. That is precisely the programme of the WTO's multilateral economic regime.

In the last few decades, of course, a material infrastructure has also been created for transnational integration. Without the global network of telephone lines, glass fibre cables, microwave channels, relay stations and communications satellites, there would be no open-border world – or at least not as a routine part of everyday life. For electronic data flows – which can be converted into commands and information,
sounds and images – eat up kilometres at the press of a key or the click of a mouse. Geographical distance ceases to be of any significance, and since the costs of the transfer and processing of data have dramatically fallen, worldwide interaction has become the daily bread of globally oriented middle classes. Thus, electronic impulses translate what the external view of the planet already suggested: the unity of space and time for any action in the world. In principle, all events can now be brought into relation with one another in real time for all parts of the earth. Whereas the picture of the globe conveyed the absence of boundaries as a visual experience, electronic networking converts it into a communications (and air transport into a travel) experience. The constant high-volume, lightning-fast flow of bits of information around the globe achieves the abolition of distance as well as the compression of time; electronic space produces a spatio-temporally compact globe (Altvater and Mahnkopf 1996).

The information highways may be compared to the railways: the digital network is to the rise of a global economy what the railway network was in the nineteenth century to the rise of a national economy (Lash and Urry 1994). Just as the railway infrastructure became the backbone of the national economy (because falling transport costs enabled regional markets to fuse into a national market), so the digital infrastructure is the backbone of the global economy, because falling transmission costs enable national markets to fuse into a global market. Distance is not, of course, truncated in the same way everywhere in the world. This results in a new hierarchy of space: the 'global cities' stand at the top of the pyramid, closely bound together across frontiers by high-speed air and land links and by glass fibre cables, while at the bottom whole regions or even continents – Africa or Central Asia, for example – constitute 'black holes' in the informational universe (Castells
1997), not connected to one another in any significant degree.

On closer examination, then, the networks of transnational interaction rarely assume configurations that stretch across the whole planet; they are not global but transnational, because they bind together only shifting segments of the earth. They are deterritorialized rather than globalized. Unlike earlier types of internationalization, this is particularly the case for the characteristic economic forms of the global age – geographically extended chains of value creation and global finance markets. Basing themselves upon an infrastructure of electronic and physical traffic, companies are now in a position to split up their value-creation process and locate individual parts in areas of the world with the most advantageous wage, skill or market environment. Thus, for a product taken at random, the early stages may take place in Russia, the further processing in Malaysia, the marketing in Hong Kong, the research in Switzerland, and the

design in England. Instead of the traditional factory where products were largely manufactured from beginning to end, a network of partial locations makes it possible for previously unheard-of efficiency gains to be achieved. The textbook case of collapsing frontiers, however, is provided by the operations of finance markets. Shares, loans and currency stocks have long left 'paper' behind and become digitalized; their owners can be switched at the press of a key, quite regardless of borders or geographical distance. Nor is it an accident that the most extensively globalized market is the one that deals in the least physical of all commodities: money. Dependent only on an electronic impulse, it can move angel-like in real time anywhere within a homogeneous space. It seems as if the narrative of collapsing frontiers can best be translated into reality when it takes place within the incorporeality of cyberspace.

How Economic Globalization Reduces the Use of Resources

For the protagonists of economic globalization, there is no greater thorn in the side than closed economic areas. Import restrictions and export regulations, product standards and social legislation, investment guidance and laws on the sharing of profits – in short, political provisions of any kind that establish a difference between one country's economic system and those of others – are perceived by the globalizers as so many obstacles to the free movement of the factors of production.

They therefore seek to undermine, and gradually to break up altogether, the state-defined 'containers' of national markets, and to replace them with a transnational arena where economic actors are no longer prevented by special rules and regulations from carrying through the dynamic of competition. The multinational economic regimes – whether geared continentally to ASEAN, NAFTA or the EU, or globally to GATT and the WTO – come down to the construction of homogeneous competitive areas stretching across nations.

The promise held out in these initiatives is one of a world that gets the utmost out of its limited means. A way has to be found of satisfying more and more people around the world, with more and more claims, and it is from this challenge that the friends of globalization derive their task – indeed, their mission – to subject the world's economic apparatuses to a course of efficiency-raising treatment. For the point of market liberalization is to ensure, through the selective power of competition, that capital, labour, intelligence and even natural resources are everywhere deployed in the most efficient manner. Only such treatment continually renewed, argue the globalizers, can lay the basis for the wealth of nations. True, companies do not act out of lofty motives but simply take advantage of opportunities for profits and competitive triumphs; nevertheless, the 'invisible hand' of the market
is expected in the end to produce greater prosperity for all, even at a world level. A dynamic must therefore be set in train that exposes every protected zone of low productivity to the bracing wind of international competition.

The main targets for such a strategy are the state-run economic complexes in the former Soviet Union and in many countries of the South. In fact, external protectionism and internal sclerosis often go hand in hand, for parasitical structures arise most easily where power elites can use their possession of the state to appropriate a country's wealth. Insulated from competition, whether internal or external, the power elite can get away with deploying capital and other resources in
short-term operations that produce a maximum surplus – a considerable part of which is then stashed away in foreign bank accounts. Along with the state monopoly of economic activity, the pressure on workers and the underprovision of consumers, it is especially the frenzied exploitation of natural resources that

here rakes in a quick profit. Growth soon becomes synonymous with expanded extraction from nature: oil in the Soviet Union, Nigeria or Mexico, coal in India and China, wood in the Ivory Coast and Indonesia, minerals in Zaire. Of course, it was no accident that the use of resources in the former communist countries was much higher than in the West, for natural treasures were seen as a cost-free (because state-owned) means of fuelling industrial development – especially as growth pressures were directed to extensive rather than intensive ways of increasing production. The opening up of bureaucratically ossified economies to competition was thus to the benefit of resource efficiency. Almost as soon as the wall of restrictions and subsidies crumbled, new suppliers from outside appeared on the scene and placed the old wasteful economy in question. Globalization razes strongholds of mismanagement to the ground, and in such cases cuts down on the use of natural resources by enforcing at least economic rationality.

This efficiency effect does not operate only through expanded entry to the market. Trade and investment also increase access to technologies that, in comparison with domestic ones, often bring considerable gains in efficiency. This applies in particular to such sectors as mining, energy, transport and industry. Examples range from the export of more economical cars from Japan to the United States, through the introduction of new power station technology in Pakistan, to the savings in material and energy that came with new blast-furnaces in the Brazilian steel industry. There is strong evidence that more open national economies deploy more resource-efficient technologies at an earlier date, simply because they have better access to the most modern – which usually means more efficient – technological investment. Moreover, transnational corporations tend to standardize technologies between countries at a more advanced level, rather than expose themselves to all kinds of coordination costs. The connection is by no means necessary, of course, but it is probable – and it

may be said that more flexible investment rules generally favour entry to a higher technological trajectory (Johnstone 1997). The efficiency effect of more open markets is visible not only in supply-side technology transfers but also on the demand side: commodity exports from the fast-developing countries to the post-industrial regions of the North have to stand the test of consumer preferences in the North, and since the market demand there often displays greater environmental awareness, production structures in the exporting country may have to adapt to those standards.

The justification for economic globalization, then, is supposed to be that it establishes an empire of economic efficiency, and that this effect often extends to the use of energy and raw materials (OECD 1998). This is understood as a growth in micro-economic rationality, as a striving to deploy the factors of production in an optimal manner everywhere. Of course, the promoters of globalization have to play down the fact that this can equally well go together with a decline in macro-rationality as regards both political–social relations and the environment. For market rationalization may lower the use of particular resources – that is, input per unit of output – but the total use of resources will nevertheless grow if the volume of economic activity expands. Growth effects may all too easily eat up efficiency effects. In fact, so far in the history of industrial society, efficiency gains have quite consistently been converted into new opportunities for expansion. This, from an ecological point of view, is the Achilles' heel of globalization.

How Economic Globalization Expands and Accelerates the Use of Resources

In recent years globalization has been hailed, often with the full redcarpet treatment, as opening a new era for humanity. Yet its goals are surprisingly

conventional: it serves on its own admission to spur world economic growth, and it involves – under changed historical conditions – such long-standing strategies as intensive development and growth through expansion. On the one hand, there is the shifting distribution of the value-creation chain across far-flung regions of the world, which enables companies – in their choice of the best location for each stage of production – to enjoy to the full rationalization benefits that were simply not available before. The advancing digitalization of economic processes has also created new scope for productivity gains – for example, through flexible automation in manufacturing, simulation techniques in research, or perfectly timed logistics in networks of cooperation. With the restructuring of large parts of the world economy, it has thus become possible to wring further growth from long drawn-out productivity competition in OECD markets that were largely saturated at the end of the 1970s. On the other hand, growth has occurred through expansion – and, in particular, through the quest for new markets abroad. Many companies that might not have been able to make much further progress on local markets decided instead to tap demand in other OECD and fast-developing countries. The combined result of these two strategies may be seen in the fact that the world economy is well on its way to doubling between 1975 and the year 2000. Even if all GNP growth does not involve a parallel rise in the flow of resources, there can be no doubt that the biosphere is under ever greater pressure from the anthroposphere.

Direct foreign investment and the expansion effect

The Utopian horizon of globalization is a permeable borderless world in which goods and capital can move around freely. Whereas the various GATT agreements expanded the exchange of goods over a period of decades, the further elimination of national barriers has in the last 15 years mainly affected

the mobility of private capital. Between 1980 and 1996 the cross-border exchange of goods increased by an annual average of 4.7 per cent, but foreign investment rose by 8.8 per cent per annum, international bank loans by 10 per cent, and the trade in currency and shares by 25 per cent *(Economist* 1997a). If one looks at the geographical distribution of these flows it becomes clear that, although the lion's share of the capital traffic remains as before within the USA–EU–Japan triad, transfers of private capital have sky-rocketed mainly in the ten 'emerging markets' of East Asia and South America. They rose from an annual $44 billion at the beginning of the 1990s to $244 billion in 1996, before settling down at some $170 billion after the 1997 financial crisis in Asia (French 1998: 7). An important sub-category – accounting for one-half in the case of manufacturing, more than one-third in services, and 20 per cent in the primary sector – has been foreign investment to buy up existing firms or to found new ones. For the investing company, the point of this has been to control the further extraction of natural resources, to erect a platform within a transnational chain of pro-duction, or to gain access to export markets. For the host state, on the other hand, the aim has been to draw in investment capital and know-how, as part of a fervent desire to take off economically and to catch up with the rich countries at some point in the future.

With the migration of investment capital from the OECD countries, the fossil model of development has spread to the newly industrializing countries and even well beyond them. Whether it is a question of factories in China, chemical plants in Mexico or industrial agriculture in the Philippines, the countries of the South are entering on a broad front the resource-intensive fossil stage of economic development. That fateful style of economics that consolidated itself in Europe in the late nineteenth century, resting to a large degree upon the

transformation of unpaid natural values into commodity values, is now expanding to more parts of the world in the wake of foreign investment. Certainly, a good part of this development is also being driven by locally accumulated capital, but the gigantic influx of foreign investment has deepened and accelerated the spread of – environmentally speaking – robber economies. Everywhere prevails an industrial–social mimetism, a copying of modes of production and consumption that, in view of the crisis of nature, may already be regarded as obsolete. For in the conventional path of development, monetary growth always goes together with material growth; a certain uncoupling of the two appears only in the transition to a post-industrial economy. The favoured targets for investment are thus precisely raw materials extraction or energy and transport infrastructure, which all push the use of natural resources up and up. Even if input per unit of output is lower than at a corresponding stage in the development of the rich countries, the absolute volume of the flow of resources has been increasing prodigiously.

The removal of national obstacles to investment activity stands in an increasingly tense relationship with the earth's bio-physical limitations. Thus the fast-industrializing countries recorded a steep rise in their CO2 emissions (varying between 20 and 40 per cent in the 1990–95 period), while the industrialized countries – at a higher level, of course – increased theirs only slightly (Brown et al. 1998: 58). All in all, fossil fuel use will double in China and East Asia between 1990 and 2005, to reach a volume almost comparable to that of the United States (WRI 1998: 121). The motor car may serve as a symbol in this respect. In South Korea (before the crisis broke), car ownership was expanding by 20 per cent a year (Carley and Spapens 1998: 35). On the streets of India, virtually the only car to be seen in 1980 was the venerable old

Ambassador limousine – a real petrol-guzzler, of course, but limited in numbers and therefore discharging far less gas than the huge fleet of more efficient vehicles turned out by the nine automobile corporations now operating there. Thus, in countries where transport has until now been mainly a question of bicycles and public services, further development of their eco-friendly systems will be blocked and replaced by a structure dependent upon high fuel use. It is altogether consistent with the logic of fossil expansion that the World Bank, for all its lip-service to 'sustainable development', allocates two-thirds of its expenditure in the energy sector to the mobilization of fossil energy sources (Wysham 1997).

Another symbol of a lifestyle widely regarded as modern, the Big Mac, may serve to illustrate the mounting pressure on biological resources. In little more than five years between 1990 and 1996, the number of McDonald's restaurants in Asia and Latin America quadrupled (UNDP 1998: 56), against a background of tripled meat

consumption over the past 25 years. Such trends mean more and more water, cereals and grazing land for cattle, so it is hardly surprising that, in the 1980s alone, the countries of South-East and South Asia lost between 10 per cent and 30 per cent of their forests (Brown et al. 1998). The forest fires in Indonesia, whose dense clouds of smoke covered half of South-East Asia in 1997–98, originated in massive slash-and-burn clearances and were widely interpreted as a warning of the destructive power of the Asian economic miracle.

Deregulation and the competitive effect

The creation of a global competitive arena requires efforts not only a quantitative expansion but also a qualitative restructuring. Alongside the geographical extension of the transnational economy, its internal reordering has

also appeared on the agenda of the day, for new rules of economic competition are indispensable if there is to be a homogeneous space no longer riven by national economic idiosyncrasies. There is no other way for would-be globalizers than to dismantle the national regulatory apparatuses that have previously encompassed economic activity. These apparatuses, which generally reflect a country's historical experiences, social sets of interests and political ideals, combine the logic of economics with other social priorities, in both fragile compromises and institutions built to last. At a later stage of the secular process that Karl Polanyi called 'disembedding', the dynamic of economic globalization is intended to release market relations from the web of national norms and standards and to bring them under the law of worldwide competition. Whatever these norms cover – labour conditions, regional planning or environmental policy – they are neither wrong nor right but are seen as obstructing entry into the global competitive arena. In this view of things, norms might be acceptable at a global level – although the question does not really apply, of course, in the absence of a political authority. Deregulation is thus a catch-all term for attempts to further global competition by dissolving the links between economic actors and a particular place or a particular community.

Like any regulation of economic activity in the name of the public interest, protection of the environment is also coming under pressure in many countries. As the number of economic actors on the global market continues to grow, so too does the competition between them – which is why governments everywhere tend to attach a higher value to competitive strength than to protection of the environment or of natural resources. New ecological norms, often imposed by democratic public opinion after years of struggle and controversy, are perceived by companies as a hindrance to competition and in many cases fiercely resisted.

As competitive interests gain the upper hand over protective interests, it becomes many times more difficult to halt deforestation in Canada or overmining in the Philippines, to stop the building of more motorways in Germany, to introduce eco-taxes in the European Union, or to maintain ecological product standards in Sweden. However, although governments are often enough determined to make their country a more attractive site for footloose capital, it is doubtless an exaggeration to speak of a 'race to the bottom' in matters concerning environmental standards (Esty and Gerardin 1998). Sometimes the protective interests are too strong, or it may be that environmental

factors are not all that significant in a siting decision. It would be more accurate to say that environmental regulation has tended to get 'stuck in the mud' as a result of increased competition (Zarsky 1997). True, world market integration has brought a certain convergence among national regulatory systems, but this has been happening too slowly and at too low a level. In many countries, the process of economic globalization has blocked any real progress in national environmental policy.

Not surprisingly, the ambition to standardize competitive conditions throughout the world – especially in the case of cross-border trade – clashes with the right of individual countries to shape economic processes. Now that tariff barriers for industrial goods have been largely dismantled through the successive GATT rounds, should environmental reasons be allowed to put certain categories of import at a disadvantage? This question has been much disputed ever since the Uruguay Round, and it continues to give rise to controversy within the WTO and OECD over deregulation and protection interests. Under the trade rules currently in force, individual states are entitled to lay down environmental and

health standards, so long as the same kinds of goods are subject to the same regulation regardless of whether they are imported or locally produced. Of course, this applies only to the composition of a product: a government might decide, for instance, to slap a special tax on all cars above a certain power threshold. Here, it seems, the principle of national sovereignty contradicts only the principle of the unregulated circulation of goods. What is forbidden in international trade, however, is to discriminate against goods whose production process does not conform to certain environmental standards. Which chemicals are used to produce an item of clothing, whether wooden products come from forest clearance areas, whether genetic engineering methods have been used to produce a plant – on none of these questions is a government allowed by WTO rules to express a collective preference. Thus, in the
well-known tuna affair, the ban on dolphin fishing could not be maintained under NAFTA rules, and one of the present disputes between the USA and the EU is over whether governments have the right to keep hormone-intensive beef out of their markets. Moreover, since local production standards are also put under strain when importers are able to gain a competitive advantage by externalizing environmental costs, individual states lose the power to insist that production processes in their own country should be environmentally sustainable. The deregulation interest nullifies the protection interest. Through the competitive effect of free trade, even gentle course corrections towards a sustainable economy are soon brought to a standstill.

All the deregulation efforts are also meant to cleanse the economy of extraneous influences, thereby ensuring optimal deployment of the factors of production. Consumers are ostensibly the main ones to benefit, since deregulated operations encourage a more varied supply through easier market entry as well as lower

prices through greater competition. Nevertheless, a regime of ruthless efficiency in environmentally significant sectors may lead to greater overall use of resources. If the price of heating oil, petrol, coal or water falls, then normally demand for them will rise and it will be even less worth introducing conservation technologies. Deregulation of the electricity market in the OECD countries, for example, certainly helped promoters of energy-efficient power stations to enter the market, but it also showed that lower prices may hinder a changeover to cleaner energy sources such as natural gas and, more important still, actually encourage higher electricity consumption (Jones and Youngman 1997). Anyway, it is fairly easy to see that falling prices within a price system that does not accurately reflect environmental costs will accelerate the quarrying of resources. So long as prices do not tell the ecological truth, deregulation will only take the market further down the ecologically slippery slope – and it is not exactly rational to keep running more efficiently in the wrong direction. But the purer competition becomes as a result of deregulation, the less will ecological rationality be able to assert itself against economic rationality. Under the given price system, global competition will deepen the crisis of nature (Daly 1996).

Currency crises and the sell-out effect

Nowhere has a global com-petitive space been raised so clear of national boundaries as in the case of the finance markets. Goods take time to be carried from one place to another, foreign investment requires factories to be built or dismantled, and even services such as insurance cannot be traded overseas without a network of branches and representatives. Only financial transfers in the form of shares, loans or currencies are scarcely subject any longer to restrictions of time and space. Every day, billions of dollars change hands online in virtual space through mere touches on VDU keyboards, irrespective of

physical distance. Only on these electronic markets does capital finally attain its secret ideal of completely unfettered mobility. For the money markets have very largely shaken
off the inertia not only of temporal duration and geographical distance, but also of material goods; less than 2 per cent of the currency trade is now covered by actual commodity flows (Zukunftskommission 1998: 73). This virtual economy has been made possible technologically by electronic networking, and politically by the deregulation of international capital traffic in the industrialized countries in the 1970s and 1980s, as well as in major developing countries in the 1990s.

As we have seen, it was the collapse of the Bretton Woods system in 1971 that gave the impetus to this development. Currencies could become commodities, their price set by the laws of supply and demand on the capital markets. But the value of a currency is a matter of fateful significance for a country: it determines the purchasing power of the national economy in relation to other national economies around the world. In fact, the ups and downs of freely convertible currencies reflect the expectations of future growth and competitiveness that investors entertain about the respective economies. In a way, a country's whole economy thus becomes a commodity, whose relative value crystallizes through the return envisaged by investment fund managers. This gives the finance markets great power *vis-à-vis* economically weak countries, so great that fluctuations in the exchange rate can decide the fate of whole nations. Governments, whether democratic or authoritarian, often find themselves compelled to gear their economic, social and fiscal policies to the interests of investors, with the result that the interest of their own people in social and economic security all too easily goes by the board. It is as if investors cast a daily ballot by transferring huge sums of money from one country to another

(Sassen 1996); the global electorate of investors lines up, as it were, against a country's local electorate, and not infrequently the government allies itself with the investors against its own electors. At the same time, however, the currency crashes in Mexico in late 1994, in several East Asian countries in 1997, and in Russian and Brazil in 1998 made it plain that investors are as jumpy as a herd of wild horses that stampedes off now in one direction, now in another as danger threatens. The collective optimism with which investors forget about risks during an upturn is matched by the collective panic with which they flee out of loans and currencies during a downturn. Investment-seeking capital storms into countries and back out again. On its way in, it gives rise to false dreams; on its way out, it leaves behind ruined human lives and ravaged ecosystems (Cavanagh 1998).

Currency crises are quite likely to threaten nature in the affected countries, for those that are rich in exportable natural resources come under intense pressure to exploit them more extensively and at a faster tempo. The falling value of the currency means that they have to throw larger quantities onto the world market in order to stop their export earnings falling through the floor. An exchange-rate crisis thus intensifies the already chronic hunger of indebted states for foreign currency, so that they will be able to repay loans and to import at least the minimum of food, goods and capital. But often the only option left is to use freely available nature as a currency-earner – as one can see from the current boom in the export of oil, gas, metals, wood, animal feed and agricultural produce from countries in the South hit
by the financial crisis. Fishing rights are being sold by Senegal, for example, to fleets of vessels from Asia, Canada and Europe; tree-felling rights by Chile to US timber corporations; and exploration rights by Nigeria to the oil

multinationals (French 1998: 23). In times of need, desperate countries have to flog off even their 'family silver'. So it is that valuable forest land is sold off stretch by stretch under the pressure of the debt burden. Mexico, for instance, after the peso collapse of 1994, rescinded its laws protecting national forests – and the people living in them – in order to promote a stronger export orientation. Brazil launched an action plan to make the export of wood, minerals and energy financially more attractive through massive infrastructural investment in Amazonia. Indonesia, after another currency crash, was compelled in talks with the International Monetary Fund to change its land ownership legislation so that foreign cellulose and paper corporations could move in on the forest (Menotti 1998b). One might even, as Menotti acerbically suggests, speak of a causal link between falling currencies and falling trees.

Measures to rectify the economy after a currency and debt crisis – measures imposed under the often blackmailing care of the IMF structural adjustment programmes – also usually lead to forced selling of natural assets on the world market, for the aim of the numerous structural adjustment programmes in both the South and the East is to bring the balance of payments back into equilibrium through an increase in exports, and thus to entice investors back into the country. A glance at the history of these programmes shows, however, that – alongside the weaker sections of society – the environment is supposed to make all the sacrifices for an export upturn. True, the removal of environmentally damaging subsidies and the liberalization of markets do generally promote a more efficient use of resources. But the rate of exploitation soon increases with the mobilization of raw materials and agricultural produce for export; land demand and pesticide use rise together with the switch over to cash crops; and tourism and transport also experience major growth (Reed 1996). Furthermore,

the new exporters' rights to natural resources collide with the hereditary rights of less endowed sections of the population to use forests, water and land; the poor are pushed to the sidelines, and compelled by rising prices to plunder marginal ecosystems for their survival. In this connection, a number of studies have concluded that the negative environmental effects of structural adjustment programmes far outweigh the positive benefits (Kessler and Van Dorp 1998).

It is not uncommon, however, for the law of supply and demand to cancel out the fruits of the export drive. Prices often fall as demand increases on the commodity markets, and once more the lower earnings have to be offset by greater export volumes. Should the recipient countries also be hit by a financial crisis, both demand and commodity prices come under renewed pressure. This is precisely what happened after the Asian financial crisis of 1997. Commodity prices on the world market slid lower and lower – by more than 25 per cent within a year (*Die Zei*t, 24 September 1998). And since the crisis also depressed demand in countries such as Japan, South Korea and Malaysia, the price spiral kept moving downward and forcing dependent countries to intensify the exploitation of raw materials for export. Thus money flows overshadow commodity flows in quite a special way during periods of economic downturn.

Vanishing distance and the transport effect

The sudden awareness of living in a shrinking world may well be the fundamental human experience in the age of globalization. The satellite image of the blue planet visually presents what things are tending towards in reality: all places appear present at the same time. While distance between places becomes insignificant, the same time comes to prevail everywhere: space vanishes, time standardizes. For currency traders and news editors, company buyers and

tourists, managers and scientists, less and less importance attaches to distance and, of course, more and more to time. It hardly matters any longer where on the globe something happens; what counts is when it happens – at the right time, too late, or not at all. Globalization, in all its facets, rests upon the rapid overcoming of space, rendering the present ubiquitous without delay. Computers, after all, count seconds, but not kilometres. How the earth is shrinking under the sway of time, how near everything is and how fast everything goes – it is in such experiences that the growing spatio-temporal compactness of the globe becomes discernible (Altvater and Mahnkopf 1996).

Spatial compression requires transport, whether along physical or electronic channels. Electronic networking is the first constitutive element in the process of globalization; without online data transfers there would not be the nervous system of signal communication that, in lightning-quick reactions, binds together events on the globe without consideration of space. If one thinks, however, that in 1995 there were 43.6 computers and 4.8 Internet users per thousand of the world's population (UNDP 1998: 167), four-fifths of whom lived in the industrialized countries, then it is all too clear that one can speak of globalization only in a geographical, and certainly not a social, sense. No more than 1 to 4 per cent of the world's population are electronically linked to one another, and no more than 5 per cent have even sat in an aeroplane. From an ecological point of view, electronic communication is assuredly less wasteful of resources than is physical transport. Yet one should not underestimate the additional strain that the construction and maintenance of a digital infrastructure place upon the earth's resources. High-quality materials used in hardware and peripherals are obtained through numerous refining processes that impose a large (and often toxic) extra burden on the environment, cables of all kinds use a

lot of material, and satellites and relay stations also cannot be had without a drain on the environment. Finally, whatever the many prophets of the information age merrily predict, electronic networking will in the long term probably generate more physical travel than it replaces. Anyone who has established close contact with distant places via electronic media will sooner or later want to seal the contact face to face. In any event, the main effect is a positive feedback between electronic and physical transport systems: globalization itself means transport and still more transport.

All forms of economic globalization, outside the international finance markets, rely heavily upon physical transport. Everywhere distances are springing up – on both the consumption and factor markets, they are growing longer and more numerous. T-shirts come from China to Germany and tomatoes from Ecuador to the United States; machinery from Europe stands in Shanghai harbour; the global class of 'symbol analysts' (Castells 1996) keep bumping into one another in the airports of OECD countries. After all, the value of world trade has been rising by more than 6 per cent a year, roughly twice as fast as the world economy itself. Foreign products – from meat to precision machines – play a more prominent role in many countries, and even small firms seek their fortune on overseas markets. And yet the word 'international trade' has a number of false associations. It no longer means that nations exchange goods that they themselves do not produce – as in the classical exchange of raw materials for industrial goods – but that foreign suppliers appear alongside local ones in largely OECD-centred trade. They no longer make up for gaps in the local supply, but try to oust the local supply either through undercutting or through the use of different symbols (Pastowski 1997). Korean cars for Carland America, Mexican beer for Beerland Germany: roughly a half of world trade

takes place *within* industrial branches; that is, the same commodities are being imported and exported at the same time (Daly 1996: 5). The main purpose of international goods transport is thus to ensure the competitive presence of many suppliers in as many places as possible.

Distance-chopping and rapid transport for high-quality goods and people are mainly provided by the international air system. Passenger transport, if it continues growing at its present annual rate of 5 per cent, will double every 15 years, and although by now roughly a half of air travel is for leisure purposes, the geography of economic globalization is reflected in the increased flow. Between 1985 and 1996, the income of airline companies grew sevenfold on routes within China and threefold within South-East Asia and between Europe or North America and North-East Asia, whereas on other routes there was at most a twofold increase or sometimes, as in the case of Africa, stagnation (Boeing 1998). Air freight has been rising still faster: after annual growth of 7 to 12 per cent in the mid-1990s (ibid.), the assumption is that it will now average 6.6 per cent and add up to a tripling of revenue by the year 2015 – figures naturally surpassed by the anticipated growth rate for international express services, where DHL and similar firms reckon on an annual increase of 18 per cent.

Without rapidly declining freight costs, the expansion of global markets would not have been possible. For such costs must not be a decisive factor, if the dynamic of supply and demand is to develop independently of geographical location. The more freight costs weigh in the balance, the less worthwhile it becomes to use price and innovation to gain an advantage over far-flung competitors; lower marginal costs in production would soon be eaten up by

greater outlays on transport. Only if the costs of overcoming space tend towards insignificance can corporate strategies alone determine the choice of location. A number of reasons have been given for the relative cheapening of freight. First, it is precisely on global markets that transport volume is being constantly reduced in relation to a given value of trade. For a computer producer in Texas, for example, it matters little whether his hard disks come from Singapore or California, as transport costs become less significant, the more the economic value of a transported good is independent from its size or weight. In fact, those branches of the economy that go in most for 'global sourcing' – computers, motor vehicles, consumer electronics, textiles – are often not the largest-volume traders (Sprenger 1997: 344). Second, containerization and easier transfers between modes of transport have greatly increased efficiency *(Economist* 1997b). But the third and main reason why distance has been losing its resistance is that the price of fuel oil, used in nearly all forms of transport, has fallen dramatically since 1980. As a matter of fact, that price is far from reflecting the full ecological costs of the production and consumption of oil. For all the efficiency gains, transport in the OECD countries is the only sector in which CO2 emissions have continued to increase in recent years. Transport also requires various facilities: vehicles, highways, harbours and airports, a whole infrastructure, which uses a considerable amount of materials and land. Yet most of these costs are passed on to society and do not show up in the freight bills. It becomes easy to overlook the extent to which the overcoming of geographical distance and temporal duration is paid for through the spoliation of nature.

How Economic Globalization Fosters a New Colonization of Nature

The results of the GATT Uruguay Round, which ended in 1993 with a package of trade agreements and the founding of the WTO, included an accord on intellectual property rights. In contrast to the main preoccupation, which had

been to dismantle national controls on cross-border trade, it was here a question of introducing a new level of regulation. Yet both strategies – deregulation as well as re-regulation – were pursued in the name of freedom of trade. The contradiction disappears as soon as one realizes that the aim in both cases was to create uniform legal foundations for a global economic space. While a plethora of national obstacles to the circulation of goods and capital had to be dismantled, it was also necessary to establish an international legal framework that would give such circulation a powerful helping hand. Factor mobility can be obstructed by a mass of laws, but it can also be left hanging in mid-air if there are no laws at all. Especially relevant in this respect was the case of property rights in goods based on genetic engineering – a case in which legal security had been defective in most countries around the world. This was the gap that the agreement on 'trade-related intellectual property rights' (TRIPS) was designed to close, for without it the exploitation of newly available raw materials – the genetic material of forms of life – would not have much of a commercial future.

Under the TRIPS agreement, all countries are required to provide legal protection for patented inventions of both products and processes, in all fields of technology. Industrial patents, of course, have long assured their owners an exclusive income from inventions for a certain length of time, but a similar system has only slowly come to apply to biological products and processes. The protection of a patent is nevertheless indispensable for the commercialization of research-intensive products, since only proprietary rights give them a commodity status – otherwise they would just be useful objects freely available in the public domain. For this reason, a guaranteed property system is the legal–social corset of a market economy, just as the more or less forcible enclosure and appropriation of common territory (fields, pasture, forest, fishing

grounds) was the historical prerequisite for the lift-off of agrarian capitalism. If the research-intensive products are organisms such as seeds or plants, this raises the additional marketing problem that they easily reproduce themselves (Flitner 1998). Seeds, for example, bring forth plants, which in turn bear the seeds for the next sowing. The commodity character of a living organism does not last long, therefore; the second generation no longer needs to be bought. But this is bad news for any investor, since if commodities can reproduce themselves, it means that the reproduction of capital is on shaky ground. That leaves just two possibilities. Either their reproducibility is curtailed (for example, through the insertion of 'terminator genes'), or patents allow fees to be charged for the use of a technologically modified living process.

Patents to genetic innovations ensure the economic control of 'life industries' over modified organisms and their offspring. Only through the establishment of proprietary rights over cells, micro-organisms and organisms does the genetic material of the living world become available to be marketed. Patents empower firms to take ownership of parts of the natural realm, to turn it into an economic resource, and as far as possible to monopolize it so that no one can use it unless they pay for an approved purpose. Life patents thus play for 'life industries' the same role that land deeds played for emergent agrarian capitalism. They define ownership, keep other users away, and establish to whom the benefits of use should accrue. Activities such as planting, animal-raising or curative treatment, which used to be part of the public domain, thus come increasingly under the control of corporations. Whereas colonialists used to appropriate mineral or land resources by physically controlling a territory, the genetic engineering firms exploit genetic resources through world-recognized patents over DNA sequences.

The consequences for plant diversity, however, are likely to be similar. There is no need to consider the numerous dangers bound up with an uncontrollable spread of transgenic species; even the accidentfree introduction of genetic technology into the agriculture of the South would cause a whole range of plants to disappear from the evolutionary picture. Whereas agrarian capitalism led in many places to monoculture of natural plant varieties, the life industries might force specialization in a few genetically optimized, and economically useful, plants (rather along the lines of the 'Green Revolution' of the 1960s and 1970s) (Lappé and Bailey 1998). In the fierce competition for markets that is likely to ensue, non-industrial and local strains would fall by the wayside – which would undermine food security, especially for poorer people without the means to purchase industrial produce. All plants other than a few strains capable of large-scale cultivation would be lost. A global system of legal patents for genetic inventions, which incorporated and irrevocably modified parts of the human biological heritage for commercial ends, would threaten to result in nothing less than a simplification of the biosphere.

How Economic Globalization Changes the Geography of Environmental Stress

In recent years, more and more salmon dishes – fresh, smoked or grilled – have been appearing on German menus, almost as if it were.150 a fish from local waters. By now Germans consume nearly 70 million kilos a year of the favoured fish, which is brought from farms in Norway or Scotland to supermarket displays (Oppel 1999). But as in the mass farming of any other creature, large quantities of feed have to be supplied – to be precise, five kilos of wild deep-water fish have to be processed into one kilo of fishmeal, which is then used to

feed salmon for consumption. This raw material is mostly caught off the Pacific coast of South America, where catches are declining because of overfishing, and it is then turned into meal in Peruvian harbour towns that are in danger of suffocating in the gaseous, liquid and solid waste matter that results from the process. While German consumers can feast themselves on fresh low-calorie (and rather expensive) fish, people in Peru are left with pillaged seas and filthy dirty towns.

This example shows how a lengthening of the supply chain can shift the ecological division of labour between countries of the South (and East) and those of the North. For economic globalization does not mean that the costs and benefits of economic activity are globalized. On the contrary, it is more likely that extension of the value-creation chain to different locations around the world will bring a new allocation of advantage and disadvantage. When a production process is divided up among different countries and regions, a tendency soon appears to separate costs and benefits by redistributing them up and down the chain. Anyway it would be wrong to imagine that the worldwide networking of offices, factories, farms and banks is accompanied by a decentralization of all functions from production and planning to finance, not to speak of the collection of profits (Sassen 1996). Despite many attempts to increase the autonomy of sub-units, the opposite is generally the case: that is, the diversification of economic activities leads to a concentration of control and profit at the nodal points of the network economy (Castells 1996). The flux of investment into distant countries is offset by a reflux of power and profits to the originating country, or, more precisely, to the ‘global cities’ of the North. As special export zones multiply in Bangladesh, Egypt or Mexico, where cheap labour, tax breaks and lax environmental norms considerably reduce production costs, the sky is

the limit for the towers of banks and company offices in Hong Kong, Frankfurt or London.

The changed distribution of economic power goes together with a change in how the pressure on the environment is distributed across geographical space. If power, in an ecological sense, is defined as the capacity to internalize environmental advantages while externalizing environmental costs, then it may be supposed that the lengthening of economic chains will start a process that concentrates advantages at the upper end and disadvantages at the lower end. In other words, the environmental costs incurred within the transnational value-creation chains will become especially high in the countries of the South and East, while the post-industrial economies will become ever more environmentally friendly. Or to use an analogy (with the salmon example in mind), the rich countries will increasingly occupy the upper positions in the food chain (where larger volumes of low-value inputs have step-by-step been converted into smaller volumes of high-value food), while the developing or poorer countries will occupy the middle and lower positions. In fact, along with numerous individual examples, a series of highly aggregated data on international flows of materials lend credence to this interpretation. Thus, 35 per cent of total resource consumption is incurred abroad in the case of Germany, 50 per cent in Japan, 70 per cent in the Netherlands, and so on (Adriaanse et al. 1997: 13). The smaller the area of an industrialized country, the greater seems to be the geographical separation between the sites of pressure on the environment and the sites of consumption benefit. In all these countries, there has been a tendency over the past 15 years for a growing proportion of environmental consumption to take place abroad (involving not so much raw materials as semi-finished products).

In agriculture, Southern regions of the world no longer supply only agrarian mass produce as in the days of colonialism, but also supply goods with a high dollar value per unit of weight for affluent consumers in the North. Highly perishable items such as tomatoes, lettuce, fruit, vegetables and flowers come as air freight to Europe from Senegal or Morocco, to Japan from the Philippines, or to the United States from Colombia or Costa Rica (Thrupp 1995). As in the case of salmon, health-conscious shoppers with an average to high income are only too pleased to have a supply that does not depend on the season, while plantations and glasshouses in the areas of origin impose irrigation, pesticide use and the repression of local farmers. Nor are things much different with shrimp or meat production. The breeding of shrimps and prawns in Thailand or India for the Japanese and European markets means that people have to wade through toxic residue to catch them and that many a mangrove forest has to disappear from the scene. More refined consumption in the North at the price of the environment and subsistence economics in the South: this pattern has rooted itself deeply in the food-produce market since the 1970s. The raising of cattle and pigs in Europe draws in manioc or soya both from the United States and from countries such as Brazil, Paraguay, Argentina, Indonesia, Malaysia or Thailand. The old law that the market puts purchasing power before human need asserts itself still more powerfully in a world economy beyond frontiers.

Of course, the expansion of the fossil development model into one or two dozen aspiring economies in the South and East has done most to change the geography of environmental stress. As the newly industrialized nations entered the age fuelled by fossil resources, the possibility presented itself of stretching the industrial production chains beyond the OECD countries. The South’s share

of world output has thus been growing (and the OECD's slowly declining) in primary industry, metalworking and chemicals (Sprenger 1997: 337; Mason 1997), rising in the last of these from 17 per cent in 1990 to 25 per cent in 1996 (French 1998: 27). What is happening is not so much migration for environmental reasons as a redistribution of functions within the world economy. The stages of an international production chain that put most pressure on the environment are usually in less-developed regions, while the cleaner and less material stages tend to be in the G-7 countries. In the aluminium industry, for instance, the quarrying of bauxite takes place in Guyana, Brazil, Jamaica and Guinea (along with Australia). The actual smelting of the aluminium, which is the next stage along, moved more and more in the 1980s from the North to countries such as Brazil, Venezuela, Indonesia or Bahrain, while the research and development stage remained chiefly located in the OECD area (Heerings and Zeldenrust 1995: 33). Despite higher use overall, the production of aluminium grew strongly in Japan and weakly in Europe; imports from the South filled the gap (Mason 1997).

A look at the computer branch further along shows just how much high-tech industry lives off the new ecological division of labour. In the case of 22 computer companies in the industrialized countries, more than half of their (mostly toxic) microchip production is located in developing countries (French 1998: 28). Does this not show in outline the future restructuring of the world economy? The software economies of the North will pride themselves on their plans for a cleaner environment, while the newly industrialized economies will do the manufacturing and contend with classical forms of water, air and soil pollution, and the poorer primary economies will do the extracting and undermine the subsistence basis of the third of humanity that lives directly from

nature.

Which and Whose Globalization?

Globalization is not a monopoly of the neo-liberals: the most varied actors, with the most varied philosophies, are also caught up in the transnationalization of social relations; indeed the ecological movement is one of the most important agents of global thinking. Accordingly, the image of the blue planet – that symbol of globalization – conveys more than just one message. The imperial message of collapsing frontiers always found itself confronted with the holistic message of the planet's finite unity. A clear line can be drawn from Earth Day 1970 (often seen as the beginning of the American ecological movement) to the United Nations conference on world climate held in Kyoto in 1997. In the squares where people assembled on that first Earth Day, speakers and demonstrators underpinned their demands for comprehensive environmental protection with photographs of the earth taken less than a year before from the surface of the moon. And nearly thirty years later, the emblem of the planet was prominently displayed on the front of the conference hall where, for the first time, the world's governments entered into legally binding commitments to limit pollution levels. That picture shows the earth as a single natural body binding human beings and other forms of life to a common destiny; it globalizes our perception both of nature and of the human story. Only with that image did it become possible to speak of 'one earth' or 'one world' in the true sense of the term. For neither the name of the environmental association Friends of the Earth, nor the title of the Brundtland Report, *Our Common Future* (WCED 1987), would have meant much without that photo of the planet.

But the 'blue planet effect' and its message of finitude goes deeper still: they

produce a way of seeing that places local action within a global framework. The picture shows the outer limits of the living space of everyone who looks at it. Does not everyone know that, if only the image was sufficiently enlarged, he or she would be able to find himself or herself on it? For the observing subject cannot be separated there from the observed object; in scarcely any other example is self-reference so inextricably woven into the image. This visual superimposition of global and individual existence has shifted the cognitive and moral coordinates of our perception of ourselves. The consequences of an action, it suggests, may extend to the edges of the earth – and everyone is responsible for them. All of a sudden, car drivers and meat buyers are linked to the greenhouse effect, and even a hairspray or an air ticket is seen as having overstepped the global boundaries. 'Think globally, act locally': this electoral slogan of the ecological movement has played its part in creating a 'global citizen' who internalizes the earth's limits within his or her own thinking and action. The narrative of limitation derives its moral force from this association of planet and subject in a common drama. The ecological experience is thus undoubtedly one dimension of the experience of globalization, because it overturns people's conventional notion that they live and act in national political and social spaces that are clearly demarcated and separated from one another (Beck 1997: 44).

Yet the ecological movement cannot escape the fact that, however provisionally, the imperial message has won through. One sign of this is the way in which multinational corporations have almost completely seized for themselves the image of the blue planet. The perception of the world as a homogeneous space, visible and accessible all the way across, has everywhere become hegemonic. This vision is imperial, because it claims the right to roam the world unhindered

and to grab whatever it fancies – exactly as if there were no places, no communities, no nations. The mechanisms of GATT, NAFTA and the WTO were born in the spirit of frontier demolition. They codify the world as a freely accessible economic arena, in which economics enjoys the right of way. The newly established rules are designed to proclaim transnational corporations as sovereign subjects within global space, exempt from any obligation to regions or national governments. State protectionism is thereby abolished, only to be replaced by a new protectionism that favours corporations. Transnational partnerships are entitled to claim all sorts of freedoms and rights, while territorial states – not to mention citizens or civic associations – have to take second place.

When people look back on the last century of this millennium, they will be forced to conclude that Rio de Janeiro was pretty good on rhetoric, but Marrakesh was taken in real earnest. Here the UN conference on the environment held in Rio in 1992 stands for a long series of international agreements – notably the conventions on climate and biodiversity – that were supposed to steer the world economy in less ecologically harmful directions. Marrakesh stands for the founding of the World Trade Organization after the end of the GATT Uruguay Round, and for the growing importance of the IMF as a shadow government in many countries. There the basis was laid for an economic regime in which the investment activity of transnational actors would be free of regulation anywhere on the globe. These transnational regimes – the environmental and the economic – are attempts to give a political–legal foundation to transnational economic society, but the two stand in marked contradiction to each other. The environmental regime is concerned with protection of the natural heritage, the economic regime with equal rights to

exploit it; the environmental agreements are based on respect for natural limits, the economic agreements on the right to carry through economic expansion successfully. Paradoxically, moreover, they wager on different systems of responsibility and accountability. On the one hand, the environmental agreements appeal to sovereign states as responsible entities that are supposed to uphold the public good in their territory. On the other hand, the economic agreements assume sovereign, transnationally active corporations that belong to no territory and are therefore responsible to no state. Already today the world's hundred largest economies comprise 49 countries and 51 corporations (Anderson and Cavanagh 1997: 37).

It is therefore not clear how the conflicting messages that appropriate the image of the blue planet can be reconciled with each other. Even transnational civil society has succeeded only on specific occasions in confronting corporations with their responsibility towards nature and the overwhelming majority of the world's citizens. If the holistic message stands for 'sustainability' and the imperial message for 'economic globalization', then it would seem necessary to suppose that, however great the synergies at a micro-level, the chasm between the two is continuing to widen. But that is the greatness of a symbol: it can hold together divergent truths within a single visual form.

Bibliography

Adriaanse, A. et al. (1997) *Resource Flows: The Material Basis of Industrial Economies*, Washington: World Resources Institute.

Altvater, E. and Mahnkopf, B. (1996) *Grenzen der Globalisierung*, Münster: Westfälisches Dampfboot.

Anderson, S. and Cavanagh, J. (1997) "The Rise of Global Corporate Power," in *Third World Resurgence*, 1/97, 37-39.

Beck, U. (1997) *Was ist Globalisierung?* Frankfurt: Suhrkamp.

Boeing (The Boeing Company) (1998) www.boeing.com/commercial.

Brown, L. et al. (1998) *Vital Signs 1998.* Washington: Norton.

Castells, M. (1996) *The Rise of the Network Society,* The Information Age: Economy, Society and Culture, vol. I. Oxford: Blackwell.

Cavanagh, J. (1998) *Background to the Global Financial Crisis,* Manuscript, San Francisco: International Forum on Globalization.

Daly, H. (1996) *Free Trade, Capital Mobility and Growth versus Environment and Community*, Public Lecture on 26 September 1996, The Hague: Institute of Social Studies.

Esty, D.C. and Gerardin, D. (1998) "Environmental Protection and International Competitiveness. A Conceptual Framework," *Journal of World Trade,* vol. 32, 3, 5-46.

Flitner, M. (1998) "Biodiversity: Of Local Commons and Global Commodities," in M. Goldman (ed.) *Privatizing Nature. Political Struggles for the Global Commons,* London: Pluto Press, 144-166.

French, H. (1998) *Investing in the Future: Harnessing Private Capital Flows for Environmentally Sustainable Development,* Worldwatch Paper 139, Washington: Worldwatch Institute.

Garrod, B. (1998) "Are Economic Globalization and Sustainable Development Compatible? Business Startegy and the Role of the Multinational Enterprise," *International Journal of Sustainable Development,* vol. 1, 43-62.

Heerings, H. and Zeldenrust, I. (1995) *Elusive Saviours. Transnational Corporations and Sustainable Development,* Utrecht: International Books.

Johnstone, N. (1997) "Globalisation, Technology, and Environment," in OECD Proceedings, *Globalisation and Environment,* Paris: OECD, 227-267.

Jones, T. and Youngman, R. (1997) "Globalisation and Environment: Sectoral Perspectives,"in OECD Proceedings, *Globalisation and Environment,* Paris: OECD, 199-221.

Kessler, J.J. and Van Dorp, M. (1998) "Structural Adjustment and the Environment: the Need for an Analytical Methodology," *Ecological Economics,* 27, 267-281.

Lappé, M. and Bailey, B. (1998) *Against the Grain: The Genetic Transformation of Global Agriculture,* London: Earthscan.

Lash, S. and Urry, J. (1994) *Economies of Signs and Space,* London: Sage.

Mason, M. (1997) "A Look Behind Trend Data in Industrialization. The Role of Transnational Corporations and Environmental Impacts," *Global Environmental Change,* vol. 7, 113-127.

McCormack, G. (1996) *The Emptiness of Japanese Affluence,* St. Leonards: Allen & Unwin.

Menotti, V. (1998) *The Environmental Impacts of Economic Globalization.* San Francisco: International Forum on Globalization, Draft.

Menotti, V. (1998) "Globalization and the Acceleration of Forest Destruction since Rio," *The Ecologist,* vol. 28, 354-362.

OECD (1998) *Kein Wohlstand ohne offene Märkte.Vorteile der Liberalisierung von Handel und Investitionen,* Paris.

Oppel, N.V. (1999) "Aus fünf Kilo Fisch wird ein Kilo Zuchtlachs," *Greenpeace Magazin,* 1/99, 40-41.

Pastowski, A. (1997) *Decoupling Economic Development and Freight for Reducing its Negative Impacts,* Wuppertal Paper 79, Wuppertal: Wuppertal Institute for Climate, Environment, Energy.

Reed, D. (ed.) (1996) *Structural Adjustment, the Environment and Sustainable Development.* London: Earthscan.

Sassen, S. (1996) *Losing Control?* New York: Columbia University Press.
Sprenger, R. U. (1997) "Globalisation, Employment, and Environment," in OECD Proceedings, *Globalisation and Environment,* Paris: OECD, 315-366.
The Economist (1997a) *Schools Brief: One World?* 18 October, 103-104.
The Economist (1997b) *Schools Brief: Delivering the Goods,* 15 November, 89-90.
Thrupp, L.A. (1995) *Bittersweat Harvests for Global Supermarkets: Challenges in Latin America's Agricultural Export Boom*, Washington: World Resources Institute.
United Nations Development Programme (UNDP) (1998) *Human Development Report 1998,* New York: Oxford University Press.
Zarsky, L. (1997) "Stuck in the Mud? Nation-States, Globalisation, and the Environment," in OECD Proceedings, *Globalisation and Environment,* Paris: OECD, 27-51.
Zukunftskommission der Friedrich-Ebert-Stiftung (1998) *Wirtschaftliche Leistungsfähigkeit, sozialer Zusammenhalt, ökologische Nachhaltigkeit. Drei Ziele - ein Weg*, Bonn: Dietz.

DEVELOPMENT RESEARCH SERIES

WORKING PAPERS:

No. 1: *Olav Jull Sørensen*: Marketing Issues in Peasant Agricultural Development, 55pp, 1983.

No. 2: *Hans Gullestrup*: The Ecol-Humanistic Technology - the new Technology as Experiences from the Past, 33pp, 1983.

No. 3: *Georg Sørensen*: Transnationals and the Transfer of Technology to the Third World, 31pp, 1984.

No. 4: *Georg Sørensen*: International Bureaucracies and Aid: The Political Economic of the 'B-Share', 11pp, 1984.

No. 5: *Georg Sørensen*: Notes on Materialism and Boredom - Western Development Ideals, 12pp, 1984.

No. 6: *Olav Jull Sørensen*: Marketing Systems and Economic Development. An Institutio-nal-Structural Approach, 41pp, 1984.

No. 7: *Georg Sørensen*: How much Poison is Another Man's Meat? - Notes on the Logic of World Systems Analysis, 29pp, 1984.

No. 8: *Georg Sørensen*: Peace and Development: Looking for the Right Track, 18pp, 1984.

No. 9: *Georg Sørensen*: The Twists and Turns of Development Theory - A Comment on "The European Experience" by Dieter Senghaas. 19pp, 1984.

No. 10: *Jacques Hersh & Ellen Brun*: Aspects of Soviet Participation in a Shifting World Economy. 45pp, 1984.

No. 11: *Olav Jull Sørensen*: Marketing System Development and Labour Migration: Analysis and Consequences. 41pp, 1984.

No. 12: *Georg Sørensen*: How Cold is the Second Cold War? - An Assessment of the Scope of 'the Great Contest'. 23pp, 1984.

No. 13: *John E. Kuada*: Agricultural Development in the Third World. 23pp, 1984.

No. 14: *Olav Jull Sørensen*: Profiles of Tanzanian Peasants and their Marketing Implications. 52pp, 1984.

No. 15: *Jørgen Kristiansen*: Urban Passenger Transport in Developing Countries - Socio-economic Impact and the Choice of Technology. 58pp, 1985.

No. 16: *John E. Kuada*: Marketing Systems in a Development Process. 35pp, 1985.

No. 17: *Georg Sørensen*: Some Contradictions in a Rich Concept on Development. 14pp, 1985.

No. 18: *Olav Jull Sørensen*: Marketing of Agricultural Inputs/Implements and Profiles of Farmers in Kenya: Project Preparations. 47pp, 1986.

No. 19: *Georg Sørensen*: Development Through the Eyes of a Child. 17pp, 1986.

No. 20: *Georg Sørensen*: International and External Intertwined: 5 Obstacles to Development in India. 20pp, 1986.

No. 21: *John E. Kuada*: Macro-Micro Integrated Framework for Market Opportunity Analysis and Project Selection. 14pp, 1986.

No. 22: *Olav Jull Sørensen*: Co-operatives: Movement-to-Movement Cooperation. Some Conceptual Views. 15pp, 1986.

No. 23: *John E. Kuada*: Financing Rural Food Marketing Systems in Ghana. 16pp, 1986.

No. 24: *Hans Gullestrup*: Culture, Cultural Analysis and Cultural Ethics - Or What Divides and What Unites Us? (Out of print) (in Danish). 84pp, 1987.

No. 24a: *Hans Gullestrup*: Culture, Cultural Analysis and Cultural Ethics - Or What Divides and What Unites Us? (Second revised edition) (Out of print) (in Danish). 92pp, 1988.

No. 25: *John E. Kuada*: Food Marketing in Ghana, the Role of Rural Food Traders. 53pp, 1988.

No. 26: *Henrik A. Nielsen*: Monitoring Rural Development in Bangladesh. 22pp, 1989.

No. 27: *Hans Gullestrup*: The Ethical Dilemma in *the* Intercultural Co-operation, or: The Development Aid Worker's Personal Problem (in Danish). 26 pp, 1991.

No. 28: *Chaiwoot Chaipan*: Current Issues on Economic Development in East and Southeast Asia. 24pp, 1991.

No. 29: *Henrik Nielsen:* Databased Information on Danida-Projects 1962-91: Overview and Analysis of the Daniproj-Database. 55pp, 1992.

No. 30: *Hans Gullestrup*: Evaluating Social Consequences of Social Changes in the Third World Countries. 24pp, 1993.

No. 31: *Johannes Dragsbaek Schmidt*: In The Shadow of the Pacific Century - Comparative Perspectives on Externalities Influence on Economic Policy-Making in Southeast Asian Would-be NICs. 106pp, 1993.

No. 32: *Henrik A. Nielsen:* Local Community Development Around the Bay of Bengal: Context, Crises and Perspectives. 27pp, 1994.

No. 33: *Johannes Dragsbaek Schmidt:* Southeast Asian State Responses to a Regionalized World Economy. 21pp, 1994.

No. 34: *Johannes Dragsbaek Schmidt:* Semi-autonomy in Economic Policy-making: The Case of Thailand. 28pp, 1994.

No. 35: *Johannes Dragsbaek Schmidt:* Increasing Exports in a Decreasing World Market: The Role of Developmental States in the ASEAN-4. 27pp, 1994.

No. 36: *Johannes Dragsbaek Schmidt:* State Capacities and Bargaining Strategies in the Global Disorder. 14pp, 1994.

No. 37: *Samir Amin:* The Future of Global Polarization. 17pp, 1994.

No. 38: *Peter W. Cunningham:* The Re-affirmation of State Socialism. The South African Debate. 17pp, 1995.

No. 39: *Andre Gunder Frank:* Nothing New in the East: No New World Order. 28pp, 1994.

No. 40: *Johannes Dragsbaek Schmidt:* State Intervention in Southeast Asia. Creating Growth without Welfare. 20pp, 1994.

No. 41: *Garry Rodan:* Ideological Convergences Across 'East' and 'West': The New Conservative Offensive. 24pp, 1995.

No. 42: *Jacques Hersh:* North Korea: Ideal-Type Anomaly. 18pp, 1995.

No. 43: *Research Centre for Development and International Relations (DIR), Johannes Dragsbaek Schmidt et al. (eds.)*: Research Program 1995-1997. Globalization and Social Change - Structures, Systems and Unidisciplinary Research. 74pp, 1995.

No. 44: *Feiwel Kupferberg:* Ethno-nationalism, Liberal Democracy and the Psychology of the Post Cold War Era. 19pp, 1995.

No. 45: *Feiwel Kupferberg:* Uncertainty, Chaos and Learning: Prolegomenon to a Sociology of Creativity. 27pp, 1995.

No. 46: *Feiwel Kupferberg:* Strategic Learning: East Germany as a "Model Case" for Transformation Theory. 26pp, 1995.

No. 47: *Li Xing*: China and East Asia vs. The West: Controversies, Clashes and Challenges. 19pp, 1995.

No. 48: *Kwang-Yeong Shin:* Democratization and Class Politics in Korea, 1987 - 1993. 20pp, 1995.

No. 49: *Joachim Hirsch:* Regulation Theory and its Applicability to Studies on Globalization and Social Change. 12pp, 1995.

No. 50: *Ellen Brun:* The New Social Contract: Sustainability from below. 20pp, 1995.

No. 51: *Li Xing:* The Dynamics of East Asian Intra-Regional Economic Relations. 22pp, 1995.

No. 52: *Kwang-Yeong Shin:* Characteristics of the East Asian Economic System: Authoritarian Capitalism and The Developmental State. 33pp, 1996.

No. 53: *Li Xing:* Playing Democracy and Human Rights. The International System and the China-West Case. 17pp, 1996.

No. 54: *Jacques Hersh & Johannes Dragsbaek Schmidt:* Dirigisme or Laissez-Faire? - Catching-up Strategies in the Global System After the Demise of Soviet-Style Command Economies. 22pp, 1996.

No. 55: *Johannes Dragsbaek Schmidt & Jacques Hersh:* Peace Convergence and Political Legitimacy in Israel and Palestine. 16pp, 1997.

No. 56: *David Harvey:* Globalization in Question. 22pp, 1997.

No. 57: *Amiya Kumar Bagchi:* In Praise of the Developmental State. 35pp, 1997.

No. 58: *Su-Hoon Lee:* The Rise of Environmentalism in South Korea. 31pp, 1997.

No. 59: *Mark Beeson & Kanishka Jayasuriya:* The Politics of Regionalism: APEC and the EU in Comparative Perspective. 37pp, 1997.

No. 60: *Manfred Bienefeld:* The State and Civil Society: The Political Economy of the "New Social Policy". 35pp, 1997.

No. 61: *Duncan McCargo:* Problematising Democratisation: The Thai Case. 22pp, 1997.

No. 62: *Li Xing:* Conceptualizing the Crisis of Socialism: A Gramscian Approach. Some Reflections on the Chinese Socialist Experience. 41 pp, 1998.

No. 63: *Henrik A. Nielsen*: Decentralising the Monitoring of Development Intervention: From Local Government Impact-Monitoring. 116pp, 1998.

No. 64: *Suresh Narayanan*: From Miracle to Realities: The Malaysian Economy in Crisis. 26 pp, 1998.

No. 65: *Li Xing, Jacques Hersh & Johannes Dragsbaek Schmidt*: The Rise and Fall of East Asian Capitalism: Back to the future? 30 pp, 1998.

No. 66: *Jan Oberg*: Globalization and Responses by Civil Society to Humanitarian Emergencies. 44 pp, 1998.

No. 67: *Johannes Dragsbaek Schmidt*: Development Theory and the Crisis of the State. 30 pp, 1998.

No. 68: *Johannes Dragsbaek Schmidt, Jacques Hersh and Li Xing (eds.) and members of DIR*: Research Program 1998-2000 Globalization and Social Change Interdisciplinary Critical Perspectives. 81 pp, 1998.

No. 69: *Katarina Tomaševski:* Human Rights in International Development Co-operation: Between Politics and Policy. 69 pp, 1999.

No. 70: *Mammo Muchie:* Problems of Sub-Saharan Africa's Renewal in the Era of Globalisation. 32 pp, 1999.

No. 71: *Wolfgang Sachs:* Globalization and Sustainability. 38 pp, 1999.