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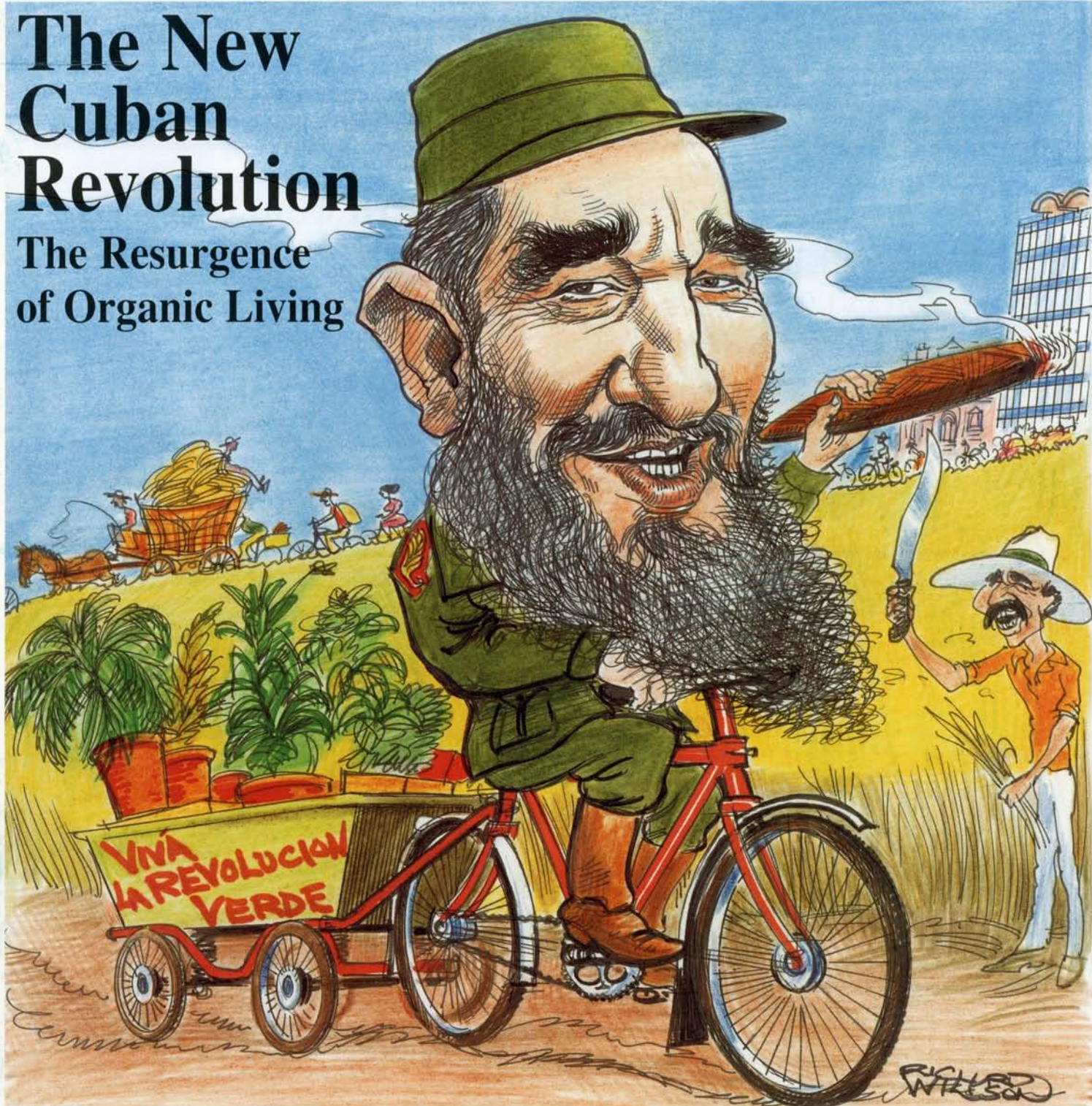
The Ecologist

Volume 29 No 8. December 1999

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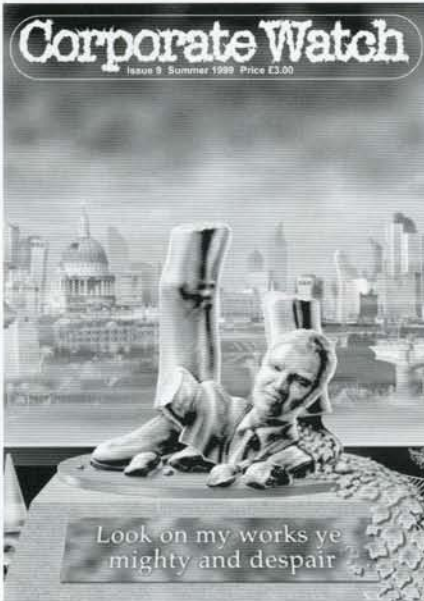
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Floris
Books

Bob's Box of Tricks

By Paul Kingsnorth

When Robert Shapiro, Monsanto's Chief Executive Officer, addressed the Greenpeace Business Conference in mid-October, he didn't look a happy man. Beamed into a London hotel via video-link from his Head Office in Missouri, USA, he looked tired, drawn and hunted, as if a pack of crop-pulling activists were trying to batter down the doors of his executive suite. He didn't sound happy, either. In fact, he sounded almost contrite.

Sounding contrite is Monsanto's newest public relations ploy. They need a new one, because none of the others worked. First they tried bullying people into buying everything they produced without question. But people asked questions. Undeterred, Monsanto tried the oily approach: lots of money spent on big adverts telling us that we should listen to all points of view, provided the final outcome was that we agreed with theirs. Not money well spent, as Bob Shapiro would surely now agree. On the contrary – all the money, time and corporate muscle applied by Monsanto over the last year has had the effect only of making them

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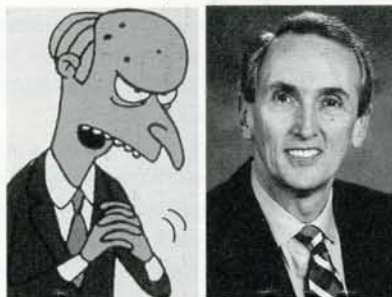
probably the most unpopular corporation on Earth.

Hence the contrition. Bob Shapiro had a clear message for the journalists and environmentalists assembled by Greenpeace in London: Monsanto have changed. No longer, he said, are we the same nasty corporation that manufactured Agent Orange or filled the seas and many of their mammals with PCBs. No longer are we the same unscrupulous collection of technocrats who employed scientists to fabricate dioxin test results, or 'misled' farmers about the health risks of our bovine growth hormones. Not any more. No sirree! These days we're New Monsanto – nice guys with test tubes who *only want to help*.

According to Bob, New Monsanto recognise that "we have irritated and antagonised more people than we've per-

suaded," and "our confidence in this technology and our enthusiasm for it has I think widely been seen, and understandably so, as condescension or indeed arrogance." Not only that, but for the first time, Bob acknowledges that "there are real concerns about its [biotechnology's] use," and that, potentially, not every biotechnology product is, per se, a good one. Bob also wants 'dialogue' with his enemies, and is willing to change his mind if he's wrong. This was almost as

LOOKALIKE:
It has been drawn to our attention that Robert Shapiro, Monsanto's Chief Executive, bears an uncanny resemblance to Mr Burns, the evil corporate megalomaniac from the cartoon series 'The Simpsons.' Are they related? Perhaps we should be told.



Shapiro

Corporate megalomaniac

exciting to some environmentalists as the announcement a couple of days before, that Monsanto will not now be commercially developing terminator seeds, as a result of widespread revolt.

But before we get too excited at this brave new dawn, let's just take a brief look at the movement behind the platitudes. Let's have a look at what the corporation is actually planning to do, and what it's planning to produce, over the next few years.

A good place to start is with a copy of *The Paper*, Monsanto's in-house newspaper, a recent copy of which has been passed to *The Ecologist* by a thoughtful reader. It contains some fine nuggets about what the corporation is currently up to. Bob's boys have, for example, just opened new laboratories in Bangalore, India, where researchers are working to "bring food, health and hope to a growing world" by inventing new, patented varieties of tropical crops. Elsewhere, the company is making the buying of as many of the world's seed companies as possible a "top corporate priority". Why?

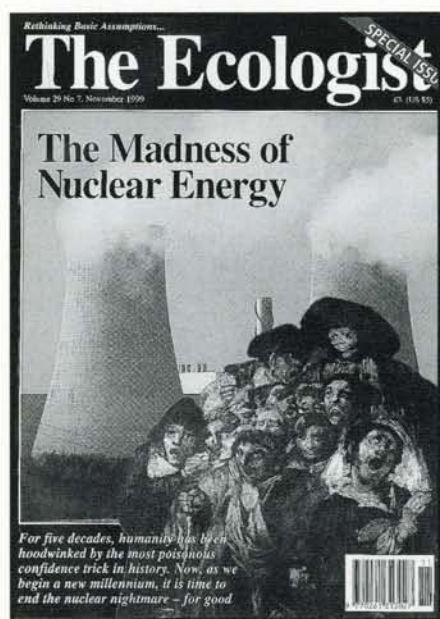
Because a global seed company will have the "financial muscle" to push Monsanto products all over the world.

The most entertaining/frightening article in *The Paper* is the double-page spread entitled 'Getting To Know Vietnamese Farmers.' A more accurate translation would probably read 'Throwing millions of dollars of corporate propaganda at Vietnamese farmers.' For Monsanto are up to their old tricks again; sending representatives around Vietnam's small farms with 'vibrant yellow Roundup posters' advertising the 'Roundup Clubs' the company is setting up across the country. Monsanto have managed to get the support of the country's government for these clubs, and no doubt a combination of persuasive propaganda and free meals at local restaurants for farmers has the effect of expanding the company's market in rural areas, with none of that pesky 'dialogue' that Bob is so keen to talk to Western Greens about.

So it's business-as-usual in many areas. But what of future technologies? What do New Monsanto have planned for us? Here's a small selection of what the company's last Annual Report promises us they may be marketing next year and beyond:

- **'Feed Enzymes**, developed through biotechnology to increase the nutritive value of animal feed.'
- **'No-till soybeans'** – you don't even have to plough them.
- **'Insect-protected tomatoes'** – yummy.
- **'Coloured cotton'** – it grows in whatever colours the market demands, and thus "reduces the need for chemical dyeing."
- **'Improved solids potatoes'** – you need less oil to fry them.
- **'Roundup Ready forestry products'** – yes, that means trees. Whole plantations of Monsanto trees, controlled with Monsanto herbicide, coming your way after 2002.

What was that you were saying, Bob? Ah, yes – "biotechnology in itself is neither good nor bad. It can be used well or it can be used badly, and like any important new tool it creates new choices for society." Indeed. Well, I think I've made my choice already. But thanks for the 'dialogue'. Much appreciated.□



Nuclear Havoc

By Zac Goldsmith

Within days of putting last month's special issue, *The Madness of Nuclear Energy*, to bed, the nuclear industry seemed to have set itself the task of vindicating our every accusation.

First it was Japan, where citizens in the Ibaraki region, and particularly those of Tokaimura village, were exposed to massive doses of radiation on September 30th, following a 'technical error'. More than 300,000 people were ordered to remain indoors with their windows and doors closed, 150 people were evacuated from their homes, and two site workers at the site are, at the time of writing, uncon-

scious in a local hospital. The nuclear plant has been plagued by problems more or less since its inception, and independent analysts have been warning the industry and regulators for years of the dangers it posed.

The potential consequences are not yet known. And judging by the endless public assurances of safety that followed the accident, it is unlikely that they will be for some time. According to the company which operates the plant, the leaked radioactivity was 'too low to be a health hazard outside the compound' – but as Chris Busby reported in our special issue, there is no such thing as a 'safe dose' of radiation. The truth, when finally it does emerge, will doubtless serve

Russia's Catch-22

By Zac Goldsmith

The following bulletin from Russia reveals a fundamental conflict between the interests of the Russian environment and those of the economy. As economic activity accelerates, so too does the deterioration of Russia's environment. And as Russia is crippled by economic collapse, so is the environment set back on the path of recovery.

Environmentalists are therefore thrown into a dilemma. Do we support the environment, even where doing so is to the detriment of economic growth, and therefore to the people themselves, or do we focus on enabling people to achieve higher standards of living?

But as ever, the real issue is more complex.

If we assume, as we are taught to from an early age, that economic growth is a process which genuinely benefits the world's people, then short of carrying out a mass extermination programme or condemning the world's people to lives of utter squalor, we find ourselves in something of a Catch-22. Clearly we cannot survive – in poverty or in wealth – without a healthy environment. And yet, a healthy environment often appears to spell economic doom.

The globalisation of modern economic development has rendered vast tracts of the planet virtually uninhabitable. This few people deny, but the process is nevertheless justified on two grounds. Firstly, economic growth brings prosperity to otherwise backward, primitive and

squalid societies. Secondly, that process generates sufficient wealth to repair the destruction wrought on the environment in the name of 'growth'.

But the facts tell a different story. Firstly, technology, and Western gadgetry in general, cannot replace that which has taken millions of years to develop. A species extinct is a species extinct. A for-

As economic activity accelerates, so too does the deterioration of Russia's environment. And as Russia is crippled by economic collapse, so is the environment set back on the path of recovery.

est felled is a forest felled, and a rapidly changing global climate is something which, despite the lunatic ideas of some of our greatest 'thinkers' (including – the latest techno-fix gone mad – positioning thousands of mirrors in space to reflect sunlight away from the Earth), cannot be controlled by human technology.

But more importantly, economic development has, the world over, created poverty where poverty need not have existed, created unnecessary sicknesses amongst healthy peoples, and destroyed the very ability of cultures around the world to live healthy lives independent of the global economic system which has imprisoned them. The past four decades have seen an 11-fold increase in world

trade, and a five-fold increase in economic growth. According to conventional economic theory, this means that we have progressed enormously, as at no other time in human history. It should mean that we are all vastly better off. But what has this surge of economic growth really brought us?

It has brought a minority of humanity more consumer goods than it knows what to do with and a material standard of living higher than any in history. But it has also brought a gap between rich and poor which widens every week. It has brought starvation, misery and environmental degradation to the billions left outside the Western economic loop. It has brought runaway global warming, the extinction of species – 1,000 a year, according to the latest estimate from the Worldwatch Institute. It has brought destruction of cultures and rising job insecurity. This grim list is seemingly endless.

Even the US, the very pinnacle of 'progress', is facing collapse in virtually every sector. Here is a society with greater levels of crime than any other, with higher rates of degenerative disease than any other, with more serious drug abuse problems than any other, with domestic violence, depression and suicide reaching unimaginably high levels. Here is a society where children are routinely pumped with attitude correction drugs like Ritalin, where teenagers are more likely to turn to drugs, crime and delinquency than any other occupation, and where 70,000 elderly people, unable to look after themselves, are left on the

yet again as a reminder that the health – and life – of everyone living near nuclear installations lies firmly in the hands of that curiously unreliable creature, the technician. Not very reassuring.

The second recent atomic ‘surprise’ was the discovery of a ‘secret’ nuclear plant in Derby, in the UK. Thousands of local residents were made aware that their friendly neighbour, a Rolls Royce factory, was involved in processing highly-concentrated enriched uranium. Predictably, they later learned, the site has similarly been plagued by problems, and has come close to disaster on more than one occasion. It also emerged that the site is not equipped to deal with the possibility of a disaster like Tokaimura, nor has

the government made any contingency plans for dealing with, or even informing local residents of such an eventuality.

The third surprise was that Aldermaston, leaders in the manufacture of British nuclear warheads, has suffered no less than 100 ‘emergencies’ in the past year alone. (It is rumoured that an unnamed Aldermaston employee, on hearing the sorry tale of the Sellafield legacy, shook his head in envy.) Aldermaston, it is reported, has broken safety guidelines so frequently that nuclear experts believe it is only luck which has prevented an accident many times worse than that in Japan. Allegations are too numerous to be listed in full, but just two examples should suffice: an in-built system whose

purpose is to protect the factory from lightning strike and consequent explosion was recently found to be ‘switched off’ and fuse-less. And, following a power failure at the factory in May, the emergency back-up generators failed, causing widespread panic among factory technicians.

The various problems associated with nuclear energy are, as reported in detail in *The Ecologist* last month, inherent in the technology. And technological failure in the nuclear industry spells not just inconvenience, but the potential death of many thousands, or even millions of people. We are all victims of the most poisonous confidence trick in history, and it is our leaders who continue to peddle the lie. □

streets to fend for themselves each year by children too busy or poor to look after them at home.

Russia’s Catch-22, then, is the world’s Catch-22. What has replaced the nightmare of communism is an equally devastating nightmare of runaway global capitalism. In fact, Russia’s new system is little different in many ways from that which it replaced. It is a system which mistakenly calls itself ‘free market’ but which could not exist were it not for vast

Russia’s Catch-22, then, is the world’s Catch-22. What has replaced the nightmare of communism is an equally devastating nightmare of runaway global capitalism.

state subsidies, compromised politicians and an artificial global economic playing field which makes no allowance for small businesses, producers and natural diversity. Every step of the way, the large, unaccountable and homogeneous is subsidised financially and politically to the detriment of the small, local and diverse.

If Russian environmentalists are to escape from this Catch-22, it will be through examining and combating a system that artificially separates economics and environment, and promotes one to the detriment of the other. It will be, as Kalle Lasn of *Adbusters* has pointed out, through “teaching their leaders to subtract.” □

Economy Vs Environment in Russia

By Stephen Carter

There are few more powerful icons of what communism meant for Russia than the smoking factory chimney. It was the banner of glorious industry, symbolising more than anything else the progress that Socialism had forced on the country. Industry – heavy industry – was the ideal: industry *was* communism.

However, industry represented not just the ideal of Soviet progress, but also the grimy reality of a people living in an environment sacrificed to the struggle for economic growth.

Over the last few years, though, Russia has suffered economic collapse on a large scale. And the crisis that has wracked Russia since has rendered silent many of the plants and factories of the communist era. But the ensuing poverty and unemployment has arrived with what some describe as a cloud with a silver lining: as economic activity has massively declined, so too has the human impact on the Russian environment.

Internationally, the most visible effect of the slowdown has been a decrease in emissions of greenhouse gases: the country now produces considerably less than its quota under the terms of the Kyoto climate agreement, and is looking to sell its surplus if it becomes tradable. Anatoly Yakovlev, spokesman for Rosgidrometr, the government’s air and water monitor-

ing service, says there has been a definite effect from ten years of economic contraction: “From the economic crisis, the level of emissions has dropped, of course.”

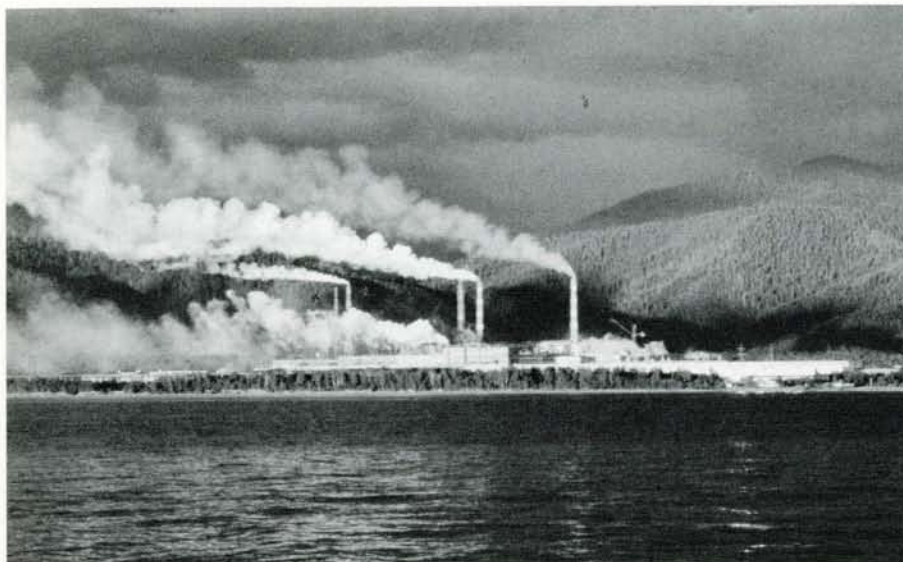
And the drop is substantial: levels of air pollutant emissions from Russian industry are calculated to have fallen from around 28 million tons in 1991 to less than 16 million at the start of 1997 – a fall of about 40 per cent. Water pollution, over the same period, fell by almost as much. In almost every sector, the picture is the same: less production equals less pollution. It is a striking trend: if the West were to reduce its emissions by as

It would seem that economic growth, as far as Russia’s environment is concerned, has been a disaster.

much, it would probably ameliorate the threat of global warming.

Of course, the practical reality behind the figures is the closure of dozens of individual factories. It is a process visible in places like Lake Seliger, 250 kilometres to the north-west of Moscow: here the closure of a tanning factory, set up as a Soviet-French joint venture, was a serious blow to the impoverished area; but the lake that many of the local people fish from and swim in has become significantly cleaner as a result.

It would seem that economic growth,



CORBIS IMAGES

Heavily-polluting factories on Russia's Lake Baikal

as far as Russia's environment is concerned, has been a disaster. Yet still, the idea that the economic collapse is a long-term blessing for Russia's environment is one that most ecologists reject, opting instead for the theory that greater economic growth provides the resources necessary to clean up the mess that same economic growth has triggered.

According to Mark Borozin, the editor of *Green World*, Russia's largest environmental newspaper, the contraction has been a two-edged sword. "For fifteen years, no-one has invested," he says, in maintenance and pollution control equipment: factories that are producing are doing so more dirtily, and are more prone to cut corners in following environmental

laws. "So there has not been a sharp improvement in the environmental situation from the fact that factories are standing idle," he says. "There is some improvement; but by 10 per cent, by 12 per cent."

Christopher Thies, International Coordinator of Greenpeace's forest campaign, also says that the crisis is dangerous. It has led to a substantial drop in timber exploitation in Russia; but in the economical cut-throat conditions which prevail, long-term considerations of sustainability often lose out to extractive exploitation. "Over-consumption causes major global environmental problems, but an economic crisis is equally risky: everything is being produced at the

cheapest possible level."

What's more, the crisis has had a wider effect on the government and its capacity to control. The State has not simply withdrawn from supporting producers: it has often, in effect, withdrawn from regulating them as well. In areas where there are few sources of employment and revenue, and where police and politics are often corrupted, there are serious problems in enforcing the environmental laws that do exist. Instead of the State sponsoring the destruction of the environment, it is allowing uncontrolled exploitation.

In the dwindling ancient forests of Karelia, the Federal Forest Service, responsible for the protection, rehabilitation and use of Russian forests, has engaged in large-scale logging activities under the cover of "sanitary cuttings". According to Greenpeace, the Service is "directly dependent on timber exploitation for maintaining its funding, and appears to be the major logging company in the country."

So the crisis may be something of a mixed blessing for Russia's environment. But the fact remains: the reversal of economic growth has provided much needed relief – even if the citizens of Russia are too busy surviving to appreciate it. And when economic growth begins again, it is likely to be doubly harmful, particularly in a country that harbours 22 per cent of the world's remaining forest cover. □

Stephen Carter graduated from Cambridge University in 1997, and has been working in Moscow as a journalist and news radio producer.

A Big Bang for Accountable Science

By John Papworth

The much-hyped Cassini spacecraft, designed to travel to Saturn, where it will orbit the planet for four years collecting scientific data, was set to re-enter the Earth's orbit in August of this year. The project attracted enormous controversy, and became a symbol of what many perceived to be the latest manifestation of the arrogance of science. Had there been an accident – and there have already been at least nine involving similar craft – Cassini would have released 400,000 curies of radioactive plutonium into the atmosphere. [See *The Ecologist* Vol.27 No.6]

Cassini was scheduled to come within 312 miles of the Earth in the course of its re-routing to Saturn at a speed of 42,000mph. It was put on course with

accuracy, which is just as well. A failure to do so would have caused it to enter the Earth's atmosphere and burn up, prompting the release of 15 to 20 pounds of lethal plutonium dust. This in turn would have caused lingering, painful, lung cancer deaths to many thousands of people over the next half century.

"The bottom line", according to US Space Command, in its 1998 document *Vision for 2020* "is that every credible vision (sic!) for economic prosperity and military effectiveness by 2020 depends on space-based capabilities."

The US space programme is constantly being expanded even though the technology involved is so complex and dependent on such a vast range of factors as to make mishaps a statistical inevitability. And yet, still when disaster is avoided business continues as usual,

and we are assured that prior warnings were little more than Luddite rumblings. Perhaps we should organise special festive days of rejoicing when these mishaps don't happen, before bringing their perpetrators before an international court for even presuming to put so many human lives at such risk.

In the words of John Gofman, himself a nuclear physicist, "The use of plutonium in space is a manifestation of organised insanity." And it would seem madness is but a breeding ground for greater madness, for its latest manifestation is an awesomely preposterous proposal – wait for it – to activate a nuclear accelerator designed to replicate the Big Bang.

The project, known as 'Relativistic Heavy Ion Collider' (RHIC) is the baby of one of the US Government's foremost

research bodies, the Brookhaven National Laboratories (BNL), which has spent eight years building it. A recent test firing was described as "successful" and the first nuclear collisions are planned to take place before the end of 1999.

A team of physicists is even now investigating whether the project could go disastrously wrong. Whatever damage it wreaks, it is a project involving Well-sian magnitudes of forces deliberately set in motion by men whose professed aim is to obtain "information".

The experimental test firing involves a beaming of particles around the giant machine, whilst inside the Collider, atoms of gold are stripped of their outer electrons and pumped into one of two 2.4-mile circular tubes. Powerful magnets will then accelerate them to 99.9 per cent of the speed of light. The ions in the two tubes will travel in opposite directions to increase the power of the consequent collisions.

Inevitably, as planned, they will smash into each other at one of the intersections between the tubes; in doing this, they will generate minuscule fireballs of supreme matter with temperatures of about a trillion degrees, i.e. 10,000 times

Perhaps we should organise special festive days of rejoicing when these mishaps don't happen, before bringing their perpetrators before an international court for even presuming to put so many human lives at such risk.

hotter than the sun. Some of the fears being expressed by some more responsible members of the scientific fraternity carry their own warnings. All agree that the risks of a colossal disaster are tiny and extremely remote, but this does not mean they are not there.

The machine is the most powerful ever to have been made; it may have the power to create 'strangelets' – a new type of matter comprised of sub-atomic particles called 'strange quarks'. Once formed, there is a possibility that these 'strangelets' might spark off an uncontrollable chain reaction that could transform anything they touch into even more mysterious forms of matter.

Following warnings of these possibilities, and of others suggesting there might ensue a new 'black hole' or a general disruption of the galaxy, one of the



Whoops

directors of RHIC has set up a special committee of physicists to review the possibilities of an unforeseen disaster. They will no doubt report that worst scenario possibilities are astronomically improbable, but one does not need to be a qualified physicist to see that the entire project is a gigantic stride into the unknown, and that consequences may ensue which are quite beyond the mind-frame of those who have caused them to comprehend or envisage. This, after all, has been a bleak undercurrent of almost all scientific development in the modern era.

What scientific expert promoting artificial fertilisers foresaw their disastrous effects on soil structure? Or on the weakened disease-immunity systems of the crops? Or the effects on human health? Penicillin and other wonder drugs were going to abolish some of humankind's disease scourges: all they have done is to promote the emergence of far more powerful disease forms which are resistant to the strongest antidotes science can contrive. The same blind pride is observable with the sedulous promotion of genetically engineered life forms. In every case, the mind-frame of the originators is focused on short-term or immediate benefits regardless of wider or longer-term consequences.

It might be thought that a project of an importance greater than that of any other single issue in the realm of public affairs would be embarked upon only after extensive open debate and, given the disastrous global consequences of any mishap, after some kind of general consensus had been reached in favour of proceeding. In fact, the entire space pro-

ject, despite the incredibly vast sums of public money involved (the Cassini space rocket project alone is estimated to have cost approximately \$4 billion), has been shrouded in secrecy from the outset.

The ultimate purpose of this exercise, we are assured, is to defend freedom and democracy. But what means are being employed to justify what ends? Those engineering this project could scarcely show greater contempt for the democratic ideal as they work night and day in ways which negate its practice en route to destroying it. One authority has suggested the cost of this exercise requires "an expenditure roughly equivalent to crashing one stealth bomber a week for an indefinite period." But money is a token of resources employed, and one wonders, if all the expertise and brain-power devoted to it were focused instead on making our planet more habitable and even more enjoyable, what sort of heritage we might create for our posterity. As things are going, it will be little short of a miracle if we are destined to have any posterity at all; far from improving life, we are seeing life itself put under increasing threat to exist.

We are assured that the project is equipped with all the latest and most sophisticated safety devices, that the risks of danger are so infinitesimal as to be hardly worth bothering about, and that in the event of any malfunctioning there are enough operative safety measures on board to correct the consequences without harm to anyone. We could do worse than recall that the same lavish assurances were showered on the Titanic.□

John Papworth is Editor of *Fourth World Review*.

Bring Back Slavery

MEMO TO: President Bill Clinton, and
senior US economic policy-makers
FROM: Gard Binney
RE: Radical economic policy proposal

As global economic competition hots up, it is clear that radical new measures will soon be needed if the USA is to retain its competitive edge in an ever-more ruthless global economy – particularly with the continued rise of ‘developing’ nations with their low labour costs and lack of uncompetitive labour and environmental laws. The following proposal, though it may seem controversial, is an economically logical solution to this problem.

Quite simply, instead of investing so heavily in those developing countries that use virtual slave and/or child labour – a fiscal blood-letting which is rapidly depleting U.S. capital reserves (the US trade deficit currently averages about \$25 billion a month) – the time has come for serious American economists to examine their most viable option: reintroducing the time-honoured institution of slavery. (“If slavery was good enough for the Founding Fathers, surely it should be good enough for us!”). While liberals and other bleeding-hearts will undoubtedly strongly reject this idea (“inhumane!” “an outrage!” etc), it is imperative that policy-makers take a pragmatic approach to the problem of maintaining our competitive edge in a world economy geared to seeking the lowest level of labour costs, without regard to other considerations irrelevant to the profit paradigm.

Obviously any reintroduction of the institution of slavery would need to be based on the needs of a modern, global economy – to return to the inefficient plantation-style patterns of the ante-bellum years is not an option. Obviously, too, the anticipated opposition will need to be pacified. Thus, in order not to offend the sensibilities of those sentimentalists who may take umbrage at the idea of private ownership of human chattel, the new, revitalised model of slavery could take the form of conscripted labour, housed in facilities after the contemporary Chinese model, and administered by the Federal or State governments.

Such a programme would achieve two objectives essential to the economic survival of the US:

1. A large percentage of the present prison population – notably the 60 per cent of inmates who have been convicted of non-violent, drug-related crimes – could be transferred to the Conscripted Labour Camps (CLCs), thus making space available in



CORBIS IMAGES

It makes economic sense

hard-pressed penal institutions for violent repeat offenders, and freeing State budgets from the burden of building additional prisons. As there are currently 2.8 million Americans in prison (coincidentally the same number of citizens as are gainfully employed in farming, fishing, and forestry) this would create a labour pool of 1.7 million.

2. This CLC labour pool could then be made available to American manufacturers of garments, shoes, electronics and similar products, thus obviating the need for exporting this type of unskilled assembly work to developing nations, and thereby achieving considerable logistical economies. (A fringe benefit would be that these manufacturers could proudly and truthfully proclaim to prospective consumers that their goods were “Made in the USA”).

In order to imbue the CLC labour force with a work ethic of the loftiest Puritan principle, we might borrow a page from recent European history and emblazon the entrance gates of the camps with the proud motto “LABOUR LIBERATES” [cf. “Arbeit macht frei” (Auschwitz, et al.)]. While not adding significantly to the cost of the finished product of their labours – thereby blunting the United States’ competitive edge on the world market – this inspiring device would give the latter-day slaves the proud realisation that they were saving their beloved fatherland from sinking to the economic level of such favourite stomping grounds of the multinationals as Haiti and Honduras, India and Indonesia.

I look forward to hearing your response to this groundbreaking proposal.

Gard Binney is an environmental activist and writer.

What is the ‘International Community’?

By Jeremy Seabrook

The emergence of something called the ‘International Community’ is a recent phenomenon. This new entity has nevertheless been extremely busy in the past two or three years, expressing its displeasure at the overthrow of Pakistan’s undeniably corrupt government, making fresh raids on Iraq,

expressing solidarity with the victims of hurricane Mitch, urging Japan to reform its banking system, and attacking Yugoslavia over the atrocities in Kosovo.

But what exactly is this amorphous, global body of opinion? What is this ‘International Community’, and whose interests does it serve? Bill Clinton and Madeleine Albright have been its most vigorous proponents, popping up when-

ever there is an environmental disaster, a war, or an economic collapse, to define the ‘Will of the International Community’. Once this ‘will’ has been defined, it is parroted by journalists and politicians from East to West, without any serious examination of what it means or who it is for. In fact, this benign-sounding term disguises a clear re-constitution of US power at the end of the American century.

The danger of an informally constituted 'International Community' is that it threatens to supersede the function of the at least nominally-accountable United Nations – although it does not disdain to use that institution as a pretext for imposing itself upon the world if and when convenient. If the UN will not play ball, though, the 'International Community' will find some other way to impose its will on disobedient areas of the world. Hence, in Kosovo, NATO gathered to itself a 'humanitarian' role – a characteristic virtually unknown in the long history of military alliances.

The 'International Community' owes its birth to the Gulf War. Moved to a righteous anger by the Iraqi invasion of Kuwait, an ad hoc global coalition was constituted, which subsequently took on a more permanent, though always amorphous, shape. 'World opinion' is the expressing of the collective will of this community, and its distinguishing feature is its resolve to act, not so much in the interests of the world, as in the interests of the dominant powers within it. Its operations are

Inflated to the global level, 'community' is meaningless. Its utility lies principally in the concept of punishing those who do not conform to US-defined political and economic standards.

quixotic, and its arbitrary interventions in other countries, sometimes in the name of 'fighting tyranny', and more recently in Kosovo in the name of 'humanity', are random and not always predictable.

Such a shifting entity has other disadvantages – it is not open to dissent, it does not appreciate the complexity of situations with which it engages, and it lacks long-term aims and vision. Those who see in its resolve the beginnings of international law that will not permit tyrants like Pinochet or Milosevic to impose themselves on their own sometime sovereign countries are likely to be rejoicing prematurely.

It goes without saying that this undisciplined 'International Community' subverts the very idea of a United Nations.



Welcome to the International Community

The increasingly archaic concept of the UN always implied great diversity among its members. It suggested genuine pluralism, acceptance of irreconcilable differences and unbridgeable ideological antagonisms. This inhibited impetuous action which, given the intensity of the Cold War and the competitive accumulation of the weaponry of annihilation, threatened rapid planetary breakdown if it was not curbed by the vanished symmetries of the USA and the USSR.

The International Community will have none of this diversity, dissent or difference of opinion. The very idea of 'community' hints at shared values, an absence of conflict, a common endeavour to suppress dissent. But the word 'community' is double-edged.

At the level where it has real meaning – in the sense of the locality, the neighbourhood, places where people are attached to each other by bonds of propinquity, kinship or shared experience – it will uphold and support the weak and the vulnerable. But inflated to the global level, 'community' is meaningless. Its utility lies principally in the concept of punishing those who do not conform to US-defined political and economic standards. It is in this sense that the USA, its allies and sycophants are invoking it to such effect. The UN, with its ideal of internationalism, has been overtaken by the menace of the International Community, with its declaration of pariah countries, outlaw regimes and rogue states.

It is a curious contradiction that, at the very time when global community is being appealed to as a matter of the highest principle, real, local communities are everywhere under threat of dissolution and breakdown, in the name of 'global economic integration' – of which the International Community is the strongest proponent. Indeed, the actions of NATO in Kosovo clearly exacerbated the catastrophe they were supposed to have prevented, as communities of ethnic Albanians were reduced to ruins, while traumatised refugees stood at border checkpoints all over the Balkans, wondering whether their new host country would be any more merciful to them than the brutalities they had fled.

If the participants in this International Community had ever been consulted; if it represented true interdependence, and not domination of the weak by the strong; if it were devoted to something more than the maintenance by privilege of its monopoly over the weaponry of coercion, then it is just possible that it might have held some meaning for the peoples of the world. But it holds none. For the International Community is just the latest euphemism for a Western – mainly US – agenda for the future of the Earth and the fate of its people.

Those who believe that reform of the UN might result in a shift of power in favour of the least privileged countries are already too late. That possibility has been undercut by the supremacy of a global 'community' which has never been formally constituted, and which cares as little for real community in its excessive pursuit of individualism, as it does for the world, to the exploitation of which it acknowledges no limit.

These concerns are now obsolete. The International Community is the fiction created by a unipolar power, which seeks to shape the destiny of every country on Earth in its own image. The UN will do nothing to help the weak when this International Community is roused to vent its anger on anyone who contests its right to the superintendence of the world, and who must be compelled, by whatever force necessary, into the path of its own version of righteousness and reason. □

Jeremy Seabrook is an author and freelance journalist based in London. A version of this article first appeared as part of Third World Network Features.

BILL CLINTON: CORBIS IMAGES; TONY BLAIR: REX PICTURES; ROBIN COOK: FINANCIAL TIMES; JACQUES CHIRAC: REX FEATURES; GERHARD SCHROEDER: SIPA PRESS

Gulliver in Automobilia

Part IV. Wherein the Author considers the Disposal of Refuse.

— By Nicholas Gould —

The Apostle Luke relates of the Athenians that they spent their Time in nothing else but either to tell or to hear some new Thing. This enthusiasm for Novelty he evidently accounts a Fault in them. It were curious to discover what his Opinion might be of the Automobilians: for they are wondrous susceptible to the charms of whatever is new. During my Sojourn among them I dined often at the Tables of the Quality, and the Talk was all of the latest News, the latest Book, Musick, Play and so forth. Nay, even the Works of ancient Masters are noticed only if they be presented in a novel Guise: as when a Nobleman's Heir sells the Contents of his ancestral Gallery to pay his Taxes, or an old Play is tricked out afresh with new Bawdry.

Where the very Patrons of the Arts are so partial, it is scarce to be hoped that the Mob will show better Sense. The Art most esteemed by the Vulgar is Balladry: and a Song that is on all Lips in May, were shown rare Favour if any listened to it still in July. This Lust for what is new is fostered by the Merchants to increase their Trade; who, while they cry this Year's Wares, omit not to decry those of last Year. The gullible Populace are induced to discard serviceable Goods for others superior in no Respect but their Newness: and by this Means the Labourers and Tradesmen are kept in Employment. Patching and Darning are quite gone out of Fashion; there is not a Tinker to be met with, and even Cobblers are seldom found; the very Launderers fear the increased Use of Undergarments of Paper, which are donned new of a Morning, and cast away the same Night. The humblest domestick Necessaries come to the House wrapt in such a swaddling Integument as would perplex our English Housewives: in a Grocer's Shop you may see not a Particle of Food exposed to the Air, but all inclosed in Boxes and Bags, measured out ready for Sale; which Wrappings are no sooner brought home, than they are rejected as of no further use.

My Readers will scarce believe what I must now tell them: yet being resolved to tell the whole Truth in this History, I will persevere. Outside every Dwelling in Automobilia stands a Tub or Bin, commonly of Iron, about the Bigness of a Beer-barrel, in which are placed the Wastes of the Household (the Refuse of the

Privy alone excepted); and so speedy is the Accumulation of diverse Matter in these Receptacles, that they must be emptied every seventh Day into great Wagons, employed at publick Expense to go round the Streets, like Pest-carts in Time of Plague. This Service being once withheld for some Weeks, the whole Nation seemed doomed to be overwhelmed, like an Oasis beneath incroaching Sands. I was much perplexed to learn the Ingredients of this Hotch-potch of Offals; and investigating a single Bin, found its principal Contents to be as follows:

Imprimis, xii Canisters of Iron, wherein Food had been stored;

Item, viii Bottles and Jars of fine Glass, with metal Stoppers;

Item, A Quantity of Scraps sufficient to provide a Day's Meals for a poor Man or a Pig;

Item, enough Paper and pasteboard to furnish a good Folio Bible;

Item, numerous small Articles, mostly Containers, of the resinous Substance the Automobilians call Plastic.

It will be seen herefrom what Abundance of useful materials, the Product of Men's Labour, is treated as worthless. Indeed, I was informed that the Authorities are put to great Expense to dispose of it; often conveying it many Miles out of the Cities to discharge it into vast Pits, so that the Minerals which last Year Men did sweat to dig from the Earth, this Year they labour to bury it again. Nor can the domestick Bins contain all the Superfluities of a Household: he who would be rid of a Carriage, or a Stove, or another of the mechanical contrivances by which this People sets such Store, must needs pay the Breaker to bear it away, or himself take it from his House by Night and abandon it privily by the Wayside, as the old Greeks were wont to expose unwanted Infants. To such Stratagems must they resort to rid themselves of the Midas-gift of their own Prosperity: and ever and anon felicitate themselves, for they measure the Wealth of a Man or a Nation, not by the Benefits it bestows, but by the Waste it produces; which is as much as to say, that they judge a Chimney not by the Fire, but by the Soot. □



"The gullible Populace are induced to discard serviceable Goods for others superior in no Respect but their Newness: and by this Means the Labourers and Tradesmen are kept in Employment."

NEWS & CAMPAIGNS *by Lucinda Labes*

Send details of your organisation's campaigns, and any important news stories and developments to Lucinda Labes, at *The Ecologist*, Unit 18 Chelsea Wharf, 15 Lots Road, London SW10 0QJ

THE WTO – Crunch time?

To Seattle!

By the time you read this, the 'protest of the century' will be in full swing

It's enough to scare the pants off Seattle's trade-pushers. Early this month, hundreds of non-governmental organisations and tens of thousands of individuals will gather in the city for the biggest ever protest against global free trade. The demonstration, timed to coincide with the World Trade Organisation's (WTO) third ministerial meeting, is being described as "the Protest of the Century."

Groups of every persuasion are planning to descend on Seattle between November 29th and December 3rd. American steelworkers, Greenpeace campaigners, students, Mexican sweatshop workers, Indian farmers... they'll all be there. And on the fringes of the meeting, the International Forum on Globalisation (IFG) will be holding an alternative two-day teach-in. The list of speakers at their event includes Maude Barlow, Susan George, Martin Khor, Walden Bello, Helena Norberg-Hodge, Vandana Shiva, Jeremy Rifkin, Anita Roddick, Andrew Kimbrell, Owens Wiwa, and a great many more.

The purpose is to educate as many people as possible about the devastating effects of the activities of the WTO and the corporations whose interests this body serves, on environment, economy and society in general. The effect will be to send a clear message to the 5000 delegates taking part in the meeting that resistance is mounting.

"The WTO is the primary rule-making regime of the globalisation process," says Jerry Mander of the IFG. "In only five years of existence, the WTO has become one of the most powerful and secretive international bodies on Earth. The central operating principle of the WTO is that global commercial interests supercede all others. Obstacles to the smooth operation and rapid expansion of global corporate activity are therefore routinely suppressed – even if those 'obstacles' are national, provincial, state and community laws and standards that are made on behalf of labour rights, environmental protection, human rights, consumer rights, local culture, social justice, national sovereignty and democracy."

For example, when Europe refused to import America's hormone injected beef, the US took the matter to the WTO. Despite EU research that found one of the six hormones to be a carcinogen and therefore unsafe for human consumption, the panel ruled in favour of the US, leaving the EU with a choice between buying potentially carcinogenic meat or facing punitive economic sanctions.

Similarly, following a case brought by the US against the European Union in 1997, a WTO panel ruled that the European Union was giving preferential access to bananas produced by former colonies in the Caribbean – an arrangement that had been made under the Lomé Treaty. The US was acting on behalf of US-based Chiquita (formerly United Fruit), a corporation renowned for its exploitation of cheap labour and low environmental standards. Following US threats that would have amounted to a full-blown trade-war, the EU agreed to

comply, but is still negotiating with the US over settlement terms. The consequence will, among other things, be that the small producers in the Caribbean, who generally work and own their own land (an average of three acres) will be undermined.

At this month's Millennium Round, delegates will discuss the further liberalisation of trade, the cutting of tariffs and subsidies and new rules on biotechnology and patenting. The 'Global Free Logging Agreement' will also be on the agenda. This far-reaching WTO proposal aims to reduce tariffs on forest products, which forest industry spokesmen admit would increase global wood consumption by up to four per cent.

For further information on the Seattle WTO protests please contact Margrete Strand at Public Citizen, on Tel: +1 (202) 546 4996, or Email <mstrand@citizen.org> Alternatively, contact the IFG on Tel: +1 (415) 771 3394; Fax +1 (415) 771 1121, or email them at ifg@ifg.org

In *The Ecologist* Vol.29 No.6 (October 1999) I incorrectly wrote that the WTO's planned 'Global Free Logging Agreement' would provide "investors with unfettered access to" other nations' forests and that logging corporations "would have no obligation to observe domestic labour or environmental laws, or protect endangered forests." In its present form, the proposal is concerned with tariff reduction only. However, in a letter to the US Congress in May, Congressmen George Miller and Merrill Cook wrote: "The World Trade Organisation (WTO) is currently negotiating a new agreement on forest products. In addition [to tariff reduction] negotiators are discussing the reduction of non-tariff barriers to trade. The agreement would expand the market for forests products without protecting domestic laws or encouraging sustainable logging practices or protecting endangered forests, ecosystems or biodiversity."

Meanwhile, in France...

Protesters are highlighting the destruction caused by a giant corporation

Several hundred members of the French organisation 'Citizen's Control of the World Trade Organisation' (CCCOMC) occupied the headquarters of Vivendi in Paris on 15 October in an attempt to bring to the public's attention the issues at stake at the next round of talks of the WTO. The action taken by the French umbrella group, which comprises the Confederation Paysanne, Droits Devant, l'Observatoire de la Mondialisation, and various trade unions, aims "to denounce all that symbolises the power of monopolies and the strategies of these multinational groups which seize control of our public services such as water, education and culture," according to Francois Dufour, spokesman for the Confédération Paysanne.

In a press release issued to coincide with the action, the CCCOMC claimed that the next WTO conference of trade ministers would provide major multinationals such as Boeing, Microsoft and Vivendi with the opportunity to increase their already-dominant positions in the global market. CCCOMC

has long campaigned against the French corporation Vivendi, which it describes as an "octopus", with tentacles stretching into all sectors of society. Figures produced by the NGO highlight what they see as the corporation's exploitation of people and planet:

- **Water.** While 1.1 billion people in the world are still deprived of drinking water, Vivendi's water operations are making massive profits through the management, reprocessing and supplying of this natural resource in more than 80 countries throughout the world;
- **Media.** Vivendi is expanding its presence through the French media sector in television, portable telephones, multimedia, databases and publishing companies, including the control of specialist media groups such as *Etudiant*, *le Quotidien du Médecin*, and *le Vidal* and has even expressed an interest in taking control of the French national news agency AFP

(Agence France Presse);

- **Environment.** The lucrative waste treatment market, both household waste as well as industrial waste, valued at FRF27 billion in 1997 in France alone, has become a global business for Vivendi's Environment Division, which controls the treatment, recycling and burial of waste in such countries as Argentina, Canada, China, Colombia and Israel;
- **Health and Education.** Vivendi has acquired more than 250 schools and hospitals, like its US counterparts, in anticipation of the planned liberalisation of these markets in the framework of the review of the WTO's General Accord on Trade Services (GATS).

For more information on Vivendi's global activities, check out their website on www.vivendi.com, or for a history of Vivendi's true mission try www.global.forbes.com/forbesglobal/98/0518/0104044a.html

Colombia Update

by Mónica del Pilar Uribe Marín

A licence signed on September 21st by Colombia's environment minister, Juan Mayr, means that nothing can now stop Occidental of Colombia (Oxy) exploiting the sacred indigenous territory of the U'wa people for petroleum. And this is not the only territory under threat, as the government continues to pursue development at any cost

The recent decision by the Colombian government to allow oil exploration on U'wa lands, despite massive international opposition, has raised the spectre of the announced mass suicide of 7,000 members of one of the few remaining intact tribal communities of South America [see *The Ecologist* Vol.29 No.1, p.42]. In the eyes of the government, though, the Occidental licence is "good news", since it will help alleviate unemployment and prevent economic decline. All this thanks to the discovery of an estimated 1,500 to 2,500 million barrels of crude oil directly below the U'wa's forest reservation.

The U'wa have steadfastly maintained their opposition to any exploration and extraction on their land for the best part of a decade. They say the Government has confused the interests of the multinationals with the interests of the nation. Nevertheless, Oxy has been granted an exploratory drilling licence covering part of the U'wa reservation. For the U'wa, petroleum (*ru'ria*) is the Earth's blood, its life-force. To extract it not only violates the cosmos, but also destroys the territory to which they are deeply tied, for social, cultural and ritual reasons, and for their subsistence.

The government remains unmoved: the "U'wa have received sufficient attention," they say, and the country "is bigger than they are." Nothing, they say,

must hold up development.

Indigenous rights in Colombia are guaranteed under the 1991 Constitution, but it largely counts for nothing when 'development' involving multinational interests is at stake. Oil extraction in Caño Limón impoverished the indigenous peoples of Arauca; the activities of Standard Oil and Texas Petroleum exterminated the Yariguies and Yariopies of the Magdalena Medio; those of Mobil and Texas wiped out the Bari in the north of Santander, and Texas destroyed the Kofa in the Putumayo. The list goes on.

Meanwhile, another development issue has raised its ugly head in the heart of the Magdalena Medio. Hidromiel, an electricity utility, has been given permission to deflect the course of the Guarín River to increase the rate of return on capital invested in its 'Miel 1' hydroelectric plant. The diversion of the river will leave the upper and middle reaches of the river basin practically without water. For the inhabitants of the region, the impact will be disastrous. They have asked the NGO 'Defender of the People' to intervene; it in turn has requested the Ministry of the Environment to hold back from granting the environmental licence.

And it doesn't stop there. One of the few remaining pockets of virgin cloud-forest in the region around the Colombian capital, Bogotá, is now under threat from the construction of a glass factory on its fringes. The beautiful Parque Chicaque, a remnant of the rich rainforest that once covered the Bogotá basin, contains many rare species of flora and fauna, and is currently run as a forest reserve for visitors and tourists. But Vidrio Andino, a glass company, is about to receive a licence to construct its facto-



The very existence of Colombia's U'wa people is now threatened by oil exploration

ry on the borders of the park. Opponents say it will pollute the Park's clear rivers and damage or destroy much of its rare ecosystem, as well as destroying agricultural lands and important archaeological sites.

Opponents of these 'developments' are appealing for international help to prevent the destruction:

The U'wa are asking for international support for their rejection of the Oxy licence. Please write to Colombian Environment Minister Juan Mayr, saying that you support the U'wa's ancestral and territorial rights, and asking that he withdraw the licence. Fax him on 57 1 288 6877 or 57 1 284 0363, or email him on Jmayr@minamb.gov.co or JuanMayrM@hotmail.com

For information on how to help save Parque Chicaque, write to Apartado Postal 077 - Soacha, Cundinamarca, Colombia or email Chicaque@latinmail.com

Russia Sells Its Forests

Widespread corruption in Russia threatens the country's forest wilderness

Russia harbours one of the greatest remaining forest wildernesses on the planet. But things are set to change. Russia's timber Mafia, profiting from illegal logging in Siberia and the Far East, is cutting great swathes through the forest. Corrupt government officials are party to the destruction, selling contracts for illegal tree harvesting on public land.

Now China is getting in on the act. After last year's terrible floods, caused in part by the systemic deforestation along the banks of the Yangtse river, the Chinese government has put a stop to all logging in its highlands. So timber merchants, desperate for raw wood, are cashing in on the cheap Russian market. "The Chinese are ready to pay, and pay most often in cash without any paper documentation," says Russian national newspaper *Novie Izvestia*.

Some of the transactions, though devastating, are quite legitimate. The Ministry of Foreign Trade and Economic Co-operation, for example, has agreed to sell three million cubic metres of timber to China's Harbin Economic and Technological Cooperation Corporation. The total investment is estimated to have cost the Chinese \$6 million, says the *Asia Pulse*. The corporation will use Russian machinery and labour, and export the entire harvest to China for sale.

The deal is hot on the heels of another sale last September, when Thailand's forestry department agreed to hand over 175,000 acres of public forest land to Chinese investors. If China continues to export deforestation, rather than living within its environmental means, the consequences for the planet will be dire.



Siberia's forests are under threat

Iceland or Greenland?

Iceland, the UK supermarket, is to ban the artificial sweetener aspartame from its own brand products. The move is certain to disturb Monsanto, which has been selling the chemical through its subsidiary Nutrasweet for over 20 years

Americans, the biggest consumers of soft drinks in the world, drink 20 billion cans of diet fizzy drinks a year, most of which contain aspartame. But recently there has been growing disquiet, with fears that the compound could be linked to multiple sclerosis and brain tumours.

In an article posted on the internet, Betty Martini, the founder of the Atlantan direct action group Mission Possible, relays a paper she gave at a Multiple Sclerosis conference. She believes that the endemic incidence of multiple sclerosis and systemic lupus in the United States should actually be

attributed to "aspartame disease."

At high temperatures – above 86° Fahrenheit – the wood alcohol in aspartame converts to formaldehyde and then to formic acid, says Martini. "If you are using aspartame and you suffer from fibromyalgia symptoms, spasms, shooting pains, numbness in your legs, cramps, vertigo, dizziness, headaches, blurred vision or memory loss... you probably have Aspartame disease," she claims.

According to Martini, the compound is particularly deadly for diabetics, as it plays havoc with blood sugar levels. Others, like US diabetic specialist Dr. H. J. Roberts, believe the chemical also causes Alzheimer's and birth defects.

Nutrasweet dismisses such claims. "The web has become a real problem; there's a lot of misinformation about," says one spokeswoman. But now King's College, London are to conduct a three-year trial to test links between aspartame

and brain tumours.

Iceland will be the first UK national supermarket chain to impose a ban. Recently, the supermarket has been trying to reposition itself as a 'green' grocer. It has banned monosodium glutamate, artificial additives and most preservatives from its own brand products, as well as guaranteeing meat stock that is free of hormones and hasn't been fed on meat or bonemeal.

For more information see Defence Against Alzheimer's Disease by Dr H. J. Roberts (ISBN 1-800-814-9800) or Dr. Russell Blaylock's Excitotoxins: The Taste that Kills (Health Press, 1-800-643-2665). To contact Betty Martini please write to: Mission Possible International, 9270 State Bridge Road Suite 215, Duluth, Georgia 30097, email <bettym19@mindspring.com> Tel. +1 770 242 2599.

America: A Nation of Legal Drug Addicts

When it came to drugs, "just say no" used to be a parent's favourite slogan. But not any more, says psychiatrist Peter R. Breggin in The Boston Sunday Globe. Today, America is raising a nation of legal drug addicts.

"In my psychiatric practice, I see children six to ten years old who have been put on four or five psychiatric medications at once," says Dr. Breggin. This year, six million children across the USA – over one tenth of the school-age population – will be prescribed anti-depressants and stimulants. "From Ritalin and Dexedrine to Prozac and Paxil, the drug epidemic among our children comes increasingly from our prescription counters," he declares.

The situation is now so out of control that the International Narcotics Control Board of the World Health Organisation has issued a warning against the massive over-prescription of stimulants to American children, a country that consumes 90 per



cent of the world's Ritalin – a 'remedy' for so-called Attention Deficit Disorder.

What type of children are drugged? Children who are sad, anxious, angry, aggressive or just plain disobedient... even shy, dreamy children are being drugged. In short, childhood itself has come to be seen as a disease.

But in a country that is supposed to value differences, such wholesale drugging of children "reflects an extreme of enforced

conformity. The child is compelled to display a drug-induced, superficial social veneer."

By turning to pharmaceutical drugs as a quick-fix solution to their children's more disappointing characteristics, many believe that parents are bringing up a generation of people who have little sense of personal responsibility. Instead of learning how to improve themselves and the world they live in, children are being taught that they are somehow defective and should rely on drugs to make them 'right'.

Puerto Rican Islanders Say 'Basta' to US Army

Activists are forming a 'human shield' to prevent the US Navy from bombing US-owned Vieques, an island off the coast of Puerto Rico

In 1941, the American military appropriated most of Vieques island for use as a bombing range. But now its inhabitants, enraged by the killing of a resident by a stray bomb, are saying 'Basta'. For the last five months, protestors have been camping out on the Federal land, obstructing any further bombardment.

Protestors say the island, which is 30 km wide and has a population of over 9,000, has already been massively dam-

aged by the Navy, and they won't budge until the firing stops.

The bombs have devastated the island's environment, whilst cancer and infant mortality rates are higher on Vieques than anywhere else in Puerto Rico. 'Independentistas', who want Puerto Rico to be free from US rule, are using the situation to sound their political horn.

The protest has found support with members of all Puerto Rico's main political parties, as well as the church: "I feel profound admiration and respect for such activism", says Roberto Gonzolez, Catholic archbishop of the San Juan diocese.

Washington is less ecstatic. Although

some US legislators support the action, others, like Republican senator James Inhofe, a member of the Senate Armed Services Committee, have demanded that the protestors be removed. The US Navy, for their part, have issued the activists with a Federal Eviction Notice.

The situation hasn't escaped President Clinton, who appointed a commission to study the matter. Its verdict was that the navy should begin a five-year phase out plan, starting with an immediate 50 per cent reduction in the use of live ammunition in military drills. But the protestors say this is not enough. They want to see the back of the US Navy right away.

France's Anti-Nuclear lobby Celebrates Victory

A delay in France's nuclear power programme has given hope to activists. By Stephanie Roth

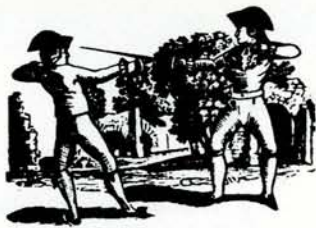
Recent news that no decision regarding the future of France's Energy Pressurised Nuclear Reactor (EPR) will now be taken before 2003-2004, has been greeted with delight by organisations who have over the last two months co-ordinated a demonstration on November 28 against a continuation of France's nuclear programme.

In a press release, the NGO Réseau Sortir du Nucléaire declared that the decision was "undeniably a victory for the whole anti-nuclear camp, and a large majority of the people opposed to the development of any new nuclear plants." "The pressure put on the government over the course of the last months no doubt contributed to the backtracking of the nuclear lobby," it stated.

The demonstration organisers have warned, however, against any premature celebrations, and urged the anti-nuclear

lobby to maintain the momentum built up over the last few months. "It is vital that we remain alert and not grow complacent," they declared. The groups which called for the demonstration, recognising the strong support shown in the first weeks of the protest's preparation, will meet again soon to decide on further action, including possibly a national demonstration in the spring of 2000.

For more information, visit <www.sortirdu nucleaire.org>



Letter Forum

What's Wrong with Fluoridation?

Your magazine has symbolised the struggle of the small people versus the giant syndicates. Then why the article *Water Fluoridation – The Truth They Don't Want You to Know* (Jan/Feb 1999)?

There is no one to benefit more greatly from water fluoridation than the UK people. The whole objective of fluoridation is a low cost public health measure that minimises the need for highly toxic toothpaste. The long term epidemiological studies of Hartlepool have vindicated the safety of fluoridated water and demonstrated the dental benefits.

While the cause of dental decay is refined sugar, educating parents and children is a slower process and there are still unacceptably high levels of dental decay in children. Drilling teeth is painful, extractions are far more terrifying, abscesses in the oral region have the potential to block the airway or lead to infections in the brain sinuses and general anaesthetics come with their own risks. One in every 100,000 patients die on the operating table from GA without any underlying cause. These painful scenarios are not something to subject our children to, and while we keep on arguing about theoretical risks versus real ones, they keep on suffering.

There is a need for fluoridated water in the UK. Do not hold this back from the children.

Atif Hussain
Cardiff, UK

Robin Whitlock Replies: *I wonder whether Mr Hussain actually read my article? If so, he would know that there have been numerous studies confirming that fluoride makes no difference to levels of dental caries. One such study was conducted by Dr. John Yiamouyannis, involving over 39,000 children from 84 separate locations during the school year of 1986-7. This study found that average decay rates for all children aged 5-17 were 2.0 teeth for both fluoridated and non-*

fluoridated areas. Similarly, 98 per cent of all the 12-13 year olds in New Zealand (60,000 children) revealed no significant difference in tooth decay rates between fluoridated and non-fluoridated areas.

Fluoride is highly toxic, and fluoridation of the public water supply is, for that reason, first and foremost a medical, rather than a dental issue. Repeated studies show that fluoride can produce a multiplicity of extremely serious conditions including brain damage, Downs Syndrome, kidney damage, allergic reactions, damage to the bone and to the skeleton, due to the tendency of fluoride to attack calcium and collagen, genetic damage, enzyme damage, gastric disorder, cancer, damage to the immune system and thyroid problems.

Thyroid problems, including goitre, have appeared in places fluoridated at a level much lower than the 1 parts per million (ppm) proposed by the government. The thyroid gland requires iodine to produce the hormone thyroxine, but fluoride displaces iodine, thereby causing the thyroid gland to stop working properly. Over 50 years ago, doctors in India discovered a close relationship between hypoparathyroidism and skeletal fluorosis – the attack upon the bone material of the skeleton by fluoride.

There is absolutely no need for fluoridated water in the UK. We can do perfectly well without it.

Whiff of Grapeshot

Congratulations on the despatching of Dr Jack Cunningham into the political hereafter. I noticed that your exposure of his seedy political dealings came less than two weeks before he was dumped from the Blair administration. One whiff of *The Ecologist's* grapeshot and he obviously knew the game was up.

You seem to be making a habit of this sort of thing. You produce *The Monsanto Files*, then a few months later, every newspaper in Britain picks up on the gene menace and it's not long before 'terminator' seeds are despatched as swiftly as Dr Cunningham. Perhaps you should begin to consider your future targets. Could you see what you

can do about Mr Blair, for example? Maybe a similar investigation is in order.

Steven Mott
Buxton, UK

Greens Wrong On GMOs?

I am concerned that environmentalists may be going adrift on the issue of genetic engineering.

It is understandable that there should be a strong public reaction to GM foods, for all the well-rehearsed reasons. What is interesting is that the responsible scientific community is very quiet. It is likely, however, that a convincing argument to justify genetic modification will be taken up by the media in the not too distant future and widely accepted by serious commentators.

Your readers could prepare themselves for this by considering the following:

1. Our genetic constitution is subject to random mutation at all times, most of it harmless, some of it disadvantageous and hardly any of it useful – unless we adapt to it.
2. This has been the case from the beginning of life as we know it: we are the result of this process.
3. As long as we recognise the difference between genetic engineering as a technology which can be controlled and genetic engineering as a symbol which can only be approached with humility, patience and the desire to understand without self-interest, we have a chance to get things right.

It seems to me that the public reaction which forced supermarkets to take GM food off their shelves was due to a much deeper misgiving – that is, about the sequestration of powerful technology by a small number of wealthy companies that can evade most government controls – or even dictate the rules to governments under cover of 'scientific advice'. Is it not time that we, as environmentalists, declared biotechnological knowledge as properly

something to be used in the service of the biosphere and not something that can only be patented by commerce for private gain?

Michael Dunwell
Bath, UK.

The Globalisation Debate

Local Evils?

Sandy Irvine's letter, in which he criticises aspects of the politics of localisation ('The Globalisation Debate', Letter Forum, *The Ecologist*, Vol.29 No.5), raises some important issues – such as localism versus globalism, the relationship of traditional peoples to their land and the autonomy of individuals in modern mass societies – which go right to the heart of the ecological debate.

He talks of 'local evils', and in the very next sentence, refers to Slobodan Milosovich and Saddam Hussein. Iraq and Yugoslavia may be small nations relative to the USA, but 'local communities' – never! But why, as Sandy Irvine suggests, should "local evils" be suppressed, while global evils (which some people regard the bombing of Iraq and Yugoslavia to be) rage unfettered over every corner of the Earth? And why is it that the conditions for the governance of local communities are better made by people far away rather than by the people most directly affected? What evidence is there that governments at the national or supranational level are any wiser than those at the local level?

Ally Fricker and Bob Lamb
Robertstown, Australia

Managing Complicity

Sandy Irvine suggests that ordinary people should be held more responsible for wilful complicity with globalisation and the consumer culture, and that the rise of transnationals is due to people 'expressing, to some extent at least, their own preferences.' I think he underestimates the manipulative power of corporations. There is a telling passage in David Korten's book *When Corporations Rule the World*, pp.150-151:

"The consumer culture emerged largely as a consequence of concerted efforts by the retailing giants of the late nineteenth and early twentieth centuries to create an ever-growing demand for

the goods they offered for sale. American historian William Leach has documented... how they successfully turned a spiritually-oriented culture of frugality and thrift into a material culture of self-indulgence. Leach finds the claim that the market simply responds to consumer desires to be nothing more than a self-serving fabrication of those who make their living manipulating reality to convince consumers to buy what corporations find it profitable to sell".

Korten also notes that "Large corporations became increasingly skilful in creating desire for their products... gradually, the individual was surrounded by messages reinforcing the culture of desire". (Jerry Mander makes similar points.) For many Westerners, there is still no apparent alternative to the prevailing culture, especially as we are taught from an early age that industrial society is the most advanced, at the forefront of evolution, and other cultures are 'backward'.

Roy B. Ashton
Roy@ballash.demon.co.uk

Localisation Can't Solve Everything

I sympathise with many of the points made by Sandy Irvine. What globalisation surely means above all else is that the anti-democratic forces of globally mobile capital and, which force nations into competition with one another, require a widespread, if not global, response.

All governments must now pursue only those policies they know will not incur the displeasure of global financial markets and transnational corporations (TNCs). The ability of capital and TNCs to move (or merely threaten to move) elsewhere is polarising the macro-economic policies of all nations into a distinctly right-of-centre, free market stance in a tit-for-tat effort to remain attractive to business at the expense of society and the environment. Most crucially, this is happening regardless of the party in power or the claims of their manifestos prior to elections. Furthermore, the inability of individual or even groups of nations to re-regulate world markets or TNCs means that only global (or virtually global) action can bring these destructive forces back under control.

The first step towards developing a strategy for achieving a new, more ecological and truly democratic world

order is to recognise that all nations are now subject to an effective dictatorship ruled by global markets which has delivered us into the age of pseudo-democracy. The traditional view of democracy led us to believe that different political parties would each deliver different policies once elected. But under pseudo-democracy, we now find, regardless of the party in power, that what is delivered is the same free market economics 'spun' in different clothing.

It should not therefore be difficult to see that global dictatorship (and that is surely not too strong a word) can only be overthrown by some kind of globally-orientated political action. Local initiatives, whilst valid in themselves, are unlikely to survive the inevitable chaos of widespread social disruption when the global economy, to which the vast majority of us are inextricably linked whether we like it or not, eventually collapses. The disturbing increase in the popularity of far-right political parties around the world should already serve as warning enough of the form that collapse is likely to take.

Surely we urgently need to find ways to act globally, not just locally. After all, even Schumacher himself recognised (in *Small is Beautiful*, p.54) that some organisations might need to be global in scope.

John Bunzl
London, UK

Propaganda Machine

Is corporate rule made easier with public complicity? Absolutely. My experience from 54 years in the US has been that general public ignorance of the eventual consequences of corporate rule is stunning.

According to Molly Ivins – the only syndicated American newspaper columnist who is regularly distressed in print that election campaigns are funded by corporations – more than half of the US public, while they acknowledge it as a potential problem, don't see it as a big problem. Of course, the vast majority of Americans get all their news from corporate television and the adventurous stray into the corporate newspapers, radio and magazines.

The US propaganda machine is enormous, very well-organised and extremely effective. To fight it, there needs to be a strategy, something that in all my years of perusing populist material and

writing about it I have never heard a mention of (although Vandana Shiva comes close). I am continually amazed at the disunity among populist organisations.

If the general public remains uninformed and complacent about the dangers of corporate rule, I can understand why.

Bob Clark
Monségur, France

Importance Of Pluralism

While it is of course unwise to idealise the past or the experience of sustainable non-Western cultures, to label any admiration of their desirable aspects as romanticism or 'radical nostalgia' runs the risk of throwing the baby out with the bathwater. Many vernacular cultures hold vital wisdom about environmental sustainability and how to live in a community harmoniously; we cannot afford to discard such lessons on the grounds that there were some imperfections by our standards; indeed it is essential for the future of humanity that globalisation does not destroy non-Western worldviews. If it does, we lose essential living examples of ecologically-viable ways of life and become forced to 're-invent the wheel' in terms of how to live sensitively on the Earth.

Sandy Irvine notes himself the difficulties we face in our efforts to re-create sustainable lifestyles when Western culture has been systematically destroying the social building blocks, such as a sense of community – and also the ability to live in a community, which requires personality traits other than the egotist individualism cultivated by consumerism. However, he seems to imply that the lack of 'the building blocks of the local community you advocate' renders the idea that we need to rebuild community as invalid. If a patient is diagnosed as having pneumonia, should we not try to treat her? Similarly, society can recover from its maladies.

Irvine further attacks localism by invoking local tyrants and the 'cruel and oppressive features' of some vernacular societies, presumably as evidence that complete political decentralisation is undesirable. Yet even the most ardent proponents of localisation, such as social anarchist Prince Petr Kropotkin, acknowledged the importance of higher level alliances between communities for trade and political co-operation. And Irvine seems to miss the

point that a key attraction of localism is its rejection of centralised power, which is prone to exactly the same abuse on a much larger scale! Inevitably, some local autonomies would develop traits that others would disapprove of; this is the nature of diversity, a pluralism that has to be respected (provided one community does not damage the well-being of another).

Finally, Irvine writes 'some contributors seem to think that there was a golden age in the past from which ordinary people were dragged kicking and screaming by imperialist oppressors and other malign forces. He seems unaware of the massive resistance which did occur all over the world when common people found their traditional livelihoods threatened by 'progress', be it the crowds who knocked down walls during European Enclosures, the Diggers, the Luddites, or indigenous resistance to colonialism, such as the on-going Andean counter-development movement documented by the Andean Project of Peasant Technologies (PRATEC).

David Ashton
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GM and Fluoride: Spot the Difference

Genetic modification of food supplies is being sold to us in a three-pronged attack: we are urged to allow "perfectly safe" GM food into our bodies; reassured that GM organisms do not pose a threat to the environment, and that the technology is "essential" to feed the starving millions in the Third World.

A similar, even cruder strategy was formulated over 50 years ago. The unique role of fluoride in the enrichment of uranium for the Manhattan Project was the "critical mass" which saw it doubly enshrined by the USA's military-industrial complex as a strategic chemical and a "protected pollutant". Thus, the bomb programme and the future of the nuclear processing industry were assured, the giant companies polluting air and water with fluoride were protected from litigation and allowed to profit from some of their fluoride waste by telling the public that the addition of fluoride to "fluoride-deficient" drinking water supplies is supplies is "perfectly safe" and reduces tooth decay in poor, deprived children.

Two multinational companies currently at the forefront of the GM issue were, in the mid 1940s, heavily involved in the production and use of uranium hexafluoride. Recently-declassified documents show that the first water fluoridation experiments in the USA were designed both to protect fluoride's public image and to secretly investigate its chronic, low-level effects on communities unaware that they were being used as guinea pigs.

The authorities already knew that fluoride was harmful. In 1936, the *Journal of the American Dental Association* stated: "fluorine is a general protoplasmic poison, but the most important symptoms of chronic fluorine poisoning known at present are mottling of the teeth [fluorosis] and interference with bone formation... when the threshold value is exceeded, as it is in drinking water containing one or more parts of fluorine per 1,000,000 detectable signs of toxicity appear." [Vol.XXIII,p.574.]

As late as 1943, JADA pointed out: "Fluorides are general protoplasmic poisons, probably changing the permeability of the cell membrane by inhibiting certain enzyme systems. The sources of fluorine intoxication are drinking water containing 1 part per million or more..." But, from coast to coast, the water fluoridation 'hard sell' was about to begin.

The scientific facts of fluoride's harmfulness have not changed: they have been ignored or suppressed, often in ways not a million miles away from the treatment meted out to Dr. Arpad Pusztai, the courageous scientist who continues to warn the public about GM food.

Tony Blair and his fellow members of New Labour's 'inner circle' are as committed to enforcing water fluoridation as to protecting the GM food industry. In order to side-step authoritative and insistent calls for a full, independent public inquiry into fluoridation, they have announced a 'review', to be carried out by a 'panel of experts.' In the meantime, their preparations continue uninterrupted for the addition of hexafluorosilicic acid, the highly-toxic waste by-product of the phosphate fertiliser industry, to our drinking water. It is any wonder that New Labour are increasingly known as 'the political wing of the multinationals'?

Terry Moore
Glasgow, UK

Fighting MAIgalomania: Canadian Citizens Sue Their Government

A citizens' initiative in Canada is suing the government for preparing to sign away its powers under the Multilateral Agreement on Investment (MAI). If they win, it could be the first serious legal challenge to the entire global trade regime. **By Michel Chossudovsky**

The initiative that has been launched in Canada by non-governmental organisations (NGOs) and citizen groups challenges the legitimacy of the Canadian government to negotiate the Multilateral Agreement on Investment (MAI). The legal charge is that the Federal government's MAI negotiations are in direct conflict with Canada's Constitution, and are therefore illegal.

The Vancouver-based Defence of Canadian Liberty Committee (DCLC) has taken the Federal government to court, and has begun proceedings in the Federal Court of Canada. Initiating documents were filed and served more than a year ago, in April 1998 (No. T-790-98), but the case is only now beginning to pick up speed.

According to the DCLC, the MAI is fundamentally unconstitutional under Canadian law, because "it gives entrenched rights to international banks and foreign corporations guaranteed by international law which Canadian citizens do not have. This is contrary to the principle of equality before the law which is part of the Canadian Constitution enshrined in the Charter of Rights and Freedoms."

In signing the treaty, the Federal government would be acting "outside of the power granted by and ultra vires of the Constitution Acts of 1867 and 1982." Furthermore, according to the applicants, "such a treaty would not be in the best interests of Canadian citizens."

The legal challenge represents much more than a mere embarrassment to the government's negotiating team headed by the former Trade Minister Serge Marchi. It highlights what amounts to a blatant violation of democratic procedures; it questions the integrity of elected politicians and bureaucrats involved in behind-the-scenes negotiations which often included meetings with powerful international business interests. Furthermore, it has enormous potential significance, for it challenges the right and ability of an overarching economic agreement to overrule national laws and standards – which is the very basis of the entire World Trade Organisation (WTO) regime.

"The government of Canada has no authority to sign a treaty without a mandate from Parliament," say the organisers of the initiative. "To do so is a violation of the fundamental principles of democracy and representative government. Exercise of prerogative power must be subject to the Constitution."

The team, which includes three top lawyers, well versed in constitutional and human rights issues, has interrogated government witnesses and demanded the submission of confidential government documents. At the initial Vancouver hearings, a number of previously unseen documents, some of which had been heavily blacked-out in parts, were revealed by a Federal government witness. In a subsequent Court ruling, the witness was obliged to release information which had until then been withheld.

From the outset, the Canadian government has attempted through various means to stall the legal challenge and to prevent it from reaching the trial stage. Initially, the government called for "adjournments". Following that, the judge selected for the case was one Jean E. Dubé, a personal friend of Canadian Prime Minister Jean Chrétien. When the applicants launched a 'motion of refusal', requesting that Dubé step down to avoid a conflict of interest, their motion was rejected – by Dubé himself.

The MAI Collapses

In the meantime, following France's dramatic withdrawal from negotiations on 'cultural' grounds, the MAI negotiations were suspended. This provided the Canadian government with the opportunity to dismiss the case on grounds that "the application for judicial review is moot." What actually happened,



however was that the negotiations had simply been transferred to a different venue – under the umbrella of the WTO.

"The fact that the terms of the same treaty may now be negotiated at a different forum, namely the WTO, does not render the legal issue(s) and constitutionality of these negotiations moot," responded the DCLC. "The Applicants call into constitutional validity all past, current and future negotiations with respect to the substantive terms of the MAI under any name

and/or forum... the executive does not have the constitutional jurisdiction to negotiate such treaties without proper and prior legal advice and authority from the Attorney General as to the constitutionality [of the treaty] as well as pre-parliamentary approval... the application is [therefore] not moot."*

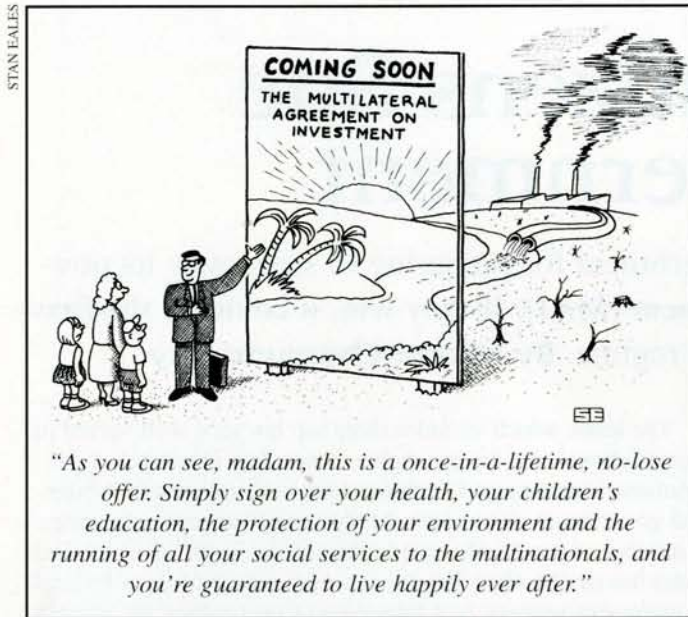
The implication of this paragraph is clear: the case against the MAI will now, if the DCLC have their way, be widened to take in all international economic agreements signed by government without recourse to their people – such as those negotiated at the WTO in Seattle last month.

A court ruling to dismiss the case on the grounds of "mootness" has been appealed. Likewise the motion of recusal concerning Judge Dubé. The legal challenge – which constitutes a timely test of the Canadian legal system – continues, and the DCLC is prepared if necessary to take the issue to the Supreme Court.

Significance of the Legal Challenge

The legal challenge constitutes a powerful instrument – one based not on empty and biased 'dialogue' with the government, nor on weak proposals of compromise or lengthy legal wranglings – but rather on challenging the entire process of international agreement negotiations. It rejects the MAI outright: it questions the legitimacy of politicians and bureaucrats to undertake negotiations (on behalf of national societies) which impoverish millions of people and derogate fundamental

* Applicants' (Fogal et al.) 'law and argument on mootness issue', Court File No. T-790-98, March 25, 1999. The Federal Court of Canada (Trial Division).



Why Canada Should Listen to the Cree

The following extract from a speech given by Ovide Mercredi, a Canadian Cree leader, to the 'Save Canada Conference' in Ottawa, in August, compares the colonisation of Indian lands by the European invaders 200 years ago with the colonisation of citizens' rights today by globalisation and corporate control – and proposes a common fightback against the removal of power from ordinary people.

I am a Cree – hence my views of Canada and the United States of America are different from those of citizens of these two foreign nation states that took root on Native soil.

However, I believe that our experiences with imperialism, colonialism and federalism can be instructive to those Canadians who fear the loss of their independence, loss of their land, water and economies and the loss of their territorial sovereignty, or the control of their way of life.

We, the Indigenous Peoples of the Americas, understand all too well that our survival and future is linked to the maintenance of our separate and distinct identity, and to the free exercise of our inherent self-determination within our

territories.

Our past struggles with Canada were battles against the forces of assimilation and the efforts by the Christian churches or the Canadian government to transform our peoples into Canadians.

Today, the immediate threat to our treaty and Aboriginal Rights is the growing consolidation of corporate power and wealth that has a tacit support and promotion by the wealthy nation states, including those that belong to that exclusive corporate mind or club called the G7.

In some way I find your concerns for your future as an independent country similar to our people's vision to blossom as a distinct people rather than becoming forever lost in that seemingly endless stream of assimilation.

Does this mean that Canadians will better understand and maybe even support the aspirations and dreams of the First People for their own presence under the sun? Maybe not, but I ask this question: how does it feel to be forced into something that you have very little power to prevent?

It seems ironic that, after trying so hard for so many centuries to dispossess the First Peoples of their rights and future, we are seeing a modern and young Canada

handing over its sovereignty and wealth to the Americans under the Free Trade Agreements, thereby making Canada the newest colony for corporate interests.

Do you want to digress into a state of a colony as your legacy for the new millennium?

I think that it is a very good thing for all of us who share this country that the indigenous nations have not given up their fight for their land, their resources and their independence. Since your governments and politicians have turned their back on the Canadian people and have abandoned the vision of your own ancestors for a free and democratic society, who is left to fight against the confluence of Canadian and American streams of assimilation?

We are still here. We are still standing; we have not forgotten. We will never surrender our destiny or our sovereignty. In the century or more to come will Canadians be able to make that same claim?

For us, it is not a choice between two colonisers or three colonisers. The choice is freedom. The choice is to build new societies that are not founded in oppression or totalitarianism. The choice is clear – the end of dominance of one society over another society.

human, cultural and economic rights.

But though more than 600 organisations have joined hands in opposing the transfer of the MAI negotiations to the WTO, Western governments have, in response, opened consultative procedures with selected "civil society organisations" as a deliberate strategy of attempting to provide legitimacy to the international agenda promoted by and under the WTO. Sadly, some NGOs are being drawn into this trap. These behind-the-stage discussions are ultimately intended to create divisions between and within civil society organisations, with a view to effectively disarming all forms of critical debate on the agreement. The general trend has been one in which numerous organisations (including some trade unions) – rather than challenging the overall legitimacy of the MAI – have preferred to bargain for environmental or labour clauses, leaving the nature and overall principles of the agreement unchanged. This is a serious mistake.

Challenging the IMF

The key objective of those behind the legal initiative is not only to stall the adoption of the MAI (now under the auspices of the WTO) but also to challenge the legitimacy generally of international rules, financial mechanisms and regulations governing the movement of capital (including speculative capital). In early 1998, barely two weeks before NGOs from around the world gathered in Paris to oppose the MAI, the International Monetary Fund (IMF) met behind closed doors and agreed to deregulate capital movements, with little or no press coverage or public scrutiny.

The measures agreed to by the IMF seek essentially to prevent national governments from regulating foreign investment. According to the IMF, such regulation, if needed at all, should instead be achieved through a more "expedient" avenue – at international level, with no national vetoes and with no public scrutiny. It is just such unaccountable global capitalism that the Canadian legal challenge seeks to prevent.

In this context, it is vital that the MAI, in its various camouflages, is monitored closely.

'Internationalising' the Legal Challenge

This is a global struggle. The legal challenge in Canada is an important landmark: it lays out a framework for the launching of similar legal challenges in other countries, not only against the MAI but also in relation to other international treaties which were negotiated without democratic legislative assent, and which violate fundamental rights. An 'internationalisation' of this type of legal challenge (i.e. legal actions launched simultaneously in several countries) could and should become part of the growing worldwide movement against globalisation. □

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Information concerning the Legal Challenge including the complete text of the Legal Documents can be found at: <http://www.canadianliberty.bc.ca/legaldocs/index.html>; email: cjogal@netcom.ca

I believe national measures in Canada and in the United States must be undertaken to save Indigenous Peoples from further exploitation and to end any further destruction of their land, resources, and any further diminishment of their sovereignty, their culture or their way of life. And there must be a national programme of resistance to the global assimilation of corporate values, that puts profit ahead of people, or the capacity of a country to remain a true democracy.

How can Canadians learn from our terrible journey – from a free people to that of dependency in less than one century? Let me put it in pure and simple language.

Firstly, when you lose your land and its resources, your people will lose their ability and capacity to maintain their livelihood or their way of life.

Secondly, when you lose your economy and the ability to control your economic future, you are reduced to a pauper, forever dependent upon the charity of those who control the economy and hold the reins of power.

Thirdly, when you lose your authority or jurisdiction over your land and territory, you are no longer free to exercise the right of self-determination.

Fourthly, when you lose the sovereignty



Cree woman and child

of your people and their lands and territories, the new masters of your destiny will never give it up voluntarily.

Fifthly, it is better to have freedom and to be self-reliant as a distinct people than to be dependent upon another society for your needs, your well-being, your progress or your destiny.

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Sixthly, you will find over the course of time that while the people may never forget their heritage and vision, the struggle to remain a distinct people with the right of self-determination equal to all nations will take its toll on the lives and limited resources of your people.

And finally, to surrender your birthright as a nation of people is to die.

The Americanisation of Canada is a very powerful stream, a stream of assimilation that cannot be ignored by Canadians or Indigenous Peoples. We can give you lessons on the art of resistance, and how to build a movement for the restoration of your rights and freedom. Of course, this advice will cost you a few more trinkets and beads:

*Your freedom for my freedom
Your sovereignty for my sovereignty
Your society for my society
Your land for my land
Your water for my water
Your culture and heritage for my culture and heritage
Your people's future for my people's future.*

May your journey to save the country result in positive gains and advances for the Indigenous People of Canada.

Small Is Bountiful

For more than a century, economists have predicted the demise of the small farm, which they label "backward, unproductive and inefficient". But in fact, far from being stuck in the past, small-farm agriculture provides a productive, efficient and ecological vision for the future.

By Peter Rosset

Today's ongoing process of liberalisation in international agricultural trade – taken a step further in the WTO Millennium Round last month in Seattle – is having dramatically negative effects on small farmers everywhere. If small farms are worth preserving, then now is the time to educate the world's economists and policy-makers about why we should do so. But are small farms worth preserving? Can they possibly compete with large farms? What are their benefits, in economic and ecological terms?

The Arguments for Small Farms

In arguing the case for the continuation – indeed, for a resurgence – of small farms, it is important to note three key points. The first point is that, though small farmers have been driven out of rural areas across the world in their millions over the last five decades, they still persist. In many areas, such as the US, they continue to be numerically dominant. In the 'Third World', they are central to the production of staple foods. The predictions of their demise continue to be premature.

The second point is that small farms are far from being as

There is ample evidence that a small-farm model of agricultural development can produce far more food than a large-farm pattern ever could.

unproductive or inefficient as many economists would have us believe. In fact – crucially – there is ample evidence that a small-farm model of agricultural development can produce far more food than a large-farm pattern ever could.

The third point is that small farms have multiple functions which benefit both society and the biosphere, and go far beyond the production of a particular commodity. These should be seriously valued and considered before we blithely accept yet another round of anti-small-farm policy measures handed down by the WTO and its client governments.

Small-Farm Virtues in the USA

Perhaps surprisingly, the US government – one of the most committed to liberalisation and corporate agriculture in the world – agrees with my analysis of the virtues of small farms. The US Department of Agriculture's (USDA) National Commission on Small Farms released a landmark report in 1998 entitled *A Time to Act*.² What the USDA calls the "public value of small farms" in this report includes:

- **Diversity:** Small farms embody a diversity of ownership, of cropping systems, of landscapes, of biological organisation, culture and traditions. A varied farm structure contributes to biodiversity, a diverse and aesthetically-pleasing rural landscape, and open space.

- **Environmental benefits:** Responsible management of the natural resources of soil, water and wildlife on the 60 per cent of all US farms less than 180 acres in size, produces significant environmental benefits.

- **Empowerment and community responsibility:** Decentralised land-ownership produces more-equitable economic opportunity for people in rural areas. This can provide a greater sense of personal responsibility and feeling of control over one's life. Landowners who rely on local businesses and services for their needs are also more likely to have a stake in the well-being of the community and its citizens.

- **Personal Connection to Food:** Most consumers have little connection to agriculture and, as a consequence, they have little connection with nature, and lack an appreciation of the farmer's role. Through farmers' markets and community-supported agriculture, consumers can connect with the people growing their food.

- **Economic foundations:** In various states and regions of the US, small farms are vital to the economy.

Small-Farm Virtues in the Third World

A similar pattern holds in the Third World, where policies promoting large farm, export-orientated agriculture have increasingly eroded the viability of small farms.

In traditional farming communities, the family farm is central to the sustainability of agricultural production. On the small farm, productive activities, labour mobilisation, consumption patterns, ecological knowledge and common interests in long-term maintenance of the farm as a resource, contribute to a stable and lasting economic enterprise. Short-term gain at the risk of degrading essential resources places both the family and the farm at risk of collapse. Family farmers regularly achieve higher and more dependable production from their land than large farms operating in similar environ-



Threshing corn on a small farm in Colombia

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ments. Labour-intensive practices such as manuring, limited tillage, ridging, terracing, composting organic matter and recycling plant products into the productive process enhance soil conservation and fertility.³

Small farmers have developed, sometimes over the course of 5,000 years, a variety of unique technologies, crops and farming systems. Perhaps most important in an era of diminishing non-renewable resources, small farmers across the Third World produce bountiful harvests with minimal recourse to expensive external inputs such as pesticides, machines or genetically modified seeds.⁴

Small-Farm Productivity

How many times have we been told by 'experts' that large farms are more productive than small farms? Or that they are more efficient? Yet the actual data, when examined, shows exactly the reverse for productivity: that smaller farms produce far more per unit area than larger farms. So why is the establishment crusade against small farmers continuing? One reason is that, because the conventional method of measuring 'productivity' is flawed, we are receiving the wrong answers to our questions.

Flawed Measurements

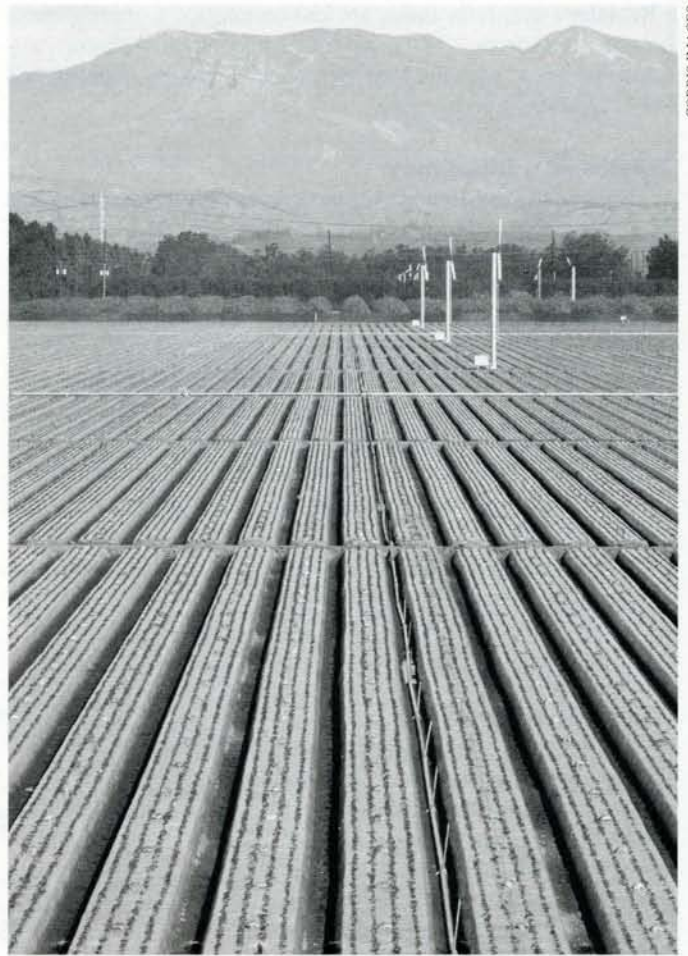
If we are to fairly evaluate the relative productivity of small and large farms, we must discard 'yield' as our measurement tool. 'Yield' means the production per unit area of a single crop – for example, "metric tons of corn per hectare" – and is the basic measurement used by economists to assess the productivity of farmland. Often, the highest yield of a single crop is achieved by planting it alone on a field – in a monoculture. But, while a monoculture may allow for a high yield of one crop, it produces nothing else of use to the farmer. The bare ground between the crop rows – empty 'niche space' in ecological terms – invites weed infestation. The presence of weeds means the farmer must then invest labour in weeding or capital in herbicide.

Large farmers tend to plant monocultures because they are the simplest to manage with heavy machinery. Small farmers,

If we are to compare small and large farms, we should use total output, rather than yield, as a more accurate measure of productivity.

on the other hand, are more likely to plant crop mixtures – 'intercropping' – where the empty niche space that would otherwise produce weeds is occupied by other crops. They also tend to combine or rotate crops and livestock, with manure serving to replenish soil fertility. Such integrated farming systems produce far more per unit area than monocultures. Though the yield per unit area of one crop – corn, for example – may be lower, the total output per unit area, often composed of more than a dozen crops and various animal products, can be far higher. If we are to compare small and large farms, we should use *total output*, rather than yield, as a more accurate measure of productivity. Total output is the sum of everything a small farmer produces: various grains, fruits, vegetables, fodder, animal products, etc. When we do this, a very different picture emerges.

Surveying the data, we indeed find that small farms almost always produce far more agricultural output per unit area than larger farms. This is now widely recognised by agricultural economists across the political spectrum, as the "inverse rela-



Research carried out in the 1940s showed how large-scale farming in California's San Joaquin Valley, above, destroyed local communities and economies

tionship between farm size and output".⁵ Even leading development economists at the World Bank have come around to this view, to the point that they now accept that redistribution of land to small farmers would lead to greater overall productivity.⁶

The four charts accompanying this article illustrate just some of the many examples of how productivity and farm size across the world show this inverse relationship: as the size of the farm increases, so its total productivity decreases.

There is a variety of explanations for the greater productivity of small farms. Some of these are:

- **Multiple cropping:** small farmers are more likely to intercrop various crops on the same field, plant multiple times during the year, and integrate crops, livestock and even aquaculture, making more intensive use of space and time.
- **Output composition:** large farms are orientated toward land-extensive enterprises, like cattle grazing or extensive grain monocultures, while small farmers emphasise labour and resource-intensive use of land.
- **Irrigation:** small farmers may make more efficient use of irrigation.
- **Labour quality:** while small farms generally use family labour – which is personally committed to the success of the farm – large farms use relatively alienated hired labour. Small farms often apply more labour per unit area.
- **Input use:** the mix on small farms favours non-purchased inputs like manure and compost, while large farms tend to use purchased inputs like agrochemicals.

• **Resource use:** large farms are less committed to management of other resources – such as forest and aquatic resources – which combine with the land to produce a greater quantity and better quality of production.

Small-Farm Efficiency

While small farms, then, are clearly more productive than large farms in terms of output, claims are often made that large farms are still more efficient. But this claim, too, is misleading.

The definition of 'efficiency' most widely accepted by conventional economists is that of 'total factor productivity' – a sort of averaging of the efficiency of use of all the different factors that go into production, including land, labour, inputs, capital, etc. Tomich⁷ provides data from the 1960s, 70s and early 80s, which shows that small farms have greater total factor productivity than large farms in Sub-Saharan Africa, Asia, Mexico and Colombia. More recently, the same pattern has been found in Honduras.⁸

In industrial countries, the pattern is less clear. The consensus position is probably that very small farms are inefficient because they can't make full use of expensive equipment, while very large farms are also inefficient because of management and labour problems inherent in large operations. Thus, peak efficiency is likely to be achieved on mid-sized farms that have one or two hired labourers. In other words, even in the 'developed' countries there is no reason to believe that large farms are more efficient – indeed, they may be quite inefficient.

But there is far more to the economic importance of small farms once we move outside the farm gate and ask questions about economic development.

Small Farms in Economic Development

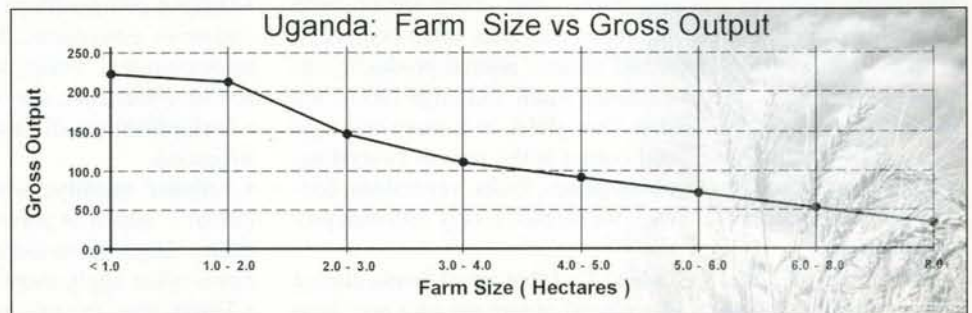
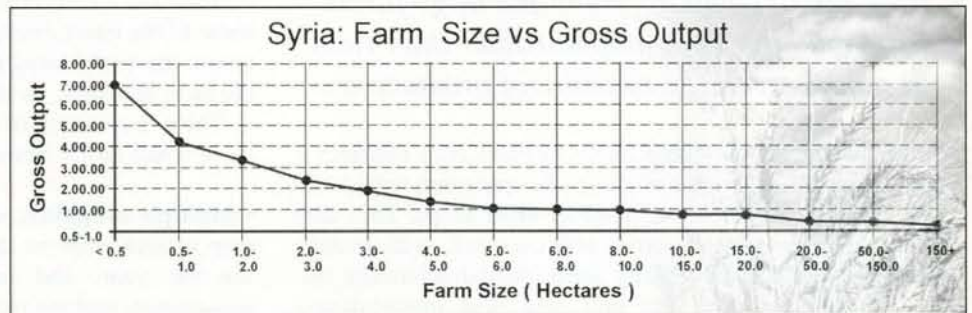
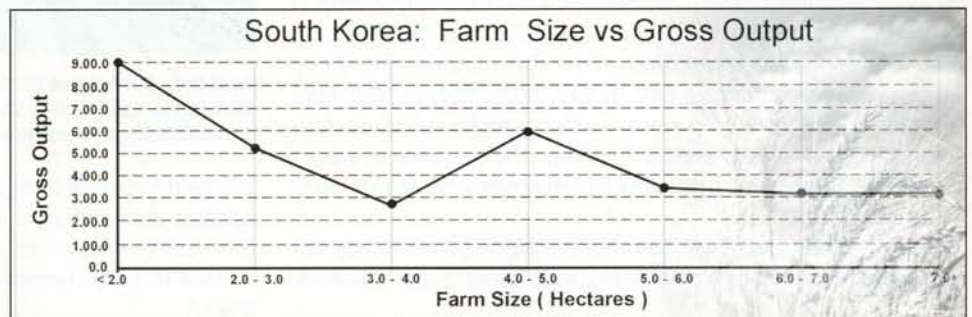
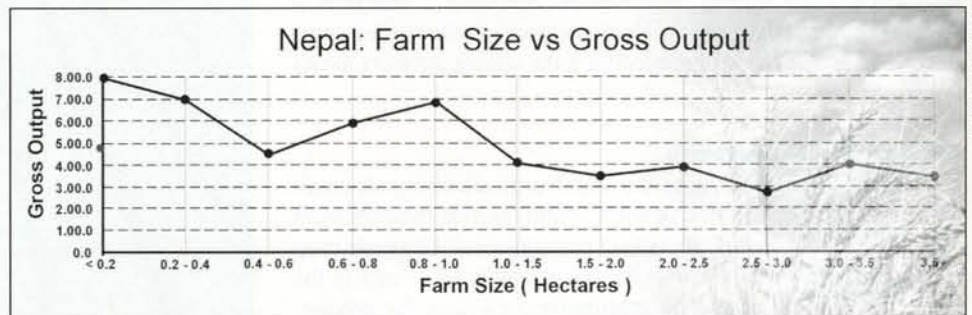
Surely more bushels of grain is not the only goal of farm production; farm resources must also generate wealth for the overall improvement of rural life – including better housing, education, health services, transportation, local business diversification, and more recreational and cultural opportunities.

In the US, the crucial question was asked more than half a century ago: what does the growth of large-scale, industrial agriculture mean for rural towns and communities? Walter Goldschmidt's classic 1940s study of California's San Joaquin Valley compared areas dominated by large corporate farms with those still characterised by smaller family farms.⁹

In farming communities dominated by large corporate farms, Gold-

schmidt found, nearby towns died off. Mechanisation meant that fewer local people were employed, and absentee ownership meant that farm families themselves were no longer to be found. In these corporate-farm towns, the income earned in agriculture was drained off into larger cities to support distant enterprises, while in towns surrounded by family farms, the income circulated among local business establishments, generating jobs and community prosperity. Where family farms predominated, there were more local businesses, paved streets and sidewalks, schools, parks, churches, clubs and newspapers, better services, higher employment and more civic participation. Studies conducted since Goldschmidt's original work confirm that his findings remain true today.¹⁰

If we turn toward the Third World, we find similar benefits to be derived from a small farm economy. The Landless Workers Movement (MST) is a grassroots organisation in Brazil which helps landless labourers to organise occupations of idle land belonging to wealthy landlords.¹¹ When the movement



As these case-studies show, the overall output of farmland actually tends to *fall* as the size of the farm increases

began, in the mid-1980s, the mostly conservative mayors of rural towns were violently opposed to MST land occupations in surrounding areas. In recent times, however, their attitude has changed. Most of their towns are very depressed economically, and occupations can give local economies a much needed boost. Typical occupations consist of 1,000 to 3,000 families, who turn idle land into productive farms. They sell their produce in the market-place of the local towns and buy their supplies from local merchants. Not surprisingly, those towns with nearby MST settlements are now better off economically than other similar towns, and many mayors now actually petition the MST to carry out occupations near their towns.¹³

It is clear, then, that local and regional economic development benefits from a small-farm economy, as do the life and prosperity of rural towns. The question now must be: can we re-create small farm economies in places where they have been lost in order to improve the well-being of the poor?

Improving Social Welfare Through Land Reform

Recent history shows that redistribution of land to landless rural families can be a very effective way to improve rural welfare. Sobhan examined the outcome of virtually every land reform programme carried out in the Third World since World War II.¹⁴ When quality land was genuinely distributed to the poor, and the power of the rural oligarchy broken, real, measurable poverty reduction and improvement in human welfare were invariably the result. Japan, South Korea, China and Taiwan are all good examples of this. In contrast, countries with reforms that gave only poor quality land to beneficiaries, and/or failed to alter the rural power structures that work against the poor, have failed to make a major dent in rural poverty. Mexico and The Philippines are typical cases of the latter.¹⁵

In Brazil, IBASE, a social and economic research centre, studied the impact on government coffers of legalising MST-style land occupations. When the landless poor occupy land and force the government to legalise their holdings, it implies costs: compensation to the former landowner, legal expenses, credit for the new farmers, etc. Nevertheless, the total cost to the State of maintaining the same number of people in an urban shanty town – including the services and infrastructure they use – exceeds, in just one month, the yearly cost of legalising land occupations.¹⁶

The conclusion to be drawn from such case studies is a clear one. Land reform to create a small-farm economy is not only good for local economic development, but is also a more effective social policy than driving the poor out of rural areas and into burgeoning cities.

Ecological Farming

The benefits of small farms extend, of course, beyond the economic sphere. Whereas large, industrial-style farms impose a scorched-earth mentality on resource management – no trees, no wildlife, endless monocultures – small farmers can be very effective stewards of natural resources and the soil. To begin with, small farmers utilise a broad array of resources and have a vested interest in their sustainability. At the same time, their farming systems are diverse, incorporating and preserving significant biodiversity within the farm. As such, small farms provide valuable 'ecosystem services' to society at large.

In the US, small farmers devote 17 per cent of their area to woodlands, compared with only five per cent on large farms. Small farms maintain nearly twice as much of their land in "soil-improving uses", including cover crops and green

manures.¹⁸ In the Third World, peasant farmers show a tremendous ability to prevent and even reverse land degradation, including soil erosion.¹⁹ In many areas, traditional farmers have developed and/or inherited complex farming systems, which are highly adapted to local conditions. This allows them to sustainably manage production in harsh environments while meeting their subsistence needs, without depending on mechanisation, chemical fertilisers, pesticides or other technologies of modern agricultural science.²⁰

Compared with the ecological wasteland of a modern export plantation, the small farm landscape contains a myriad of biodiversity: the forested areas from which wild foods and leaf litter are extracted; the wood lot; the farm itself, with intercropping, agroforestry, and large and small livestock; the fish pond; the back garden, allow for the preservation of hundreds if not thousands of wild and cultivated species.

Free Trade: The Enemy of Small-Farm Agriculture

If we are concerned about food production, small farms are more productive. If our concern is efficiency, they are more efficient. If our concern is poverty, land reform to create a small-farm economy offers a clear solution. If the loss of biodiversity or the sustainability of agriculture concerns us, small farms offer a crucial part of the solution.

Despite decades of anti-small-farm policies adopted by nation states, small farmers have clung to the soil in amazing numbers. But today we stand at a crossroads. As a world, we are poised to take steps toward global economic integration that pose far greater threats to small farmers than they have ever faced. Trade liberalisation and globalisation pose grave threats to the continued existence of small farms. Over the past couple of decades, Third World countries have been encouraged, cajoled, threatened and generally pressured into unilaterally reducing the level of protection offered to their domestic food producers in the face of well-financed foreign competitors. Through participation in GATT, NAFTA, the World Bank, the IMF and the WTO, they have reduced or eliminated tariffs, quotas and other barriers to unlimited imports of food products.²¹

Typically, Third World economies have been inundated with cheap food from major grain-exporting countries. For a variety of reasons (subsidies, both hidden and open, industrialised production, etc.) this food is more often than not put on the international market at prices below the local cost of production. That drives down the prices that local farmers receive for what they produce, with two related effects.

First, a sudden drop in farm prices can drive poor, indebted farmers off the land in the short term – they simply cannot compete with the cheap, subsidised products of giant monoculture farms. Second, a more subtle effect kicks in. As crop prices stay low over the medium term, profits per unit area – per acre or hectare – stay low as well. That means the minimum number of hectares needed to support a family rises, contributing to the abandonment of farmland by smaller, poorer farmers – land which then winds up in the hands of the larger, better-off farmers who can compete in a low-price environment by virtue of having a lot of land. They overcome the low profit per hectare trap precisely by owning vast areas which add up to good profits in total, even if they represent very little on a per hectare basis. The end result of both mechanisms is the further concentration of farmland in the hands of a few large farmers.²²

A penalty is paid for this land concentration in terms of productivity – as large farmers turn to monocultures and machines to farm such vast tracts – and in terms of the environment – as

these large mechanised monocultures come to depend on agrochemicals. Jobs are lost as machines replace human labour and draft animals. Rural communities die out as farmers and farm workers migrate to cities. Natural resources deteriorate as nobody is left who cares about them. Finally, food security is placed in jeopardy: domestic food production falls in the face of cheap imports; land that was once used to grow local food is used to produce export crops for distant markets; people now depend on money – rather than land – to feed themselves; and fluctuations in employment, wages and world food prices can drive millions into hunger.

Cause for Hope?

But, fortunately, there is less than unanimous support among the world's nations for the increasingly-global US-led corporate farming agenda. A number of countries have taken up the call made in Chapter 14 of Agenda 21, the declaration drawn up at the 1992 Earth Summit, that "agricultural policy review, planning and integrated programming [be carried out] in the light of the multifunctional aspects of agriculture, particularly with regard to food security and sustainable development."

According to this viewpoint, agriculture produces not only commodities, but also livelihoods, cultures, ecological services, etc. – and, as such, the products of agriculture cannot be treated in the same way as the products of other industries. While a shoe, for example, is a relatively simple good, whose world price can be set by supply and demand, and the trade in which can be regulated through tariffs or de-regulated by removing them, the products of farming are very different.

The Japanese government, in a preparatory document for last month's Seattle negotiations, put it this way:

"Agriculture not only produces/supplies agricultural products, but also contributes to food security, by reducing the risks caused by unexpected events or a possible food shortage in the future, to the preservation of land and environment, to the creation of a good landscape and to the maintenance of the local

All of us should demand, loudly and firmly, that our governments respect the multi-functionality of agriculture and grant each country true sovereignty over food and farming, by stepping back from free trade in agricultural products.

community, through production activities in harmony with the natural environment. All of these roles are known as the 'multifunctionality' of agriculture... Market mechanisms alone cannot lead to the realisation of an agricultural production method that will embody the multifunctionality of agriculture."²⁵

Norway has also endorsed the concept of 'multifunctionality' as the basis for special treatment of farming,²⁶ as has the European Union to some extent,²⁷ and a number of other countries.²⁸

More governments need to swiftly endorse this agenda. Ignoring the multiple functions of agriculture has caused untold suffering and ecological destruction in the past. The time is long overdue to recognise the full range of contributions that agriculture – and small farms in particular – make to human societies and to the biosphere. Farms are not factories that churn out jeans or tennis racquets, and we cannot let narrow arguments of simple economic expediency destroy the world's agricultural legacy.

All of us should demand, loudly and firmly, that our gov-

ernments respect the multi-functionality of agriculture and grant each country true sovereignty over food and farming, by stepping back from free trade in agricultural products. Instead of deepening policies that damage small farms, we should implement policies to develop small-farm economies. These might include genuine land reforms, tariff protection for staple foods – so that farmers receive fair prices – and the reversal of biases in policies for credit – technology, research, education, subsidies, taxes and infrastructure, which unfairly advance large farms at the expense of smaller ones. By doing this, we will strike at the root causes of poverty, hunger, rural decline and degradation of ecosystems around the world.□

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Cuba's Organic Revolution

The US trade embargo of Cuba, plus the collapse of the island's Soviet market, has meant that the island has found it virtually impossible to import the chemicals and machinery necessary to practise modern, intensive agriculture. Instead, it has turned to farming much of its land organically – with results that overturn the myths about the 'inefficiency' of organic farming.

By Hugh Warwick

The Cuban revolution of 1959, which brought Fidel Castro to power, is considered to be the seminal moment in the modern history of the island. But the revolution begun in 1989, with the collapse of the Soviet bloc, is an equally significant, if much quieter, event.

During the early 1960s, as the US tried unsuccessfully to crush the new, revolutionary spirit of Cuba with the most far-reaching trade embargo in history, Castro's Cuba had to forge powerful links with the Soviet bloc in order to survive. And for some 30 years, the support Cuba received from the USSR helped to create the most well-'developed' island in the Caribbean. By 1989, Cuba ranked eleventh in the world in the Overseas Development Council's Physical Quality of Life Index (which includes infant mortality, literacy and life expectancy), while the USA ranked fifteenth.¹

The help Cuba received came in many forms – the Soviets bought Cuban sugar, for example, at over five times the market rate, and discounted oil was bought and then re-exported. For 30 years, from 1959 to 1989, 85 per cent of Cuba's trade was with the Soviet bloc.

The Soviet Collapse

But in 1989, the Soviet system began to unravel. Imports dropped overall by 75 per cent and oil imports by 53 per cent. Known officially by the Castro regime as the 'Special Period in Time of Peace', this moment in Cuba's history saw it slide close to the edge of collapse, as all aspects of life were affect-

"I don't care whether Fidel leaves vertically or horizontally, but he's leaving."

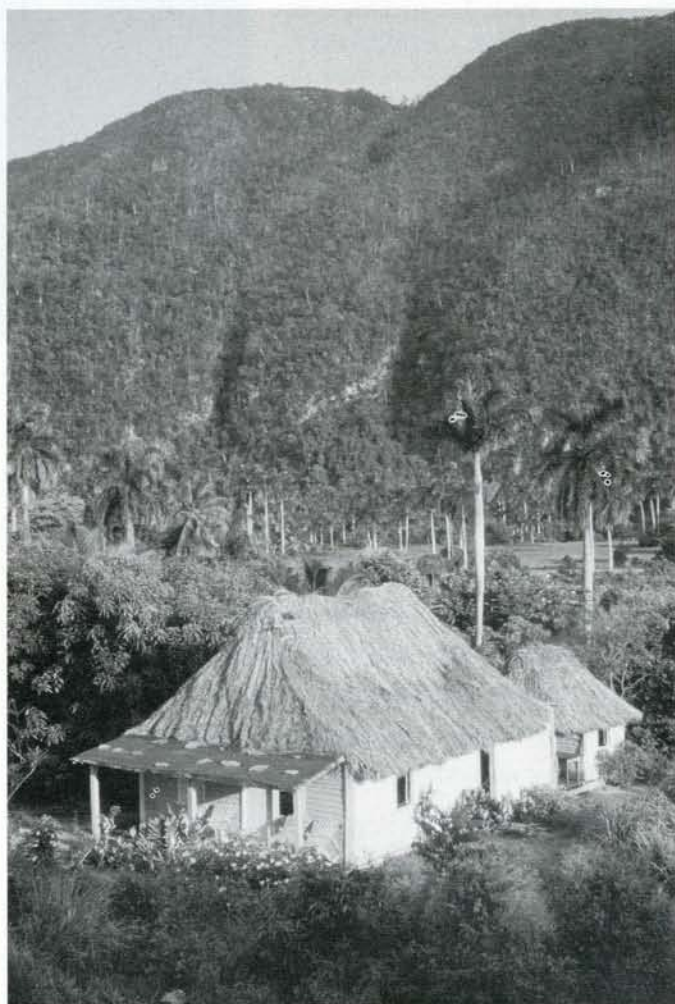
– US Senator Jesse Helms

ed by the crumbling of its international market.

The most significant impact was on food. Some 57 per cent of Cuba's calorific intake was imported, and it was estimated that the population relied on other countries for over 80 per cent of all their protein and fats.^{2,3} The Soviet collapse also led directly to an 80 per cent reduction in fertiliser and pesticide imports. Prior to 1989, most of Cuba's intensive agriculture was dependent on these imports – their disappearance was thus a disaster for its agricultural system.^{4,5}

America's Grip Tightens

This was exacerbated by the implementation in 1992 of the USA's punitive 'Cuba Democracy Act', which tightened its existing trade embargo, and further in 1996 with the signing of



Small farms are enjoying a resurgence in Cuba

the satirically-titled 'Cuba Liberty and Democratic Solidarity Act' (the 'Helms-Burton Act'). On top of an embargo that prevents the sale by any American or American-friendly industries of food or medicine to Cuba, upon pain of sanctions or legal action, the Helms-Burton Act is a deliberate attempt to stifle the re-growth of the Cuban economy by deterring foreign investment. US Senator Jesse Helms, one of the creators of the Act, is remarkably honest about its overall aim – the replacement of Castro's government by one more favoured by the US. "Let this be the year Cubans say farewell to Fidel," he said as the Act was passed in the Senate. "I don't care whether Fidel

leaves vertically or horizontally, but he's leaving."

For a less resourceful and determined nation than Cuba, such action by the world's only superpower could have spelled disaster. But rather than roll over and die, Cuba began to foment a new revolution. The nation responded to the crisis with a restructuring of agriculture. It began a transformation from conventional, high-input, mono-crop intensive agriculture, to smaller organic and semi-organic farms.

Urban agriculture

As oil imports crashed, Cubans looked for ways to reduce their dependency on it. In agriculture, this meant reducing transportation, refrigeration and storage costs by relocating agricultural production closer to the cities. Havana has some 20 per cent of Cuba's population, and at 2.5 million people is the largest city in the Caribbean. Feeding its population was obviously a priority. Urban agriculture was one of the solutions.

Urban agriculture played an important role in feeding urban populations around the world up until the industrial revolution of the eighteenth century, when nearly all food began to be imported from the countryside.⁶ Fertile areas inside and surrounding cities were lost to development. But since the 1970s, there has been evidence of a global reversal of this trend. It is estimated that some 14 per cent of the world's food is now produced in urban areas.⁷

As oil imports crashed, Cubans looked for ways to reduce their dependency on it. In agriculture, this meant reducing transportation, refrigeration and storage costs by relocating agricultural production closer to the cities.

Prior to 1989, though, urban agriculture was virtually unheard of in Havana. Thanks to State provision, there was adequate food for all and little need to grow any privately. The post-Soviet crisis incited a massive popular response, initially in the form of gardening in and around the home by Havana's people. This was soon given a boost by the Cuban Ministry of Agriculture, which created an Urban Agriculture Department, with the aim of putting all of the city's open land into production.

By 1998, as a direct result of this policy, there were over 8,000 officially recognised 'gardens' in Havana, cultivated by over 30,000 people and covering some 30 per cent of the available land.⁸ These farms and gardens have been organised into five main categories – though they are not comprehensive or exclusive, they do give an indication of the style of work.

• *Huertos Populares* (popular gardens): Cultivated privately by urban residents in small areas throughout Havana.



Castro is leading a new, organic, revolution in Cuba

- *Huertos Intensivos* (intensive gardens): Cultivation in raised beds with a high ratio of compost to soil. Run either through a State institution or by private individuals.
- *Autoconsumos*: These belong to and produce for workers, usually supplying cafeterias of particular workplaces.
- *Campesinos Particulares*: Individual small farmers, largely working in the greenbelt around the city.
- *Empresas Estatales*: Many of these State enterprises are run with increasing decentralisation, autonomy and degrees of profit-sharing with workers.⁹

The most common of these are the popular gardens, which range in size from a few square metres to three hectares. The larger plots of land are often subdivided into smaller individual gardens. Usually the gardens are sited in vacant or abandoned plots in the same neighbourhood as, if not next-door to, the gardeners' household. The local government allocates land, which is handed over at no cost as long as it is used for cultivation.¹⁰

Cuba Goes Organic

The crash in agricultural imports has also led to a general diversification within farming on the island. Oxen are being bred to replace tractors; integrated pest-management is being developed to replace pesticides no longer available; the promotion of better co-operation among farmers both within and between communities is promoted; and the rural exodus of previous decades is being reversed by encouraging people to remain in rural areas.¹¹

But the most significant aspect of the post-Soviet agricultural revolution has been the response to the removal of the chemical crutch, as imports of pesticides, herbicides, etc., collapsed. Fortunately for Cuba, it was well-placed to respond to this. While Cuba has only two per cent of the Caribbean

Cuba Goes Renewable

While Americans have deprived themselves the luxury of legally imported Havana cigars, for Cubans, the U.S. embargo meant total trade reliance upon the Soviet bloc, and when that collapsed, a bold – albeit forced – move into some form of self-sufficiency.

Nowhere is the struggle to replace previously imported goods with domestic products more evident than in the area of energy consumption. From 1989 to 1992, when the Soviet Union was breaking up, oil imports from the USSR to Cuba plunged from 13 to 6 million tons per year. To cope with petroleum shortages the Cuban government turned to local renewable energy sources, not solely as an emergency measure, but as a permanent alteration in the country's energy dependency.

Over 200 small hydroelectric plants have been built, mostly in isolated mountainous regions, of which 180 are now functioning. Wind energy is also being utilised through the construction of approximately 5,700 windmills. Abundant sunshine makes Cuba a prime

source, Cuba has been highly successful in converting sugar cane bagasse (the pulpy residue left after extraction of juice from the cane) into electricity. Of Cuba's 160 sugar mills, 104 are powered entirely by their own bagasse. It is estimated that the utilisation of bagasse saves Cuba 700,000 tons of oil per year, while other biogas (methane from manure and waste material) operations represent the equivalent of 370,000 tons of oil per year. Together, almost 30 per cent of Cuba's energy supply now originates from biomass.

Shortage of oil not only requires energy innovation, but conservation too. Cuba's predicament has made her a world exemplar of environmentally sound transport policy: everyone in Cuba rides a bicycle – because they have to! It is not unusual for a Cuban to make a 50 km journey on a bike. The dominant make is a one-speed Chinese model affectionately known as the "Flying Pigeon". In recent years the government has imported 1 million such models from China and it is estimated there are

Cuba's predicament has made her a world exemplar of environmentally sound transport policy: everyone in Cuba rides a bicycle – because they have to!

candidate for the development of a solar industry, and the government has established a Solar Institute in Santiago de Cuba that is looking at ways of bringing solar energy to the island. To date, there are around 350 solar heating systems operating. The priority at the moment is to install solar panels on the roofs of family doctor clinics and community centres in remote rural areas not already on the electricity grid.

In its search for alternative energy

800,000 of them in Havana alone. Cuba will soon produce bicycles domestically – they are expected to be the principal form of local transportation well into the future. That reliance upon the bicycle is more coerced than voluntary makes the Cuban experience no less of an example to the congested cities of the world.

The embargo makes no special exception for medicine or medical equipment, imports of which (from countries outside the embargo) have dwindled since Cuba's



Because of the US oil boycott, Cubans have taken to cycling in a big way

economic crisis of the early 1990s. The response of the Cuban Ministry of Public Health has been to oversee the development of what it calls "natural and traditional" medicine. All medical students are now required to study alternative treatments relevant to their specialty (such as acupuncture and homeopathy); while practicing doctors and nurses are given intensive courses to update their knowledge. The result is that alternative medicine is now available in all medical facilities, as well as at special Centres for Holistic Medicine, lessening Cuba's reliance upon expensive foreign drugs.

Cuba in the 1990s provides a rare example of a poorer country seeking to provide for the basic needs of its people by embracing environmentally sustainable technologies.

– Edward Metcalf

region's population, for example, it has some 11 per cent of its scientists.¹² And many of them, influenced by the ecology movement, had already developed a critique of Cuba's intensive agriculture system (to the displeasure of some in the establishment). They had also begun to develop alternatives to chemical dependency, which have since come into their own.¹³

Almost uniquely, Cuba has begun to develop a biological pest-control programme based largely on parasitoids. While this in itself is innovative, the effort has been reinforced by the establishment of 'Centres for the Reproduction of Entomophages and Entomopathogens' – (CREEs). Over 200 of these have been set up to provide decentralised, small-scale, co-operative production of biocontrol agents, which farmers can use instead of pesticides to protect their crops.^{14,15}

As a result of such necessary innovations, the Cuban landscape, once dominated by chemical inputs, has been changing

rapidly. And many of the new control methods are proving more efficient than pesticides. For example, the use of cut banana stems baited with honey to attract ants, which are then placed in sweet-potato fields, has led to the complete control of the sweet-potato borer – a major pest – by the predatory ants. There are 173 established 'vermicompost' centres across Cuba, which produce 93,000 tons of natural compost a year. Crop rotations, green manuring, intercropping and soil conservation are all common today. Planners have also sought to encourage urbanites to move to the countryside, as labour needs for alternative agriculture are now a constraint on its growth (organic farming is generally more labour-intensive than chemical farming). Programmes are now aiming to create more attractive housing in the countryside, supplemented with services, and to encourage urban people to work on farms for periods of two weeks to two years.¹⁶

Confounding the Experts

Conventional wisdom has it that a switch away from chemically-intensive agriculture will ultimately lead to a fall in yields – though this is not necessarily the case (see Rosset in this issue). In Cuba, the intensive State sector, controlling the vast majority of the land, suffered a fall in yields, but small-scale farmers were able in some instances to increase their productivity. Peter Rosset writes that, in many cases, peasant farmers had remembered old methods and re-applied them. "In almost every case," Rosset says, "they said they had done two things: remembered the old techniques – like intercropping and manuring – that their parents and grandparents had used before the advent of modern chemicals, simultaneously incorporating biopesticides and biofertilisers into their production practices. Incidentally, many of them commented on the noticeable drop in acute pesticide poisoning incidents on their co-ops since 1989."

It is still hoped that the successes with the peasant and urban farmers can be recreated with the former State farms. Many of the problems with the large farms have been put down to a dislocation of people with the land, so the government has set up a programme called "linking people with the land." Whether it will work remains to be seen.

In the event of a trade free-for-all, Cuba's tentative steps towards environmental sustainability could be trampled under the feet of the Cuban exiles returning to claim the land and homes that were once theirs, and the US corporations flooding the island with their goods.

There is much reason to be hopeful that Cuba's turn to less-intensive agriculture will succeed – as it has elsewhere. Jules Pretty has analysed 45 non-chemical agricultural initiatives spread across 17 African countries. From these, some 730,000 farming households have substantially improved their food production and food security. In 95 per cent of the projects where yield increases were the aim, cereal yields have improved by 50-100 per cent. Total farm food production has increased overall.¹⁷

And while the large farms have not yet generated the successes that had been hoped for – which may well be down to their unmanageable size – the immediate crisis in Cuba has passed. By mid-1995, food shortages precipitated by the Soviet collapse had been overcome, and in the 1996-7 growing season, the harvest produced its highest-ever production of ten basic food items. Small farmers primarily have achieved these increases.¹⁸

Clouds on the Horizon

Cuba has taken enormous strides towards agricultural self-reliance without chemical inputs and without large-scale corporate or State control, and has shown that international food aid is not the only alternative to food shortages. But this is not an Arcadian idyll. While Cuba could be a model to the rest of the world, there is the risk of what Jules Pretty describes as "The Empire Striking Back". Not all of Castro's old guard is converted to this green future.¹⁹ And Cuba is also involved in the development of biotechnology. Already it is being used on the local level, and there is no evidence that Cuba will join the call for a GMO-free world – though at least in Cuba they are free of the corporate control which blemishes the science else-

where.

There is also, ironically, the worry about what would happen if the US embargo were to be lifted. In the event of a trade free-for-all, Cuba's tentative steps towards environmental sustainability could be trampled under the feet of the Cuban exiles returning to claim the land and homes that were once theirs, and the US corporations flooding the island with their goods.

International Recognition

But such concerns should perhaps be set aside this month, with the news that the work taking place in Cuba has been recognised by an international audience. On December 9th the Swedish Parliament will see the presentation of the Right Livelihood Award – the 'Alternative Nobel Prize' – to the

Cuba has taken enormous strides towards agricultural self-reliance without chemical inputs and without large-scale corporate or State control, and has shown that international food aid is not the only alternative to food shortages.

Grupo de Agricultura Organica (GAO), the Cuban organic farming association.

GAO has been at the forefront of the country's transition from industrial to organic agriculture. Its President, Dr. Fernando Funes-Aguilar said of the Award, "We hope that our efforts will demonstrate to other countries that conventional chemically-dependent agriculture is not the only way to feed a country." □

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Eclipse of the German Greens

Last year, the German Green Party moved into national government. One year on, their achievements have been negligible. What happened to Die Grünen, and what does their story tell us about the problems of power and the paradoxes of Green politics? **By Daniel Mittler**

On September 27th 1998, contrary to most predictions, the German Green Party, Die Grünen – one of Europe's strongest and most influential Green Parties – gained 6.7 per cent of the vote in the country's general election.¹ This made them the third strongest party in the German parliament, and delivered them what they had been working towards for two decades – power, as a member of the new governing coalition of Chancellor Gerhard Schröder.

One year later, the German Greens face a paradox. While all opinion polls declare the German Foreign Minister, leading Green Joschka Fischer, to be the best-liked politician in Germany, the Greens as a party have become exceedingly unpopular. In a string of local, regional and European elections they have consistently lost 30-60 per cent of their vote. The party, engaged in increasingly fierce internal battles, can only agree on one thing. Both the pragmatic Fischer and a group of party left-wingers declared recently that "the extent of our unpopularity endangers the very survival of the Green Party."²

What lessons can the Green movement as a whole draw from this unenviable predicament? What have Die Grünen achieved in their first year in office? And how can their setbacks be explained?

A Surprising Rise to Power

Germany's Greens have come a long way since their colourful and chaotic beginnings 20 years ago. Starting off as an 'anti-party party', they slowly and incompletely mutated into a pragmatic political force intent on gaining power. From 1985 onwards, Greens regularly found themselves part of Länder (regional) governments. There, they were forced to grow accustomed to the painful art of political compromise. At national level, however, the Federal party maintained many radical policy commitments. These included an immediate end to the use of nuclear power in Germany and an opposition to armed intervention of any kind in any foreign conflicts. These policy commitments were restated during the 1998 election campaign.

As the Greens had not been doing well in elections throughout 1998, their hopes for achieving power were slight. Yet Joschka Fischer argued that the 1998 election was the last chance for his generation (the first generation of Green politicians) to have a lasting impact on Germany. His generation thus put all their energy into campaigning for a slice of power, whilst neglecting the more humdrum task of preparing a strategy for how to use it if it were delivered to them. The campaign was a great success – the Greens mobilised all their core supporters. Their place in the new government, however, probably had less to do with their own efforts than with the East Germans' overwhelming rejection of Chancellor Kohl's Christian



Chancellor Schroeder with Green Foreign Minister Joschka Fischer

Democrats (CDU). The Social Democrats (SPD) made particularly massive gains in East Germany and thus ensured a majority for the 'Red-Green coalition' that now governs the country.

The strength of the SPD (which gained 40.9 per cent), was a mixed blessing for the Greens. When it came to negotiating a common programme of government, they faced buoyant and self-confident Social Democratic opponents. The Greens, meanwhile, had simply not prepared sufficiently for the eventuality of sharing power – a mistake for which they were to pay a heavy price. Nor did they have a clear negotiating agenda. Instead of setting out a few key policy demands, in exchange for which they would offer the government their support, they bargained on each issue in isolation. The result was that they lost ground in almost all policy fields. Even their successes worked against them. So Fischer himself secured his dream job as Foreign Minister, but this meant that he wasn't as heavily involved with negotiating most of the new government's agenda as he could have been. While individual policy issues were being fought over, Fischer jetted off to Washington, Paris and London to reassure Germany's key partners that the Foreign Ministry was 'safe' in his hands.

There were some significant defeats for the Greens in these negotiations, especially over genetically modified foods (where business as usual, including a massive State-sponsored research programme, was agreed). But there were also some

apparent victories. For example, nuclear power was to be phased out in Germany "as quickly as practicable". Waste policy was to be revolutionised to achieve a "true recycling economy". An eco-tax reform was included in the programme. There was an emphasis on sustainable transport and, as a first step, railway investment was to equal the government's spending commitments on roads.

The Curse of Kosovo

But the mood of cautious optimism and enthusiasm engendered by the Greens first foray into national government was not to last. In March this year, the war in Kosovo erupted in full and, for the first time since the Second World War, German troops were involved in military operations abroad. Joschka Fischer believed that "humanitarian intervention" was justified, but an increasing number of Greens found themselves in opposition to their Foreign Minister. Numerous petitions were signed against the war, organised demonstrations followed, and some members simply retreated from party work altogether. At a party Congress in May, Fischer was compared to Goebbels by opponents of the war.

That Congress ultimately passed a motion which, while not endorsing NATO policy, also failed to directly oppose it. The internal splits over this issue grew bitter and deep. They did nothing to help the Greens' public image, especially as most of the public was staunchly in favour of intervening in Kosovo. The war ended just in time to prevent an actual split in the party. But by this point, much of the Green enthusiasm for sharing power had dissolved.

The Promise Dissolves

Perhaps Kosovo would not have been as devastating had the party been able to point to successes in other fields. But hopes in this field were also crushed. The agreed environmental tax reform was watered down beyond recognition. Big business was granted an 80 per cent reduction in the tax even though they got all the benefits of the reduced indirect labour costs which the tax finances. The result was an increase in the State subsidy to business by 2 billion DM (£800 million) this year, and a failure to deliver any real environmental benefits. The coal industry was exempted outright; and fuel prices were only increased by the equivalent of two pence per year, an increase utterly insufficient to change mobility patterns. In order for the government to achieve its own carbon dioxide reduction target of 25 per cent by 2010 (compared to 1990 levels) the eco-tax charges would have needed to be three times as high.³ The increases that were passed, meanwhile, mainly affected domestic electricity consumption, punishing anyone living in poorly insulated homes.

The nuclear issue looked even worse. The "as soon as practicable" clause of the coalition agreement came to mean "whenever the nuclear industry sees fit". Current proposals will ensure that nuclear power stations are shut down within 25-35 years (when most reach the end of their natural lives anyway). If implemented, the current "nuclear shut down" programme is at best a slow phase-out, and at worst a pernicious licence for the nuclear industry to print money for another 30 years.

Things are little better in the field of transport. The first budget failed to implement commitments to invest as much in the railway system as in the roads programme. All key road developments are still set to go ahead. In May, the Government, without consulting Parliament, released 8 billion DM (£2.3 billion) for trunk roads in the former East Germany, to attract a

further 3 billion DM (£1 billion) of EU regional fund money. Airports are still hailed as "job machines" and are supported in their expansion plans.⁴ Though it was meant to be one of the new government's priorities, Germany also failed to push for an EU-wide aviation fuel tax during her EU presidency in the first half of 1999.

Reasons for and Responses to Failure

The Greens, of course, are by no means solely responsible for these failures – they are, after all, a minority party in a coalition government. Chancellor Gerhard Schröder, who delights in being called the "Comrade of the bosses", has "reliably applied

Chancellor Gerhard Schröder, who delights in being called the "Comrade of the bosses", has quite openly sought to appease big business, and has honoured none of the deals that he cut with his Green Ministers.

heavy brakes when it comes to environmental policy".⁵ He has quite openly sought to appease big business, and has honoured none of the deals that he cut with his Green Ministers. Examples of his unreliability are legion. Initially, for example, he supported a swift nuclear shutdown programme. Then, after a meeting one morning with the heads of the German nuclear industry, he underwent a U-turn on his commitments to the Green Environment Minister, Jürgen Trittin, which he had reaffirmed on national television only the night before. Similarly, after having been lobbied by the head of Volkswagen, Schröder



The German Greens have failed to prevent the government's major road-building programme

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forced Trittin to water down and delay an EU car-recycling Directive.

The Greens are, then, victims of Schröder's politics of special interests. But they have also failed to lobby the Chancellor effectively. At least until September 1999, Joschka Fischer disappeared from internal politics and kept only to his international brief. He failed to spearhead Green demands within the Cabinet. He thus deprived the Greens of their main weapon – his popularity and political weight. Constant internal disagreements within the party similarly damaged their ability to communicate policy demands. Bizarrely, the Greens also failed to make it clear that environmental policy is a central policy area for the Green Party, as it should be for all parties. As Naturschutzbund (Nature Protection League), an NGO, observed in July 1999: "Environmental policy within the Greens now has the same status as in the other parties. It is a specialist policy field dealt with by experts."⁶

That the German Greens appear to some to be losing sight of their very *raison d'être* is given further credence by the formation of a group of MPs and other prominent party post-holders who call themselves the 'New Greens'. Their aim is to position the Greens as a liberal, low-tax party of the 'New Centre' – the ecological version of Tony Blair's New Labour. What this would mean for environmental policy has been set out by a group of experts within the party. Their document calls for active co-operation with corporations; voluntary codes to improve industry's environmental performance; accepting economic globalisation; focusing environmental policy on the development of "sustainable high-tech industries"; and realising the export potential of "green technologies".⁷ If the New Greens have their way, the distinctiveness of the Green Party will be annihilated. The current supporters of the Greens would no longer vote for the party. Minister Trittin observes: "[The New Greens] eliminate our traditional support base without offering a new one".⁸

Successes

If you read Die Grünen's press releases (available by email from info@gruenebt.de) the general impression of the party's achievements is somewhat different to that painted above. Almost daily, the Greens declare victory. And there have undoubtedly been some. The Government has, for example, started a 100,000-roofs programme to support solar and photovoltaic energy. It has increased the amount of subsidies paid for conversions to organic agriculture from 250 DM (£85) per hectare to 300 DM (£100). A high-speed railway line between Nürnberg and Erfurt, which would have obliterated an important nature reserve, has been halted. A comprehensive bill dealing with 'electronic waste' is in the pipeline. The Foreign Ministry is increasingly taking into account environmental causes of international conflicts, and the Greens have persuaded the Social Democrats to attempt to place the protection of animals as one of Germany's key policy objectives enshrined in the constitution. Without the Greens in government, most of these policies would almost certainly not have happened. Nevertheless, to many Green Party members in Germany, the setbacks outweigh these successes.



The German Greens have come a long way since their genesis as an 'anti-party party' in the early 1980s

Lessons

So what lessons can be drawn from Die Grünen's first year in power? First, we must note that most of the reasons for the state that Germany's Greens find themselves in are specific to them. They had no clear strategy for taking power. They were unlucky that Kosovo erupted when it did. They faced an overwhelmingly strong and viciously unreliable coalition partner. They made things worse for themselves by not containing their internal arguments.

Nonetheless, there are clear lessons. Green parties with any hope of winning power must always have a set of key policy demands ready. They must make it clear that there is a 'minimum price' for joining a government. A meaningful ecological tax reform or the rapid end to the use of nuclear power could be such unnegotiable basic policies. Once in power, a Green party must make sure that its most prominent members bargain with

coalition partners and that environmental aspects of policies get most of the Greens' attention. A Green party that is only a moderator between environmental polluters and 'other interests' is bound to lose its support base.

Even more sobering are the lessons for the Green movement at large. Once in power, Green Parties become subjected to massive lobbying by the economic powers that be. This is particularly visible in Germany, as Schröder does not hide his subservience to big business. But the problem is global. Green Parties will only ever have a chance to stand up to these powerful players if there continues to be pressure for change from civil society. The Green movement in Germany is starting to learn this message. After trying to lobby the government quietly for most of the last year, they have recently returned to direct actions and public protests.

This is by no means the end for Germany's Greens, and neither should their first, experimental year in power be taken as a sign either that they are unfit to govern, or that Green Parties in general can never break the mould. There is still time for the Greens, as there is – and must be – for environmental politics in general. But the failures and problems of Die Grünen should serve as salutary warning to Green Parties the world over of what can happen when power comes too fast, too soon, to politicians with too little real idea how to use it.□

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Brave New World Revisited

It is a groundbreaking new technology with enormous potential for the future. It will change the way we live forever, and could solve many of our environmental and social problems. Furthermore, it is safe, reliable and affordable. That's what they say about biotechnology; it's also what they said about nuclear technology 50 years ago. The similarities between the two are uncanny – and are a warning to advocates of genetic modification today.

By Antony Froggatt and Kerry Rankine

The civilian nuclear power programme was born out of the 1940s and 50s nuclear arms race. Initially, its supporters promoted nuclear power as a good investment – clean, safe and – above all – 'necessary' for technological development. Many of the same types of claims have been made by and on behalf of the genetic engineering (GE) industry since it began to seek public support for its technology in the 1980s.

A Good Investment?

Probably the most famous proclamation of support for nuclear power was by the then head of the US Atomic Energy Commission, Lewis Strauss, in 1954, when he said that nuclear electricity would become "too cheap to meter".¹ More recently, though, nuclear power has been described by *Forbes* business magazine as "the largest managerial disaster in business history, a disaster on a monumental scale".²

The collapse of the illusion of the economic viability of nuclear power began early in its history. In 1971 it was estimated in the US that the cost of building a 1,000 MW nuclear plant was US\$345 million – by 1980 it had risen to US\$3,200 million.³ Despite such problems, many continued to claim that nuclear power was cheaper than its competitors. However, by the 1990s, few argued that nuclear power could compete with conventional power stations. The latest analysis released by the International Energy Agency in 1998 shows that in virtually all OECD countries, electricity from nuclear power is more expensive than conventional thermal power plants, like gas and oil.⁴ The promise of cheap energy has been a monumental failure.

The biotech industry, too, has promised huge profits and rapid growth. However, a recent report by financial analysts at Deutsche Bank suggests that this success may be short-lived. The report, *GMOs are Dead*, concludes that "in order for GMO crops to be viable they must be sold at a price that is as good or better than non-GMO options". What is actually happening, the bank reported, is that:



When profit and science combine, politicians are keen to ignore any potential dangers

- We see a two-tier grain market developing with GM corn and soybeans at a discount to non-GM. Very bad news for farmers.
- If a two-tier market takes hold, we see price premiums for high-value-added GM seed collapsing. Very bad news for seed companies.
- If GM seeds become a liability rather than a driver of growth, we see growth rates and valuations coming down. Very bad news for seed company shares.⁵

Interestingly, the authors of the report compare the current misfortunes of the GE industry with the beleaguered nuclear industry:

"Are GMOs safe, good for the environment, and necessary to support the inevitable growth in the world's population? Yes, they say, but the same arguments can be made for advancing nuclear power. Despite the support of the scientific community, it is unlikely that we will add any new nuclear power plants any time soon."⁶

Global Benefits?

One of the interesting similarities between nuclear power and genetic engineering is the way in which both technologies are and were claimed as the solution to complex global problems. In the case of nuclear power, it is now being promoted as the solution to climate change. As one nuclear promoter said, "in the next century mankind must harness the nuclear genie if our energy needs are to be met and our security preserved".⁷

The second working group of the International Panel on Climate Change assessed what size of nuclear programme would be needed in order for it to make a significant impact on climate. Under their scenario, by 2100 nuclear power would be contributing nearly 50 per cent of electricity needs. This would require 3,300 reactors in operation, roughly ten times the current level.⁸ Assuming an operational life of each reactor of around 35 years, this would require the construction of over 6,000 reactors in the next century – one every six days. This is

clearly impossible.

Promoters of genetic engineering, meanwhile, say that it will end world hunger. Some have even gone so far as to suggest that to impose any regulations on genetic engineering is to perpetuate mass hunger.⁹ Mark Cantley of the Biotechnology Unit at the OECD warned that if restrictive laws on genetic engineering continued:

"the consequences for food security and nutrition could be severe for many millions of people in developing countries... Careless policy costs jobs – and lives."¹⁰

But development agencies have clearly pointed out that world hunger is not caused by a global shortage of food but by conditions such as war, civil unrest and – above all – inequitable distribution. A report prepared by Christian Aid earlier this year argued that GM crops are 'irrelevant' to ending world hunger, will concentrate power in too few hands and will strip small farmers of their independence. Indeed:

"GM crops are... creating classic preconditions for hunger and famine. A food supply based on too few varieties of patented crops are the worst option for food security. More dependence and marginalisation loom for the poorest."¹¹

Both world hunger and climate change are complex problems, and their solutions must involve political, social and economic changes. Nuclear power and genetic engineering, on the other hand, have the apparent advantages of being one-off technical fixes which will sort out these problems whilst maintaining the status quo.

Safe and Clean?

In the early days of nuclear power there was little or no public awareness of the possible environmental and human health effects of radioactivity. There were even proposals to build a reactor in the centre of New York, opposite the UN buildings.

Even as public awareness of the dangers of nuclear power grew, after the near-disaster at Three Mile Island in 1979, there

was still a belief evident amongst some politicians that nuclear power was safe. And the health implications of nuclear power continue to be as disputed as they were 40 years ago. The International Atomic Energy Agency (IAEA) in April 1986 stated that 30 deaths occurred in the immediate aftermath of Chernobyl. Furthermore, they stated, "Apart from increase in thyroid cancer, there has been no statistically significant deviation in the incidence rates of other cancers that can be attributed to radiation exposure due to the accident."¹²

This view is not shared by health officials from the countries most affected, Belarus and Ukraine, who report thousands of people dying each year. Similar controversies occur surround-

Nuclear power and genetic engineering have the apparent advantages of being one-off technical fixes which will sort out problems whilst maintaining the economic status quo.

ing the Sellafield reprocessing plant, which has discharged vast amounts of radioactivity into the sea and air in Cumbria, and many similar plants around the world (see *The Ecologist* Vol.29, No.7).

It has been harder in the more environmentally-aware eighties and nineties for the genetic engineering lobby to avoid discussion of the potential risks to human health and the environment posed by genetic engineering. However, the industry and its supporters have always made clear their belief that the risks involved are insignificant. For example, this is Dr Beringer, then chairman of the Advisory Committee on Releases to the Environment (ACRE) in February 1996, on genetically engineered maize:

"Genetically engineered maize carries a resistance to penicillin. It sounds alarming but technically it isn't. It's not a good idea, but the risk of harm is so remote that it is not worth con-

Spot the Difference



1950s: The wonders of nuclear power

1990s: The wonders of biotechnology

sidering. The arguments against it are mostly emotional."¹³

It is notable that just as the nuclear industry and its supporters attempted to ignore the mounting evidence of the potential harm from their technology, so too have the proponents of genetic engineering. Over the last two years, studies have shown that beneficial insects are harmed from feeding on pests that have fed on genetically engineered crops.¹⁴ The larvae of Monarch butterflies were shown to be harmed by pollen from genetically engineered corn,¹⁵ and transgenic plants have been shown to be 20 times more effective at passing on their genes to other plants than conventional plants with the same characteristics.¹⁶ Yet despite the mounting evidence of cause for concern, the industry and its supporters in the government continue to dismiss the concerns raised by such developments as "biased propaganda, meaningless mantras or scaremongering media headlines."¹⁷

The 'Industry of the Future'

In the 1950s, civil nuclear power was the new wonder technology for the post-war years. Extraordinary claims were made for the future achievements of this industry. Harnessing the power of the atom would allow humankind to "dig canals, to break open mountain chains, to melt ice barriers and generally to tidy up the awkward parts of the world."¹⁸ The public was invited to "imagine a world in which hunger is unknown, where dirt is an old-fashioned word, and routine household chores just a matter of pushing a few buttons. Where the air is everywhere as fresh as on a mountaintop. And the breeze from a factory is as sweet as from a rose."¹⁹

A similar emphasis on the importance of genetic engineering as the industry of the future permeates the rhetoric of the industry's supporters. Tony Blair recently described the GE industry as fundamentally important to the 21st century. This gives rise to the description of those who question the widespread development of the technology as "Luddite revolutionaries"²⁰ who will lose Britain's place in the high-tech race. A recent speech by Sir Richard Sykes, Chairman of the British Association for the Advancement of Science and Chairman of the pharmaceutical giant Glaxo Wellcome, stated that continued opposition to genetically engineered foods "will lead to a failure to develop new UK companies based upon the technology developed here, loss of technical expertise as funding by international companies is withdrawn, and disadvantage for British agriculture."²¹

Similar arguments were used to rally support for the nuclear industry in the 1980s. In particular, it was claimed that without cheap nuclear electricity, countries would lose their economic competitiveness. The then Secretary of State for the Environment, Kenneth Baker, stated in May 1986, immediately after the Chernobyl accident:

"Those two countries [France or Germany] are not likely to halt or reverse their nuclear programmes because neither has over-abundant supplies of fossil fuel. Nuclear electricity will give their industries a competitive edge."²²

But the nuclear industry is now obsolete. By 2000, in North America and Western Europe, the birthplace of the world's commercial nuclear power industry, there will be no reactors under construction. These world economies are flourishing and it is clear that their economic futures are not determined by nuclear power.

The arguments that the biotech industry is the industry of the future fail to take into account the significance of the lack of public demand for the end products of this industry in the markets of the UK and Europe, and the widespread public demand

for food guaranteed free from GMOs. One indication of this is the speed with which British supermarkets have moved, in just two years, to provide food guaranteed free from GMOs. Even Dan Glickman, the US Agriculture Secretary, one of the most bullish supporters of the GE industry, recently stated:

"Ultimately, if the consumer doesn't buy, the technology isn't worth a damn."²³

The Real Similarities Between the Two Technologies

There are real similarities between the nuclear and genetic engineering industries, in particular in terms of their hidden potential costs, the speed at which they were introduced and the unquestioning acceptance by government of their benefits.

The Hidden Costs

The GE industry, and the UK and US governments, present a positive economic picture of GE agriculture. However, there are lessons to be learnt from the nuclear experiment, particularly in the area of liability.

In the 1960s, given the potential transboundary impact of nuclear accidents, international agreements were drawn up to regulate compensation claims. These treaties act to both limit liability and channel it towards the operator, thus reducing the ability of citizens to seek recourse in the event of an accident. The Chernobyl disaster showed the true cost of a nuclear accident – thought to be in the hundreds of billions of dollars – while models have assessed that an accident in Germany would cost around a trillion dollars.

Just as the nuclear power industry has been shown to have hidden costs for taxpayers – in terms of the costs of environmental clean-ups, the storage of nuclear waste and the health costs – so the potential exists for significant costs to arise from the release of genetically engineered organisms into the environment. In the case of genetic engineering, despite the fact that there are GE products and ingredients on the market, and several farm-scale field trials taking place already, it is not clear who will pay if things go wrong. There is currently no legal liability framework in place that would ensure that in the case of harm to the environment or health, the original producers of the genetically engineered crop would pay.

Speed of Introduction

From the mid-1960s onwards, the nuclear industry's rush to construct a large number of nuclear power stations was largely driven by the need to recoup the high start-up costs of their investment in military and civil nuclear programmes. In the decade between 1965 and 1975 in the US alone 177 nuclear power plants were ordered. These reactors were ordered on condition that construction was rapid and relatively inexpensive. As a result, when costs began to increase, reactor orders were cancelled as quickly as they were made.

Equally, the rush to bring genetically engineered food products to market has been driven by the GE industry's need to recover years of investment and give their shareholders good returns. There is no reason to expect large companies to work to any other agenda. However, government regulators have also followed this industry timetable. Instead of a precautionary approach, the current stance is that no current evidence of harm means that no probability of harm exists.

Government Support

Another similarity is the almost unquestioning acceptance by governments of the day of the benefits of the technologies, and

the close links between the government and these industries. In the case of the nuclear industry, for the first 40 years or so it was wholly-owned and subsidised by the State. It has only been in the last decade or so that attempts have been made to separate the nuclear industry from the government as privatisation processes and market liberalisation have become more common.

In the case of genetic engineering, the government and its watchdogs can hardly be said to have an independent view. From the outset, there have been close and well-documented links between the government and the biotech industry [see, for example, 'The Enforcer: Dr Jack and the Company he Keeps', by Mark Hollingsworth, *The Ecologist* Vol.29 No.6]. One of the problems for the government in terms of their objectivity is that the majority of scientific institutions working on genetic engineering in the UK accept funding from the industry. Scientists from these institutions advise government and civil servants on the issue and appear in the media as experts to give a supposedly objective view of the technology to the public. For example, Professor Ben Mifflin, then Director of the Institute for Agricultural Crops Research (IACR), said in 1998 on the GE crop controversy: "We have every interest in pushing the debate forward in an open and constructive way."²⁴ Although it may be true that Professor Mifflin wanted to conduct an open debate on genetic engineering, his institute received 11 per cent of its funding from industrial users, including agri-genetic companies duPont, AgrEvo and Rhone-Poulenc in 1997/8. Furthermore, it is currently working on a joint five-year project on genetically engineered wheat funded by Zeneca to the tune of £1.1 million pounds.

Whose Money?

Despite its widespread failure, the nuclear industry continues to receive significant funding for research and development from governments and inter-governmental agencies. Between 1986 and 1997, for example, research and development funding from governments of the OECD for nuclear technology was over three times more than the combined budgets for all renewable energy technologies and energy efficiency.

One of the ironies of the current GE debate is that while the UK government tries to convince the public that genetically engineered food is good news, they give huge sums of money to support this new technology. This support includes funding bodies such as the Bioscience and Biological Science Research Council (BBSRC) who, as well as supporting the major research institutes working on genetic engineering, also fund projects which promote genetic engineering to the general public.

In the early days of genetic engineering in Britain, government funds were seen as necessary to support the development of a fledgling industry. But by 1998 alone the government spent £52 million on agricultural genetic engineering.²⁵ By contrast the amount of taxpayers' money spent on research and development of the organic sector is a mere £2.2 million. Despite the huge and growing demand for organic food, this year the government allowed only £6.2 million to assist farmers in converting to organic farming and the money ran out this summer.

Conclusion: Seeds of Failure

Perhaps the central problem facing advocates of genetic engineering is that they are using the same arguments and tactics as the proponents of old 'new' technologies such as nuclear power. Their industry relies on selling products to individual

consumers who have some choice as to what they buy and who, unlike the governments that invested heavily in nuclear power in the 1950s, have a stronger personal interest in the long-term safety of a new technology.

The genetic engineering industry should learn from the fate of the nuclear industry and the evidence of Three Mile Island, Chernobyl and most recently Tokaimura in Japan, which show that, whatever the political ideology, whatever the financial circumstances, accidents will happen when new technologies are

Perhaps the central problem facing advocates of genetic engineering is that they are using the same arguments and tactics as the proponents of old 'new' technologies such as nuclear power.

introduced at top speed, in a race to reduce costs and beat the market. If GE crops are grown commercially on a worldwide scale, problems will occur, and the environmental and human health costs are likely to be great.

Governments and regulators should study again the lessons to be learnt from the nuclear power experiment, and invest in the sustainable agricultural and alternative energy technologies that will be the real industries of the future.□

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Celebrating Columbus Day

Every year, the US population celebrates Columbus Day. Yet Columbus was a mass-murderer, whose soldiers killed thousands of American Indians, and whose legacy was a continent-wide genocide against the original inhabitants of the Americas. So what does the celebrating of Columbus Day tell us about modern America? **By Peter Montague**

Examining a nation's heroes may tell us something fundamental about that nation's goals and values. Christopher Columbus has been a genuine American hero since at least 1792, when the Society of St. Tammany in New York City first held a dinner to honour the man and his deeds.

Columbus Day – first observed as a US national holiday in 1892, and declared an annual day of national celebration in 1934 – commemorates the re-discovery of North America, by Christopher Columbus and his band of 90 adventurers, who set out from Palos, Spain just before dawn on August 3, 1492 intending to find Asia by crossing the Atlantic Ocean in three small ships.

Columbus made four voyages to the New World.¹ The initial voyage reveals several important things about the man. First, he had genuine courage, because few ship's captains had ever pointed their bow toward the open ocean, the complete unknown. Second, from numerous of his letters and reports, we learn that his overarching goal was to seize wealth that belonged to others – even his own men – by whatever means necessary.

Columbus's Royal sponsors (Ferdinand and Isabella) had promised a lifetime pension to the first man on any of the ships who sighted land. A few hours after midnight on October 12, 1492, Juan Rodriguez Bermeo, a lookout on the *Pinta*, cried out – in the bright moonlight, he had spied land ahead. Most likely Bermeo was seeing the white beaches of Watling Island in the Bahamas.

From numerous of his letters and reports, we learn that his overarching goal was to seize wealth that belonged to others – even his own men – by whatever means necessary.

As they waited impatiently for dawn, Columbus let it be known that he had spotted land several hours before Bermeo. According to Columbus's journal of that voyage, his ships were, at the time, travelling ten miles per hour. To have spotted land several hours before Bermeo, Columbus would have had to see more than 30 miles over the horizon, a physical impossibility. Nevertheless, Columbus took the lifetime pension for himself.²

Columbus then installed himself as Governor of the

Caribbean islands, with headquarters on Hispaniola (the large island now shared by Haiti and the Dominican Republic). He described the people, the Arawaks (called by some the Tainos) this way:

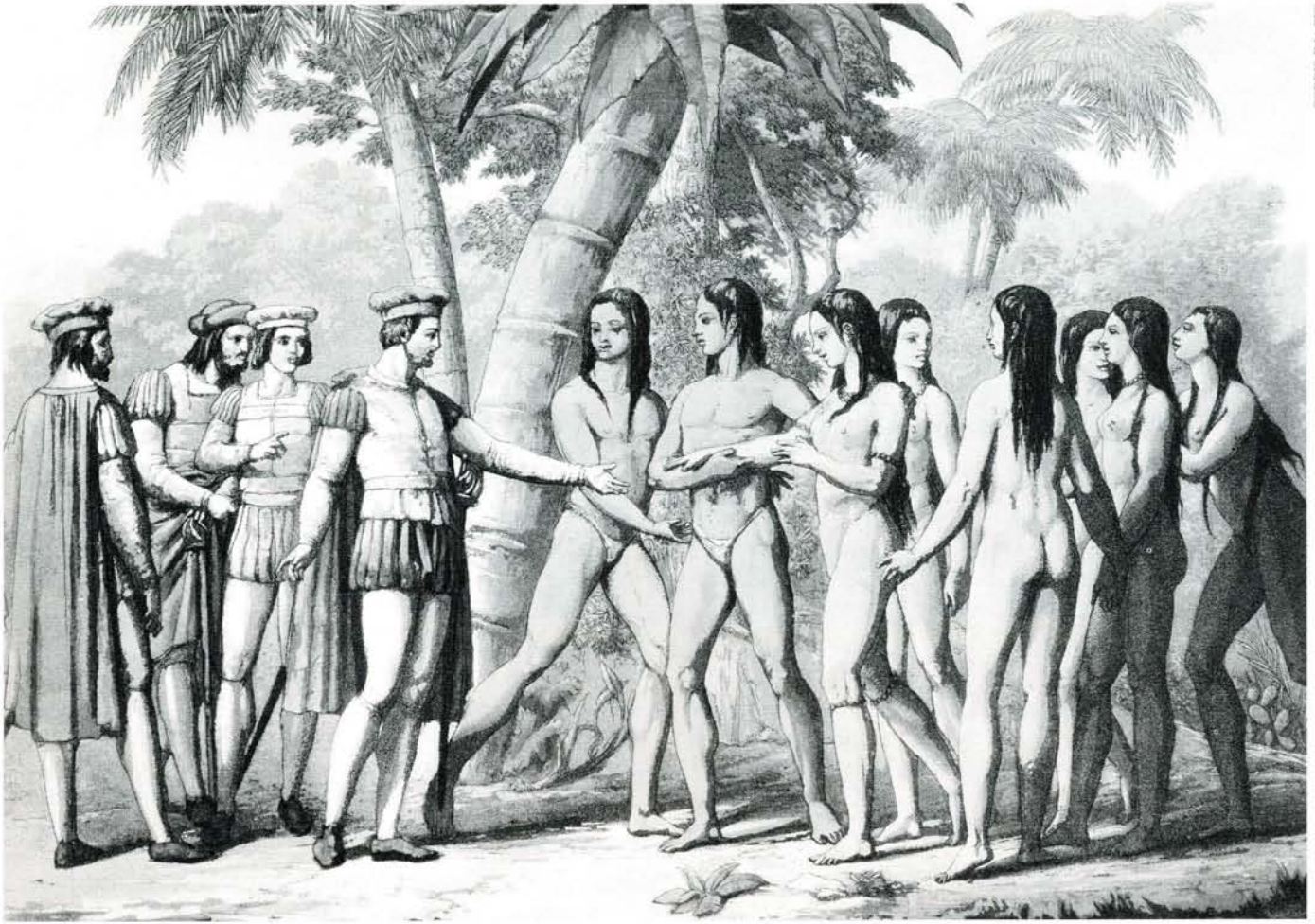


Christopher Columbus: egotist, plunderer, killer

"The people of this island and of all the other islands which I have found and seen, or have not seen, all go naked, men and women, as their mothers bore them, except that some women cover one place only with the leaf of a plant or with a net of cotton which they make for that purpose. They have no iron or steel or weapons, nor are they capable of using them, although they are well-built people of handsome stature, because they are wondrous timid... They are so artless and free with all they possess, that no one would believe it without having seen it. Of anything they have, if you ask them for it, they never say no; rather they invite the person to share it, and show as much love as if they were giving their hearts; and whether the thing be of value or of small price, at once they are content with whatever little thing of whatever kind may be given to them."^{3,4}

After Columbus had surveyed the Caribbean region, he returned to Spain to prepare for an invasion of the Americas. From accounts of his second voyage, we can begin to understand what the New World represented to Columbus and his men – it offered them life without limits – unbridled freedom. Columbus took the title 'Admiral of the Ocean Sea' and proceeded to unleash a reign of terror unlike anything seen before or since. When he was finished, eight million Arawaks – virtually the entire native population of Hispaniola – had been exterminated by torture, murder, forced labour, starvation, disease and despair.⁵

A Spanish missionary, Bartolome de las Casas, described first-hand how the Spaniards terrorised the natives.⁶ Las Casas gives numerous eyewitness accounts of repeated mass murder and routine sadistic torture. As Barry Lopez has accurately summarised it, "One day, in front of las Casas, the Spanish dismembered, beheaded, or raped 3,000 people. 'Such inhumanities and barbarisms were committed in my sight,' he says, 'as no age can parallel...' The Spanish cut off the legs of children who ran away from them. They killed people by pouring boiling soap down their throats. They made bets as to who, with one sweep of his sword, could cut a person in half. They loosed dogs that 'devoured an Indian like a hog, at first sight, in less than a moment.' They used nursing infants for dog food."⁷ This



Columbus arrives in the 'New World'

was not occasional violence – it was a systematic, prolonged campaign of brutality and sadism, a policy of torture, mass murder, slavery and forced labour that continued for centuries. “The destruction of the Indians of the Americas was, far and away, the most massive act of genocide in the history of the world,” writes historian David E. Stannard.⁸ Eventually more

“The Spanish cut off the legs of children who ran away from them. They killed people by pouring boiling soap down their throats. They made bets as to who, with one sweep of his sword, could cut a person in half. They loosed dogs that ‘devoured an Indian like a hog, at first sight, in less than a moment.’ They used nursing infants for dog food.”

than 100 million natives fell under European rule. Their extermination would follow. As the natives died out, they were replaced by slaves brought from Africa.

To cut a long and very grisly story short, Columbus established a pattern that held for five centuries – a “ruthless, angry search for wealth”, as Barry Lopez describes it. “It set a tone in the Americas. The quest for personal possessions was to be, from the outset, a series of raids, irresponsible and criminal, a spree, in which an end to it – the slaves, the timber, the pearls, the fur, the precious ores, and, later, arable land, coal, oil, and iron ore – was never visible, in which an end to it had no meaning.” Indeed, there was no end to it, no limit.

As Hans Koning has observed, “There was no real ending to the conquest of Latin America. It continued in remote forests and on far mountainsides. It is still going on in our day when miners and ranchers invade land belonging to the Amazon Indians and armed thugs occupy Indian villages in the backwoods of Central America.”⁹ As recently as the 1980s, under Presidents Ronald Reagan and George Bush, the US government knowingly gave direct aid to genocidal campaigns that killed tens of thousands of Mayan Indian people in Guatemala and elsewhere.¹⁰ The pattern holds.

Unfortunately, Columbus and the Spaniards were not unique. They conquered Mexico and what is now the south-western US, with forays into Florida, the Carolinas, even into Virginia. From Virginia northward the land had been taken by the English who, if anything, had even less tolerance for the indigenous people. As Hans Koning says, “From the beginning, the Spaniards saw the native Americans as natural slaves, beasts of burden, part of the loot. When working them to death was more economical than treating them somewhat humanely, they worked them to death. The English, on the other hand, had no use for the native peoples. They saw them as devil worshippers, savages who were beyond salvation by the Church, and exterminating them increasingly became accepted policy.”¹¹

The British arrived in Jamestown in 1607. By 1610, the intentional extermination of the native population was well along. As David E. Stannard has written, “Hundreds of Indians were killed in skirmish after skirmish. Other hundreds were killed in successful plots of mass poisoning. They were hunted down by dogs, ‘blood-hounds to draw after them, and Mastives [mastiffs] to seize them.’ Their canoes and fishing weirs were



Kayapo Indians on the march. Columbus's legacy of persecuting indigenous peoples lives on

smashed, their villages and agricultural fields burned to the ground. Indian peace offers were accepted by the English only until their prisoners were returned; then, having lulled the natives into false security, the colonists returned to the attack. It was the colonists' expressed desire that the Indians be exterminated, rooted 'out from being longer a people upon the face of the earth.' In a single raid, the settlers destroyed corn sufficient to feed four thousand people for a year. Starvation and the massacre of non-combatants was becoming the preferred British approach to dealing with the natives."¹²

In Massachusetts, Connecticut and New Jersey extermination was officially promoted by a "scalp bounty" on dead Indians. "Indeed, in many areas it [murdering Indians] became an outright business," writes historian Ward Churchill.¹³

Indians were defined as sub-humans, lower than animals. George Washington compared them to wolves, "beasts of prey", and called for their total destruction.¹⁴ Andrew Jackson – whose portrait appears on the US \$20 bill today – in 1814 "supervised the mutilation of 800 or more Cree Indian corpses the bodies of men, women and children that [his troops] had massacred – cutting off their noses to count and preserve a record of the dead, slicing long strips of flesh from their bodies to tan and turn into bridle reins."¹⁵

Indians were defined as sub-humans, lower than animals. George Washington compared them to wolves, "beasts of prey", and called for their total destruction.

The English policy of extermination – another name for genocide – grew more insistent as settlers pushed westward. In 1851 the Governor of California officially called for the extermination of the Indians in his State.¹⁶ On March 24, 1863 the Rocky Mountain News in Denver ran an editorial titled, 'Exterminate Them.' On April 2, 1863 the Santa Fe New Mexican advocated "extermination of the Indians".¹⁷ In 1867 General William Tecumseh Sherman said, "We must act with vindictive earnestness against the Lakotas [known to whites as the Sioux], even to their extermination, men, women and children."¹⁸

In 1891, Frank L. Baum (gentle author of *The Wizard of Oz*) wrote in the Aberdeen (Kansas) Saturday Pioneer that the army should "finish the job" by the "total annihilation" of the few

remaining Indians. The US did not follow through on Baum's macabre demand, however, for there really was no need. By then, the native population had been reduced to 2.5 per cent of its original numbers, and 97.5 per cent of the aboriginal land base had been expropriated and renamed the land of the free and the home of the brave. Hundreds upon hundreds of native tribes with unique languages, learning, customs and cultures had simply been erased from the face of the Earth, most often without even the pretence of justice or law.

Today we can see the remnant cultural arrogance of Christopher Columbus and Captain John Smith shadowed in the cult of the 'global free market' which aims to eradicate indigenous cultures and traditions worldwide, to force all peoples to adopt the ways of the US. Global free trade is manifest destiny writ large.

But as Barry Lopez says, "This violent corruption needn't define us... We can say – yes, this happened, and we are ashamed. We repudiate the greed. We recognise and condemn the evil. And we see how the harm has been perpetuated. But, five hundred years later, we intend to mean something else in the world."¹⁹ If we chose, we could set limits on ourselves for once. We could declare enough is enough. So it is always good to remember Columbus on his day, and to consider his legacy. □

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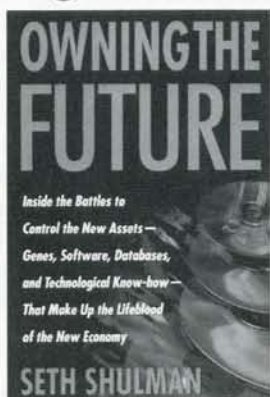
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Reviews

Heritage of the Mind



OWNING THE FUTURE

by Seth Shulman,

Houghton Mifflin Company, Boston,
1999, 240 pp, US\$25.00,
ISBN 0 395 84175 5

Lexington, Massachusetts, is now a pleasant middle-class suburb of Boston. If you have ever explored Massachusetts (whose car number plates declare the State “the Spirit of America”) on an authentic heritage experience, you will know this town as the site of the “shot heard round the world”, where the first musket was fired in anger in the American War of Independence.

What you may have missed, however, is the charming little green in the centre of old Lexington. On one side of the green, small brass plaques tell the story of the warships – one in every generation since the Revolution – that have proudly borne the town’s name, and of the brave, sometimes astonishing deeds of their crews. And just across from the green stands another monument of civic pride – the public library.

For Seth Shulman, a US science journalist whose previous work includes *The Threat at Home: Confronting the Toxic Legacy of the US Military*, libraries are an icon for all that’s most important in a global struggle for control of information and knowledge in the modern economy. They embody a central element of what makes a modern society worth living in: free and open access to information. This, he argues in his new book, is increasingly being eroded by a system of intellectual property that allows just about everything to become the subject

of ownership.

“The challenge before us”, he writes “is to lay bare the fundamental fallacy of a system that lavishly rewards the incremental innovations of individuals but ignores our collective stake in society’s wealth and know-how. Rectifying the situation will not be easy. It will require nothing short of remaking the civic sphere, deciding which pieces of our intellectual and cultural heritage should be collectively preserved and even subsidised as part of the public domain. But the stakes match the immensity of the challenge: nothing less than the integrity of our shared civic institutions rests on the outcome.”

Shulman does not object to the patent system as such – only to the kinds of abuse to which it is increasingly put, especially in the United States. The American system, like its European forebears, was designed to reward innovation, guard against secrecy, and, as Abraham Lincoln put it, to add “the fuel of interest to the fire of genius”. By offering an inventor monopoly protection for individual inventions, government aims to help spur innovation. But today, Shulman argues, a system designed to encourage invention is either squelching it instead, or pushing innovation in the wrong direction. It is also allowing a Wild West-style land grab on fundamental parts of humanity’s shared inheritance and the traditional resource rights of the 96 per cent of the world’s population who do not live in the United States and have little access to the 70 per cent of the world’s lawyers who do.

The main substance of this valuable book is a series of highly informative accounts of recent developments in the control of intellectual property in key areas of the modern economy including medicine, software, agricultural biotechnology, bio-prospecting and genetic engineering. Virtually all the examples are from the United States, but, given the preponderance of American methods in the world economy, the focus is understandable, and there is not another summary available that packs so much into such a readable form.

Examples vary from the near comical (the case of a young researcher who

THE WOMAN WHO KNEW TOO MUCH: ALICE STEWART AND THE SECRETS OF RADIATION,

by Gayle Greene,

University of Michigan Press, 1999,

839 Greene St., Ann Arbor,

MI 48106-1104,

FAX 800 876-1922,

ISBN 0-472-11107-8

In an article, ‘The Woman Who Knew Too Much’, by Matt Henry, on page 404 of our special November edition, *The Madness of Nuclear Energy*, we failed, through technological error, to include details of the excellent new book (of the same title) from which all our material originated. For the record, our article was intentionally derived from *The Woman Who Knew Too Much: Alice Stewart and the Secrets of Radiation*, by Gayle Greene (University of Michigan Press, 1999). The book traces the life and career of a remarkable woman. Alice Stewart’s discoveries about radiation risk have revolutionised medical practice and challenged international nuclear safety standards. As one of the world’s few truly independent scientists, she has become something of a legend in the war against nuclear energy. *The Ecologist* strongly recommends this book too its readers.

found himself working on a chain gang under the gaze of a shotgun-toting prison guard in the North Florida State Penitentiary among drug dealers, robbers and sex offenders, after being found guilty of the crime of stealing his own research into how to make a more absorbent cat litter) to breathtaking cynicism (the case where Monsanto joined with the farmers’ rights group RAFI to oppose a patent on transgenic soybeans by Agracetus, and then turned round and bought the company instead) to the plain appalling (a patent has been issued for a method for assessing placental dysfunction, and it is earning the ‘inventor’ huge sums even though he made no device, and simply observed a natural phenomenon). As the *New England Journal of*

Medicine put it: "to claim private ownership rights over natural phenomena, the nature of disease or human biology is a restriction of intellectual freedom that will stifle medical research. It is grotesque."

The book also makes plain how far back in American history the barefaced theft of other people's intellectual property goes – from British inventions in the early days of the Industrial Revolution, to the most productive varieties of soybeans from China in the 1920s, and attempts to expropriate the fruits of thousands of years of Indian plant-breeding expertise in recent years. Shulman does a good job of sketching out solutions too. These include instituting 'sanctuaries' akin to national parks for certain 'non-negotiables' such as the human genome, and the 'zoning' of certain areas of the internet that would allow private ownership but restrict certain specific uses so as not to interfere with the rights of others or erode agreed-upon desirable features.

Equally important, he argues, is a revitalisation of anti-trust law in order to restrict monopolies over the 'infrastructure' (that is, the software and internet backbone of the modern economy). "The problem today – as the unfolding Microsoft antitrust case illustrates – is that we have yet to establish a clear sense of what anti-trust means in the knowledge economy."

There are signs that this revitalisation of anti-trust law is taking place. The ongoing suit by the US Department of Justice against Microsoft and the recently launched suit by the Foundation on Economic Trends, which contends that a handful of companies are seeking to exploit bioengineering to gain a stranglehold on agricultural markets, are two examples.

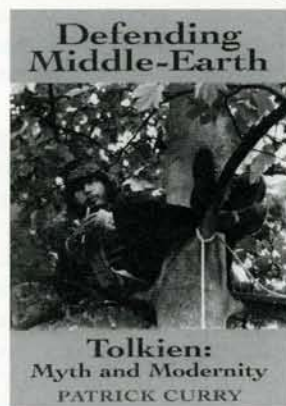
As Shulman puts it: "When the market fails, as it often does in the conceptual realm, the best model we have to rely on is called democracy. Democratic processes and institutions can tame the excesses of monopoly ownership, insisting upon arrangements that feature pooled risks and shared benefits. This is the system that brought us our unique public institutions in the first place – that forged the idea of a library open to all and championed the notion of public education and equal opportunity." These are fine words but of limited applicability in a country where democratic processes and institutions almost always sell to the best-funded candidates.

Oh, and in that Lexington library you

may just find an account of a nearly forgotten eighteenth-century rebellion in Massachusetts against a rich and unaccountable power far away. The rebellion was led by one Daniel Shays, a backwoodsman from what was then the deep back country of western Massachusetts, and the unaccountable power was the independent state government in Boston, newly wealthy from the plunder of expropriated loyalists, but still determined to tax small farmers until the pips squeaked. There is no monument to Shays; but his spirit lives on with those struggling for freedom and decency, and Shulman's book is a useful addition to their intellectual armoury.

– Caspar Henderson

Lord of the Rings.



DEFENDING MIDDLE EARTH: TOLKIEN, MYTH AND MEMORY

by Patrick Curry,

Floris Books, 208 pages, £15.99,
ISBN 0 86315 234 1

Contemporary literary analysis is dominated by a plethora of 'isms'. There is Leavisism, structuralism, deconstructionism, Marxism, post-modernism, and feminism. Conspicuously absent amidst all these wonders of word-play is an ecological dimension, one that locates texts and their authors in something wider and deeper than the well-trodden turf of class and gender.

All cultural activity interacts with the broader ecological community in a rich variety of ways. The shallowness, aimlessness and frequent nihilism of much modern writing, for example, is an expression of a society dangerously adrift from its ecological roots. The failure of contemporary literary discourse to recognise the green dimension stems, in part, from its grounding in the dominant world-view. It looks at the world through spectacles inherited from the Enlightenment. These have been further distorted

by heavy doses of the politically-correct but bankrupt 'everything-is-relative-and-as-good-as-anything-else' school of thought.

However, there have been writers, and many other artists, who have been able to take a leaf out of Nature's book – they have been both stimulated by her wonders and angered by her violation. Patrick Curry's new book shows that the works of J. R. R. Tolkien, notably his voluminous *The Lord of the Rings*, are part of this tradition. Obviously, there is a danger that an 'ecologically informed' study of literature might repeat the error in some schools of thought which judge the literary value of, say, Victorian novels by their stance on imperialism. Nor do we need a green version of socialist realism and the rule of a new Zhadanov, the tsar of culture under Stalin.

Fortunately, such dangers seem avoidable. Ecology might provide an overarching narrative for literary theory but this does not mean that everything should be judged according to that framework. There is neither need nor point in following those Marxists who analysed every aspect of our being through the lens of a diabolical and hysterical materialism.

Already, there is strong evidence of the dividends yielded by the ecological approach. One pioneer was Theodore Roszak, whose seminal study *Where the Wasteland Ends* (1973) contained, amongst much other wisdom, an illuminating discussion of the Romantic Movement. Other notable contributors to an ecological literature and to literary theory include Wendell Berry, Gary Snyder, Joseph Meeker and Paul Shepard. We should also learn from late historian Christopher Lasch who made many telling points about the decay of contemporary literary studies and indeed modern intellectual endeavour as a whole.

Curry has made a major contribution to this canon. His subject, J. R. R. Tolkien, has become one of the most popular of twentieth-century writers, one keenly attuned to the natural world and the communities of which it is composed. His writings provide, then, an ideal case study for an investigation into how the tools of literature provided a vehicle for someone deeply concerned about the waste and destruction wrought by ongoing industrialisation and economic growth.

As Curry points out, there is an added interest in Tolkien's work. It lies in the striking contrast between, on the one hand, his popularity among the public,

and, on the other, the comparatively low esteem in which he is held by literary critics and theorists. According to the cultural cognoscenti, Tolkien's tales are nothing more than silly stories, devoid of any social interest or artistic merit. It would be wrong, of course, to put public taste on some pedestal. It would be easy to cite massively popular novels, magazines and newspapers that plumb the depths – Jeffrey Archer blockbusters sell by the truckload. But, in this case, Curry amply demonstrates, it is the savants who have got it wrong.

It is, of course, somewhat curious to find a book written by an Oxford don attracting a cult following amongst a truly diverse audience, including sixties' hippies. But the explanation is not so difficult, since Tolkien's questioning of that great idol, Progress, is likely to appeal to anyone dismayed by the wreckage being wrought in its pursuit. Curry takes his readers through the narrative of *The Lord of the Rings*, showing how its plot, characters and underlying themes challenge the whole industrial order. Conversely, it is interesting that an apologist for the status quo such as Michael Allaby chooses to rubbish his former associates in the ecological movement by referring to them as "timid little hobbits" for refusing to worship at the shrine of Technology and Economic Growth (see his contributions to *The Politics of Self-Sufficiency*).

Tolkien's work raises a host of issues, not least those of free will versus predestination and decay versus renewal. He casts some illumination on that old dilemma, right versus wrong (not least whether good people should use the weapons of evil – i.e. the 'ring' of *The Lord of the Rings* – to defeat Evil). Curry's study provides a sure-footed guide here too. His style is vigorous, avoiding the longueurs of academic works but not sacrificing intellectual rigour.

Tolkien's achievement should not be doubted. In his books, and especially *The Lord of the Rings*, he devised a whole new world ('Middle Earth'), populated by a rich diversity of beings, many of whom he equipped with detailed genealogies and languages. Unlike many authors in the fantasy genre, Tolkien also managed to spin a great tale. Despite a few excesses, notably when characters announce (again!) impending doom, *The Lord of the Rings* manages to impart a mass of detail yet retain its digestibility.

There will be those who dismiss

Tolkien as nothing but a soft-headed romantic, befuddled by nostalgia for a mythical golden age of bygone times. Certainly he offers no programme for social reconstruction nor strategy to reverse society's disastrous course. Yet Tolkien managed to spotlight critical features of the modern malaise, pose questions and suggest alternatives. His sense of 'rightness' matches the wisdom of Aldo Leopold's rightly celebrated 'Land Ethic'. Countless articles have been written about the philosophical basis of conservation as well as the utilitarian benefits of preserving different species. Few rival the wise words Tolkien puts in the mouth of Gandalf when talking to the Ent 'tree-herder' Treebeard. "You have not plotted to cover all the world with your trees and choke all other living things" (which, of course, is precisely what, right now, humankind is doing, more than ever). Indeed, the chapters relating to the Ents and the fight against Saruman at Isengard contain wonderful evocations of the evils of deforestation.

Curry, indeed, demonstrates that nostalgia can be a potent force for reshaping the world on better lines. For a start, it can puncture illusions about the achievements of techno-industrial civilisation, exposing its flaws. More importantly, the different ways of living and thinking about things that characterised previous societies show that there is no immutable 'human nature', something that makes environmental destruction, economic exploitation and political oppression inevitable aspects of human existence.

But perhaps Curry is so keen to defend Tolkien from his many detractors that he devotes insufficient attention to less attractive aspects of Tolkien's fantasy world. Certainly, he should have addressed more fully the somewhat misogynist feel to *The Lord of the Rings*. Middle Earth is very much a man's world: 'ordinary' women characters are conspicuous by their almost complete absence. There are Galadriel and Eowyn but their parts seldom transcend well-worn stereotypes.

The most disappointing thing about Curry's book, though, is its cover. In a somewhat desperate attempt to exploit today's direct action protest movement, the book's jacket features a pixie-like protestor, presumably tied to a tree in an attempt to stop its felling for the sake of some new road or airport extension. Such a representation merely serves the dominant order by caricaturing its oppo-

nents as harmless eccentrics and worthless drop-outs. Otherwise, the publishers have served the author well and the price of the hardback version is reasonable given the riches it contains.

– Sandy Irvine

Going Underground



SCHNEWS SURVIVAL HANDBOOK

Justice?, 1999, £6.00,

ISBN 0 9529748 1 9

[Email: schnews@brighton.co.uk]



DO OR DIE 8

Earth First!, 1999, 344pp, £3.60,

ISSN 1462 5989

[Email: doordtp@yahoo.co.uk]

The second-best magazine in Britain (you're reading the first, obviously) is free. It's also, strictly speaking, not a magazine at all, but more of a weekly newsletter from what some might call the 'underground', or perhaps the underbelly, of the UK resistance movement. Published in Brighton by the campaigning/information network Justice?, SchNews has become, in a few short years, a must-have publication for anyone who wants to hear "the news that the mainstream media ignore".

The SchNews Survival Handbook contains every edition of SchNews from January 1998 to February 1999, featuring pretty much every significant issue covered and/or ignored by the media and

mainstream NGOs during that time. Police raids on road protest camps; the world's leading bigwigs meeting at Davos to carve up the global cake; President Suharto's visit to the UK; the truth about Tony Blair's 'New Deal'; the Stonehenge free festival; anti-GMO coverage (SchNews got wound up about this long before the tabloids even noticed); US foreign policy; pesticides; deaths in the workplace; the Stephen Lawrence case... you name it, it's here. And what's more, it's covered not only with a sharp insight and a pretty sound grasp of facts (and you can't always say that about Fleet Street, now can you?) but also – and of equal importance – with a sense of humour.

SchNews' sense of humour is one of its strongest assets, and, coupled with a well-applied sense of outrage, serves it well in almost any situation. In fact, it's probably one of the funniest publications around at the moment. So, for example, we are treated to the regular 'crap arrest of the week' column (my 'favourite': the black man arrested in Oklahoma for 'possessing' rosemary sprigs, which the

police thought were marijuana. They weren't, but he still got 25 days in jail). We're given a clear verdict on the World Bank's attitude to Third World debt ("bunch of bankers") and we're regularly presented with cheesy headlines to otherwise serious stories that would make even a Sun sub-editor think twice. SchNews is also scattered with surreal little illustrations, bizarre photographs that wouldn't get a look in elsewhere, and cartoon strips by, amongst others, the brilliant and shamefully underused Kate Evans. (Kate: if you're out there, send us some cartoons!)

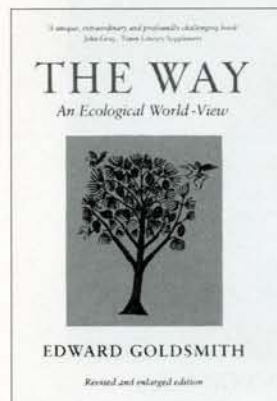
But perhaps the best thing about SchNews is its practical use to those involved in campaigning for or against the myriad of issues it covers. Much more than just a newsletter, this selection alone also provides the reader with tips on how to build road protest tunnels, research the history and background of corporations, start organic gardening, call a local referendum and set up a housing co-op. It also contains a list of over 500 grassroots organisations and publications working on the issues that

SchNews has close to its heart. Now, how many publications can honestly say that they're useful, entertaining and informative on a regular basis? SchNews is a must-read for anyone who wants to change the world and have a good time while doing it.

Also popping up from the underground (often literally, since many of its contributors seem to have spent a fair bit of time living in tunnels beneath proposed airport runway extensions) is the eighth issue of **Do or Die**, the latest collection of offerings from Earth First!

Like SchNews, **Do or Die** is full of random illustrations, cartoons, useful contacts and news you won't hear anywhere else. Unlike SchNews, it specialises in long, referenced explorations of issues the contributors see as significant. There are, for example, a lot of historical pieces. There's an interesting piece on the history of piracy, for example, and there are pieces on the Luddites, the Suffragettes, the history of squatting and a non-standard version of the history of globalisation. Elsewhere, everything from biocentrism to genetic crop trashing are tackled. Some of these pieces are well-researched and interestingly argued; others are more sketchy and less trustworthy. But almost all are worth reading; if nothing else, because they bring a raw, unedited, uncompromised perspective on a lot of the issues of today.

Occasional forays into pretentious phraseology ("intercourse between destruction and creation") and socio-economic grandstanding ("the only option left available to us is the complete abolition of capitalistic social relations"), as well as an irritating tendency by some of the more self-righteous contributors to accuse anyone who doesn't agree with them of "selling out", have always been a problem with Earth First! publications. But none of this diminishes the significance of a lot of the offerings here. An interesting question to ask about a book like this is how its contents, and ideas, will be seen by society as a whole in 50 or a hundred years-time (assuming society as a whole is still around). Will they continue to be dismissed as radical idiocies, as they probably are today by the average citizen, or will they, like the offerings of the Suffragettes, or the Chartist manifesto of the early nineteenth century, be looked on as blindingly-obvious nuggets of common sense by historians wondering why 'civilisation' didn't come to its senses a lot sooner? – *Paul Kingsnorth*



"A unique, extraordinary and profoundly challenging book"
– John Gray, TLS

"An intellectually rigorous and emotionally compelling ecological world-view." – Bill McKibben, author of *The End of Nature*

The Way is Edward Goldsmith's extended critique of the modernistic approach to understanding and acting on the world, based on the promotion of economic development and world trade. He argues that we need to learn instead from the world-views of traditional societies, where human welfare is seen as being best served by maintaining the critical order of the cosmos (encompassing society, the natural world and the world of the gods). In many archaic societies,

a word existed for the 'path' or 'way' that had to be followed in order to achieve this goal – the R'ta for instance of Vedic India (later the Dharma), and the Tao of the Chinese. Whereas, with us, major problems are interpreted as evidence that economic development has not proceeded far or fast enough, for such a society they indicated instead that it had diverted from the 'way', disrupting thereby the critical order of the cosmos.

A truly ecological world-view, as the author sees it, must necessarily be based on the world-view of primal society, whose members, significantly enough, were the only people who knew how to satisfy their real needs without annihilating the living world on which we totally depend for our welfare, indeed for our survival.

Edward Goldsmith is a campaigner and scholar. He has written or edited 17 books and a host of articles, and is the founder of *The Ecologist* (1969), of which he is still the editor. He is a recipient of the Right Livelihood Award, also known as the Alternative Nobel Prize in Stockholm (1991).

550pp with glossary, bibliog. & index ISBN 0 9527302 2 7 £28.50 (hb) ISBN 0 9527302 3 5 £16.50 (pb). Ecologist readers can order *The Way* direct from the publishers at the special price of £25.00 (hb) or £15.00 (pb), post free.



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A Wake-Up Call



EARTH ODYSSEY: AROUND THE WORLD IN SEARCH OF OUR ENVIRONMENTAL FUTURE

by Mark Hertsgaard.

Broadway Books, New York, 1999.

US\$26. 372pp. ISBN 0 7679 0058 8

In this latest work by investigative Reporter Mark Hertsgaard, the latter-day Odysseus travels around the world in search of an answer to the question "will our species survive the environmental depredations committed by global capitalism?" It is a radical departure from his previous writings, in which he explored the inner workings of American politics. His best-known work, *On Bended Knee: The Press and the Reagan Presidency* (1998), documents the ruthless methods employed by the Reagan White House to intimidate the Washington TV and press corps.

Hertsgaard's odyssey encompassed nineteen countries and lasted six years. While the answer to his central question seems to be a qualified "maybe", he has managed to put a human face on the most pressing environmental issues of our times: the pace of global population growth, the wanton destruction of the rainforest and other finite resources, and the rampant air and water pollution in the developing world. This, of course, is hardly a novel message, but by presenting it in the form of encounters and interviews with a broad spectrum of individuals – from native Africans and dirt-poor Chinese farmers to notables like Václav Havel and Al Gore – he has made a valuable contribution to the literature on the global environment.

In a chapter entitled 'How Population Matters', the author quotes a United Nations report which states that three-quarters of the people in the South live in ecologically fragile areas. "Poverty forces them to exploit their limited resources just to survive, leading to... a vicious cycle of human need, environmental

damage and more poverty." Population growth has also encouraged the rapid urbanisation that has turned Third World cities like Cairo, Calcutta and Mexico City into squalid monstrosities, projected to account for three-quarters of the world's population growth in this decade.

But, as Hertsgaard concedes, the wasteful mismanagement of natural resources being perpetrated under the aegis of the much vaunted global economy is the principal cause of social injustice and environmental damage. There is little doubt in his mind, however, that the tripling of world population in this century has been an aggravating element in the socio-economic equation, difficult to isolate from other contributing factors. Thus, while most primeval forests are getting the axe to satisfy the North's insatiable demand for lumber and paper, in countries like Brazil and Indonesia the rainforest is literally going up in smoke to make room for the excess population of the favelas and slums. While this is, at best, a short-term solution to a social problem, it aggravates air pollution and global warming, and accelerates the extinction of species – many of them vital to our own survival.

On the subject of survival, the author quotes some telling statistics: it is estimated that 99 per cent of the fauna and flora which once inhabited the planet is now extinct, and that the average survival time is about 1 million years. By this standard, the human race has done rather well, even if we have a long way to go to catch up with the dinosaurs, which lasted some 100 million years. He debunks the prevalent myth – supported by many religions – that *homo sapiens* somehow towers above those natural laws which govern all life forms. Only by tempering our hubris with a measure of humility, and subordinating our short-sighted ambitions to the universal laws, it seems, can we hope to attain an extended lease on life.

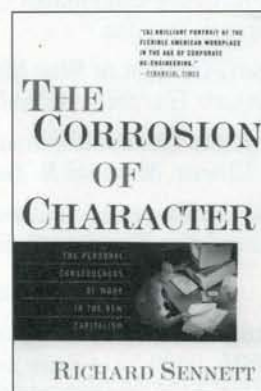
On a more hopeful note, Hertsgaard puts the lie to another popular misconception: "the assumption that environmental protection must cost jobs and lower profits", which is almost universally accepted as the gospel truth. That mantra has been repeated so many times by the 'experts' – economists, labour leaders and politicians – that it has come to be regarded as fact. Thus, in analysing the economic effects of lowering carbon emission, as proposed in the Kyoto conference on climate change, leading American news media used words like "pain" and "sacrifice", and one economist asserted that nobody

knew how to achieve this goal "without crushing the world economy." Hertsgaard contradicts this gloomy prophecy by quoting energy specialist Amory Lovins, inventor of the hybrid car and author of *Factor Four: Doubling Wealth, Halving Resource Use*: "The idea that reducing global warming will harm the ...economy is contradicted by experience. Climate change is actually a lucrative business opportunity disguised as an environmental problem."

The key is efficiency: not doing without, but doing more with less. Thus Germany and Japan use half as much energy per dollar of GNP as the United States, while Sweden – already one of the most energy-efficient nations in the world – was able to cut its utilities cost by \$1 billion a year, and reduce carbon emissions by one-third. As the author points out, "Efficiency has even greater potential in developing countries, where technology tends to be outdated, and relatively small investments can yield enormous benefits."

While Mark Hertsgaard's *Odyssey* does not reveal any earth-shattering new truths regarding our odds of survival on this planet, his lively journalistic style and personal involvement makes this a fascinating book to anyone concerned with the environment. It is, in the words of World-watch President Lester Brown, "a must-read for anyone who wants to understand how population growth and environmental deterioration are affecting the human prospect." – Gard Binney

Globotomy



THE CORROSION OF CHARACTER

by Richard Sennett,

W W Norton & Co., New York, 1999,
176pp, US\$23.95, ISBN: 0 393 04678 8

At this year's World Economic Forum in Davos, Switzerland, International Monetary Fund (IMF) officials were hauled over the coals for

being insensitive to the social pain that their failed formulas for saving drowning economies have caused, time after time. "They just don't know what to do," Harvard economist Jeffrey Sachs said, of US and IMF officials. Or, as a reporter for the *Philadelphia Inquirer* summed it up: "Judging by Davos, the world is a tossing ship without a rudder."

In his latest book, Richard Sennett, professor of sociology at New York University and the London School of Eco-

nomics, debunks the myth of the global economy as a panacea for all humankind's ills from a totally different – and somewhat surprising – point of view: that of the quintessential "Davos man", outwardly successful but lacking any firm beliefs or loyalties, whether to any particular country or corporate entity. In pursuit of short-term profits, these venture capitalists and transnational entrepreneurs have themselves become rudderless ships without any moral com-

pass. It is this malaise which Sennett calls *The Corrosion of Character – the Personal Consequences of Work in the New Capitalism*.

Over the last 15 years, the lives of some 100 million Americans have been directly affected by corporate mega-mergers – inevitably followed by 'downsizing', uprooting of families and en-masse employee relocations – as well as by 'outsourcing', 'flexitime' and 'telecommuting'. You don't have to be a behavioural scientist or sociology professor to realise that such practices are hardly conducive to fostering corporate loyalty or harmony in the workplace. The banner of the new capitalism has been emblazoned with the motto: Each man for himself, and may the devil take the hindmost.

The author begins his highly personalised narrative with a chance encounter with a young, outwardly successful businessman named Rico. The two had met 15 years earlier, when Sennett interviewed Rico's father for *The Hidden Injuries of Class*, a book (co-written with Jonathan Cobb) which became a classic in its field. Rico's father was a blue-collar worker who toiled all his life, inspired by the promise of the American dream: that his son could achieve much more – a higher standard of living and social status. And by outward appearances he had. But as Sennett listened to Rico's stories of promotions, frequent relocations, downsizing, and his subsequent decision to become a consultant, he realised that the price Rico and his generation were paying for their material success was high... not just in job insecurity, but in a host of intangible personal areas as well.

Sennett's incisive arguments explore the contrapuntal views of Denis Diderot, Adam Smith and other voices from the dawn of the Industrial Revolutions, as well as the firsthand experiences of people in the modern workplace. Among these are a barmaid, who has advanced from 'pushing the booze' to dispensing a more perfidious form of physical gratification in her role as an advertising executive. Particularly poignant is the account of the senior IBM executive, who, along with tens of thousands of his colleagues, was abruptly 'let go' in 1993 from a job which he had been made to believe was a lifetime assignment.

The British journalist Anthony Sampson, who visited the corporate HQ in upstate New York after the 'downsizing', found social disorganisation rife within the company, rather than a rein-

INTERNATIONAL JOURNAL OF HEALTH SERVICES

EDITOR-IN-CHIEF: VICENTE NAVARRO

In an article published in the *World Health Forum* (Vol. 16), the organ of the World Health Organization, a librarian analyzed the most frequently cited journals among 123 health-related journals. The *International Journal of Health Services* placed among the top 15 most frequently cited publications, ranking higher than the *New England Journal of Medicine*, *Journal of the American Medical Association*, *American Journal of Public Health*, *British Medical Journal*, *American Journal of Epidemiology*, *Journal of Public Health Policy*, *World Health*, *Health Policy*, *International Journal of Epidemiology*, and many others. The other top 15 journals were bimonthly or monthly scholarly journals, the IJHS was the only quarterly in the group.

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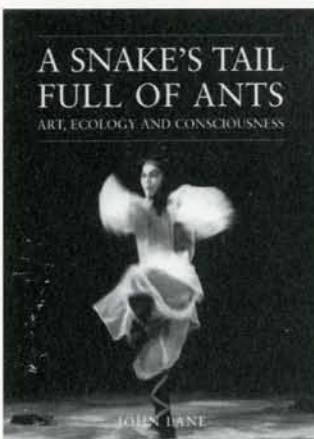
vigorated workforce. "Corporate loyalty is dead," a management consultant flatly declared. And at AT&T, another corporate giant that went through a similar process of attrition, there was, in the words of one executive, a pervasive climate of fear. As he bluntly put it: "When they cut 40,000 jobs, who is going to criticise a supervisor?"

Whether one subscribes to the didactics of Diderot or the simplicities of Adam Smith, it is obvious – from recent upheavals in the world market as well as from the revelations of Richard Sennett – that the bottom line of the balance sheet is not necessarily the shortest way to the top of the mountain, either that of the Buddha or of mere material beings. In our frenzied pursuit of a global economy we have substituted global pillage, spiritual poverty and a loss of communal commitment for the utopian dream of a global village.

The Corrosion of Character should be required reading for all believers in the unmixed blessings of the global market, be they economists, ministers of finance and trade, or the heads of such obsolete institutions as the IMF, World Bank and USAID, with their often self-serving or counter-productive agendas.

– Gard Binney

For Art's Sake



A SNAKE'S TAIL FULL OF ANTS

by John Lane

Green Books, Devon, 1996, pp317,
£14.95, ISBN 1 870098 65 X

This important book is founded on the premise that the human arts are a social activity with redemptive powers, which can transcend the evils of history. Ecological breakdown is, at root, spiritual breakdown. Art both addresses and reflects such breakdown. The image of a dead snake's tail swarming with the frenetic activity of ants is one originally

used by the film-maker Ingmar Bergman to account for the disquiet and frenzy in some art that is related to a psychic paralysis in 'modern' societies.

John Lane has read widely and thought long about the crucial role of the artistic process in the making of a sane human consciousness. He has also observed societies other than Western ones, societies in which artistic 'making' involves a far greater proportion of people and activities than is the case in 'developed' economies. A most rewarding aspect of his book, therefore, is its breadth of reference, the many cultures and art forms it discusses, and its judicious use of quotation. We hear from minds as differing as that of Hernando Cortez, a relentless instrument of European expansionism, and Alfred North Whitehead, a far-ranging but under-appreciated philosopher of this century. The result is a feast of historical, philosophical and aesthetic material.

Lane makes perfectly clear that life itself should be an art; that the loss of a sense of meaning and excellence from modern life has forced the aesthetic sensibility into an existence limited to the 'high' arts, leaving the rest of life stripped of such a dimension. The connection between this removal of the aesthetic from most productive processes and the physical ills of the planet's ecology is a line of Lane's argument.

With this broad perspective I am in entire agreement, but I differ from Lane in matters of emphasis. He believes our ills are the outcome of Humanism – a materialist, anthropocentric vision dominating the last five centuries and now reaching its destructive conclusion. Humanism did give us the naïve belief in material progress, in the right to material fulfilment without limit. Consumerism is the final working out of this in the decadence of an Americanised planet run by market economics.

But Humanism also gave us a universal codification of human rights, won at terrible cost, and continually being eroded. It is one of our few lines of defence in the face of the corporate hegemony that now threatens every culture and site on this planet. It gave us also the idea of the 'noble savage' and the anthropological curiosity that enabled us finally to form a non-lethal appreciation of arts and cultures other than those of Europe.

Furthermore, Humanist art from Socratic Athens to the Renaissance and beyond, never became entirely materialistic. It could be argued that Michelangelo's sculpture locked the soul up in its

epic musculature, in an anatomical literalism that precluded any transcendental theme. But another kind of Humanism is expressed in the late portraits and figures of Rembrandt. Deeply ensouled, these singular yet universal countenances show a depth receding into infinity. And in a music as profound as the purest Gregorian chant, composers such as Palestrina and Bach have made transcendental constructs of the spirit.

The humanist individual, then, is not solely a consumer, but is a complex of qualities with roots in the Christian notion of the soul, and its destructive aspect in the practice of economic individualism. As a consuming id, a bundle of appetites unreachable by ethics or tradition, the individual is a disaster. Space-hungry, indifferent to all other being, this insensate creature has driven capitalism and the programme of globalisation, but is a far cry from the singular soul – that unique sensibility able to impart to a culture particular values of thought, art or sociality, which Humanism has also brought us.

Thus the better works of Western art and metaphysics, while they might reflect the developing spiritual and ecological impasse in which we now appear to be enmeshed, frequently posit values that resist the destructive tendencies in the wider culture. All cultures may develop an obverse side to their symbolism. In Humanism its life-force, its grandeur, reached an exaltation of energy and profundity in Beethoven. His *Missa Solemnis* came near to being a synthesis of the religious and humanist principles: the City of God and the City of Man heard in one sonic architecture. Yet Beethoven's exact contemporary, riding the same wave of world-historical energy, was Napoleon, the giant of a spurious administrative rationalism that ends in the standardising of all soul, of all culture, of all nature.

This obverse side of the creative and the spiritual is a tragic aspect of history. Angelus Silesius, who represents a redemptive beauty in the Medieval soul, worked in the same historical milieu that encompassed the vandalism of the Crusades and the brutal slaughter of the Albigensians; the civilisation which, at its loftiest peak of intellectual development in the mind of Thomas Aquinas, could still infer from the ground of theology the fatal idea that an apparently inarticulate Nature existed for the instrumental purposes of humanity.

Does the development of the negative potential in some of our basic symbol-

ism account for our present frightening impasse? The Western arts, dominated by infinity symbols since the decline of the Romanesque, have given us the soaring aspiration of Gothic architecture, and later a poetic reach in Shakespeare and William Blake that takes us to the frontiers of heaven and hell. But this great spiritual urge to the beginning and end of things is represented profanely in that horrifying power, multiplied to cosmic proportions as nuclear fission. Infinity symbolism gives us the puerile 'big bang' theory of the origins of time and space, but also the beatitude to be heard in Messiaen's Quartet for the End of Time.

Two factors contribute to a destructive development of our symbolism. Neither is particularly attributable to artists, though their works may reflect them. These factors, inextricably related, are materialisation and mechanisation. As St. Peter's rose above Rome in the 16th century, it became the first colossal materialisation of infinity, weighing God down with its titanic structure, its gaudy statement of a baroque and earthly power. But that did not mean the Baroque was all of this kind. Innumerable works in every artistic field – Bach's great A Minor Organ Prelude and Fugue, for instance – did not materialise but rarefied their central structure. St. Peter's was a warning, though, of what was to come from minds that mixed temporal might with transcendental symbols. Architectural modernism perpetuates this error in building after building, creating a massive travesty of the Platonic aesthetics that were its original inspiration.

The problem of a too-gross materialisation of ideas is not unknown in other cultures. The sculpture and architecture of classical Rome represent a materialisation of Greek principles, admired, yet not able to be recreated in their original inspiration. But a significant difference marks our civilisation off from any others. We have materialised our intuition of infinity not just in inert architecture, or works of art, but in the dynamic and kinetic phenomenon of the machine.

The machine is profane infinitude – series of endlessly repeated, unvarying actions – an infinitude that denies and parodies infinitude. Without the machine as a semi-autonomous phenomenon, the kinds of materialisation noted by John Lane in regard to artists and architects such as Brunelleschi and Michelangelo, might have passed heroically but harmlessly into history. With the machine and

a materialist metaphysic, we have the means to wreak havoc in nature and society on a scale hitherto unknown.

The artist stands instinctively against the machine – even the most nihilistic of artists – because they know that its 'making' is of a different order from their 'making'. Art produces singular events or objects, even within the context of highly canonical artistic languages. No two stones of Chartres cathedral are exactly alike, no two godsticks of New Zealand's Maori. Nor are any two cells of an organism. But the machine, especially as it brings about Brave New World's nightmare of applying mechanical principles to biology in the form of genetic engineering, works on an amoral and a-biological principle – that of infinite and exact reproductivity – of standardisation. Ultimately this principle is hostile to all life and all art.

I do not believe it is Humanism that is at the heart of our artistic and ecological predicament so much as mechanism and reductionism. These have only an oblique relationship with Humanism. What caused them to become the monsters they have in this era of the 'digital' is a belief in the infallibility of abstract thought, that is startlingly present even in the Athens of Socrates. John Lane chronicles with a wide reach the outcome of our entrapment in certain mental states, but treats of them as being more recent than I believe they are. They were there in embryo at that definitive moment when our ancestors, picking up the first tools and weapons barely formed from the earth, dimly conceived the idea of the instrumental purposes of nature in human destiny.

Lane's survey is a fascinating view of the varying degrees in which artists or 'makers' have accepted or rejected in their various cultural contexts this view of Nature as a passive substance, there only for the use of humanity. And it is clear from his text that even during the last five centuries, artists have seldom embraced completely the categories of the de-racinated intellect in order to make art express purely reductionist principles. I urge people to read *A Snake's Tail Full of Ants* and enjoy its rich territory. The proposition that underlies it: that ecology, a symphony of natural and social systems, and art, a secondary creation of interrelated symbols, sounds, gestures and images, are complementary in a high degree, each leading in its health to the regeneration of the other, must, surely, be correct.

– Denys Trussell

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