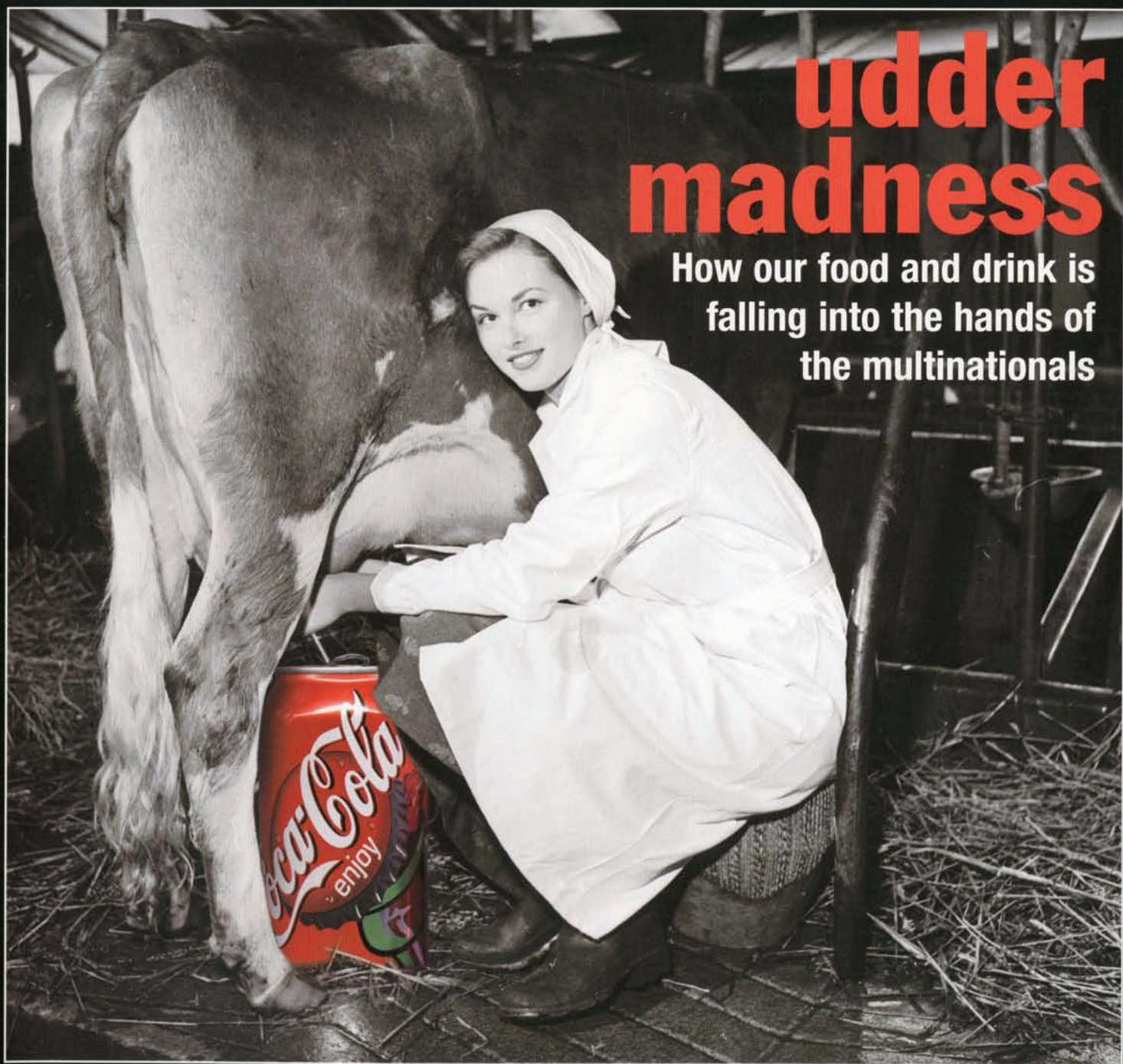


THE Ecologist

VOLUME 31 NO 5 £3.50

RETHINKING BASIC ASSUMPTIONS

JUNE 2001



udder madness

How our food and drink is falling into the hands of the multinationals

HOWARD'S WAY
The original answer to foot and mouth

GREAT OUTDOORS
What you can't see can hurt you

METRIC MARTYR
Imperial edicts from Europe



ANITA RODDICK · PATRICK HOLDEN · MATT RIDLEY · SUE MAYER

HER EGGS ARE BEING POACHED



...SO, WHAT CAN YOU DO ABOUT IT?

In many places people kill turtles for meat; in Malaysia it's the green turtles' eggs that are the target and harvesting from beach nesting sites has reduced their population by 60% in the last 50 years.

To stop the decline and reverse the trend requires an understanding of how green turtle nesting works, which creates a need for long term scientific research. Earthwatch is one of the largest supporters of science-based conservation research, putting volunteers in the field where they work alongside leading scientists to get to the root of conservation problems like this one.

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CRACKDOWN ON THE FARM

Combined with this edition of *The Ecologist* is a special report on hygiene issues. It makes a compelling argument that many of the extraordinary regulations imposed on food producers are designed principally, if not completely, to undermine small businesses to the benefit of multinationals.

Certainly the past few years have seen the war between regulators and the regulated move into a faster gear. Today, if you are a grocer, you will lose your shirt simply for weighing produce in the old imperial system. But hygiene is not the only weapon to have been deployed in this war.

Since the start of the foot and mouth outbreak, nearly 3 million farm animals have been slaughtered by the Government. And despite what the Government has assured us, evidence suggests both that official figures have been fiddled somewhat, and that the killing will continue for many weeks ahead.

The result will be that many farmers will be forced to migrate, the country will face at least a £10 billion bill, and we will be made even more dependent for our survival on imports.

We will also face the release into our atmosphere of great quantities of dioxins as carcasses are burnt on chemical saturated pyres across the country. The Government assures us there is no alternative and in any case that the emissions are virtually harmless. But neither argument is true. For there is no known safe dose of the chemical. Dioxin, whichever way it's cut, is deadly stuff. According to Ralph Ryder, director of Communities Against Toxics, 'minuscule amounts of dioxin pose a very real threat to human health, particularly that of foetuses and the breast-fed child. Dioxin is a highly potent carcinogen and disrupter of the reproductive and immune systems in wildlife and humans'. That view is shared by the usually mild US Environmental Protection Agency following their extensive three-year study that proved dioxin to be more toxic than had originally been believed. And despite statements by the chemical industry that dioxins are natural, tests conducted on, among other things, Egyptian mummies where no traces of the chemicals were found, demonstrate that dioxin is the product of industrialisation, not of nature.

But was there really, as the Government tells us, 'no alternative'?

If the aim of government policy is to protect trade, the traders and the big producers, at any cost, then it goes without saying that no cost is too high, and there is no alternative. If the aim however is to protect the interests of our communities, the environment, real economies, countless livelihoods and popular health, then the experts should think again.

Foot and mouth is relatively mild, as Albert Howard discovered nearly a century ago, and for a typical producer, is largely inconsequential. It has been the Government's barbaric response to the disease, not the disease itself, that is fatal for the countryside. So why the mass cull?

The sole basis of the policy was the protection of our export rights. But we earn, through selling our meat and dairy abroad, less than £600 million in a good year, which in light of the bill this country now faces is small fry. Much of that trade, what's more, is both unnecessary and unhealthy. In 1998 for instance, Britain imported 240,000 tonnes of pork and 125,000 tonnes of lamb, while it exported 195,000 tonnes of pork and 102,000 tonnes of lamb. Which means that even crude modern economics cannot justify the Government's culling policy.

In fact an early EU ban on our exports would have forced us to rethink the subsidies that make monoculture for long distance transport viable, and would have led to a dramatic shortening of distance between farm and table, to the benefit of farmers, the environment and consumers, 89 per cent of whom according to last month's *Ecologist* poll would prefer to eat British food if it were more available.

Why then did the Government insist on this unnecessary massacre? Surely it has similar access to basic accounts? If predictions are accurate, then the Government's upcoming report on the future of agriculture may hold the answer.

Blair's vision of Britain involves a countryside dominated by fewer and fewer farmers 'managing' larger and larger areas of land. In other words, bigger, more intensive units of production for the global food economy, or exactly the opposite both of what we need and what people are beginning to demand.

By 2005, the report will tell us, as many as a quarter of our farms will have merged, or closed down altogether, and up to 50,000 farmers will be forced to leave the land. Almost all small farms will cease to exist, and the Government, unswerving in its support for rural people, will offer a generous retirement package for those farming 'uneconomic units'.

The market, so the argument goes, will have made the difficult decision on our behalf, the Government will be rid of those awkwardly stubborn farmers, and the supermarkets won't even have to pretend they support local producers. There won't be any. Meanwhile, our taxes will be lavished on a never-ending infrastructure designed to prop-up the great food debacle, and the big boys, in whose favour the 'free' market has been so crudely biased, will need new belts to cope with their increasingly swollen subsidies.

ZAC GOLDSMITH



THE Ecologist *contents*

VOLUME 31 NO 5, JUNE 2001



COVER FEATURE

Everybody's favourite multinational, Coca-Cola, is 'test marketing' a range of new products based on milk. Why? Because milk is a favourite drink for under-12s all over the world, and Coke wants a piece of the action. It aims to get it with the launch of its new project, the disturbingly-named 'Project Mother'. If it works, corporate control of the world's milk supplies – with all the associated environmental, animal rights and social problems – could be cranked up.

But milk is just one aspect of modern food production which is increasingly destructive. Now, in the wake of foot and mouth and BSE, people are finally asking questions about how their food is produced. To find out the real facts, three articles in this issue look below our food wrapping to the truth beneath.

We examine the effects of modern agricultural practices on modern food; the effects of the global invasion of the burger chains, and the truth about 'Project Mother'. Judge for yourself as we uncover the real facts about what you eat.

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Original cover photograph: Hulton Getty

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In the concluding part of his series on the health hazards of modern life, Martin J Walker takes a look at what assails us in the workplace and in the open – from car fumes and power lines to computers and asbestos – and uncovers the industry front groups whose job it is to deny everything.

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In the wake of BSE and foot and mouth, people are asking questions about how our food is produced. The answers, as these three articles show, are unpleasant in the extreme. First, Peter Bunyard explains the effects of modern agricultural practices. Then, in **Pulling a fast one** (p36), with the help of Eric Schlosser's acclaimed book *Fast Food Nation* we study at the effects of the burger chains on global food culture. Finally, in **Mother's milk** (p38) we look at Coca-Cola's plans to colonise the world's milk supplies.



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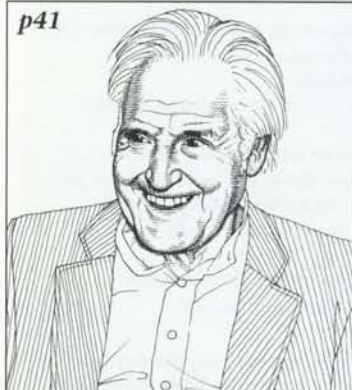
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Are all politicians the same? No; the Green Party is the only party with a sustainable economic agenda. The author will be voting for them come election time – and thinks you should too.

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OFFICIAL POLL RESPONSE

I always find food for thought in *The Ecologist*. Reading your survey of public opinion (Vol 30 No 4), two things, which I think are linked, struck me in particular.

The first is the perception that we have not improved the environment since we came to power. If that really is the perception then we have certainly failed badly to get across the reality. The second is the sense that the environment is more important to ordinary people than the main political parties realise.

I do think that we have achieved a lot in the past four years.

Our Countryside Bill gives everyone the right to enjoy mountains, moorland, fens and common land – for the first time since the enclosures of the 17th and 18th centuries. It also brings greater protection for Sites of Special Scientific Interest; improved management for Areas of Outstanding Natural Beauty; and extra powers for the prosecution of wildlife criminals.

On water, we secured a 15 billion-pound investment programme over the next five years, at the same time as cutting bills by an average of more than 12 per cent. Leakage is down by almost 30 per cent. And The Water Industry Act guarantees that no one will lose their water supply through non-payment of their bills.

We began action to tackle our growing mountain of waste. Our White Paper set statutory targets for local authorities to recycle 25 per cent of waste by 2005. We have committed Government to buying goods with recycled content and we launched the Waste Resources Action Programme to ensure that there are actually markets available for the recycled materials.

We have said again and again that there will be no commercial cultivation of GM crops until 2003 – and only then if our trials prove they are safe for the environment.

Our UK Climate Change Strategy sets out how we in Britain will play our part in tackling global warming by achieving a 23 per cent cut by 2010. To help us reach these targets we are bringing in the Climate Change Levy, we have set a 10 per cent renewables target supported by an obligation on suppliers, and we are setting up the Carbon Trust.

I think we have begun to show international leadership. Remember, the UK used to be known as 'the dirty man of

Europe'. We have turned that round.

Tony Blair was the first world leader to commit to attending next year's World Summit on Sustainable Development. In the OSPAR treaty we fought for cleaner oceans. At the G8 we worked to protect our forests. At Kyoto we helped broker a climate change deal. And in the EU we have been a voice for coherence and integration.

Given our record, why don't people think that the environment is getting better? They may have expected results too quickly. We came to power after 18 years in opposition. We had a lot to do, across a whole range of areas. We were committed to being open and consultative. It was surely right to talk to NGOs and other stakeholders as we developed our policies, but that took time.

'There is a sense that the environment is more important to ordinary people than the main political parties realise.'

There is also a huge time lag in many areas. This is particularly true for environmental issues. We have, for example, set a high level Government target to reverse the long-term decline in farmland birds. This decline is based on agricultural and habitat changes stemming back 50-100 years. Similarly with renewables. Major changes in energy production and infrastructure take years. I think that it will be in the second term that we see many of our policies coming to fruition.

It may also be that we have not focused enough on environmental issues that matter to people in their daily lives. Eighty per cent of people live in towns and cities. The environment they experience is when they step out of their front doors: pollution, dereliction, litter, speeding traffic, ugly buildings. Last month the Prime Minister delivered a speech on 'Improving your local environment' which promised to deal with these issues and to focus on what the Americans call 'liveability'. Improving local quality of life, particularly in cities, will be a major theme in our second term.

So are we giving the environment the attention that the public demands and that it clearly deserves?

We were elected, with a very strong popular mandate, to tackle health, education, jobs and crime. These, quite rightly,

have been our top priorities.

We have at the same time moved the environment agenda forward. But the general public does not always come along with us as quickly as we might hope. Opinion polls are one thing. Getting people to actually pay more or change their behaviour has proved to be quite another.

Government, of course, needs to show leadership. We cannot rely on today's public opinion alone. Tomorrow's generation – or people on the other side of the world – do not have a voice in our debates. I think that on issues such as climate change, we have shown genuine leadership.

The Prime Minister has made a number of important speeches over recent months. It is clear that he understands the importance of the issue. He has promised to make Britain a showcase for sustainable development, to provide leadership internationally for it, and to match the action with the words.

There are compelling moral and practical arguments for giving more priority to environmental concerns. I also believe that we will reap enormous benefits.

Environmental issues are important to people. They are important to our target voters in middle England who want to see improvements to their health and quality of life. They are of even more importance to the socially excluded and less well off. Poor local environments and social exclusion are mutually reinforcing. And the poorest people live in the worst environments. I believe that environmental issues can enthuse and connect with voters – particularly the young. Young people today are motivated by environmental and wildlife issues. They join campaign groups like Friends of the Earth or Greenpeace rather than political parties. The RSPB alone has a million members.

Environmental issues have been moving up the political agenda over the last couple of years. And as we start to feel the impact of climate change, concern will only grow.

We have made a start in tackling these problems, but clearly there is a lot more still to do. We have a set of ambitious, but workable, policies for the second term. You only have to cast your eyes across the Atlantic to see what the right wing alternative would mean for the environment.

MICHAEL MEACHER MP London, UK



CASH FLOWING FREE

John Bunzl (*Get It Together*, Letters, Vol 31 No 3) argues that the localisation that Colin Hines advocates cannot be implemented even at a European level, because of the 'substantial capital and employment outflow' he predicts.

However, the solution he proposes, 'global and simultaneous solutions', are no more likely to be adopted than Colin's, given the 'powerful international forces of international capital and big corporations' he and Colin both recognise.

The power of these forces derives from the debt-money system they manipulate, and which has created them. The power of international finance is awesome, but based on a 'confidence' which is fast evaporating.

Bernard Lietaer is well aware of the situation, and is promoting 'complementary' currencies as a palliative and a fall-back for when the global collapse of the dominant system occurs, which he regards as inevitable within the next 10-20 years at most. He believes that the financial oligarchy is too powerful to challenge with proposals for monetary reform, being aware of its failure over the past centuries.

I beg to differ from John, Colin and Bernard: Any government of a modern nation, yielding to the demands of an informed electorate to introduce 'debt-free money' – by the same simple process of creation-from-nothing that the banks all use, but then spending it into circulation instead of lending it at interest, could wrest the power from the banks overnight, and stop them, by equally simple legislation, from creating any further debt-money. It could then cancel the accumulated debts that are driving us to destruction. This would give that country complete control of its finances, to use its money to meet social need, instead of being driven to desperation by the artificial shortage of money the present system creates.

Yes – the financial oligarchy would use its

full power to try to coerce such a country into submission; but the results of the reform would be dramatic, and with the power of the Internet to spread the news despite the stranglehold held on the mass media by their financial masters, support would mushroom worldwide, as the growing movement against the WTO, GATS etc foreshadows. This way, the otherwise inevitable global catastrophe could be averted, and all efforts could be directed to saving the planet, and restoring civilisation.

BRIAN LESLIE *Sustainable Economics, UK*

PESTICIDES – THE REAL CULPRIT?

Regarding *Sheep or Goats – could BSE spread beyond cows?* (Vol 31 No 3), there is an alternative theory to consider. Since the mid-80s, Mark Purdey has been pursuing a theory that BSE in cattle is triggered by environmental

factors, not by eating scrapie-infected meat and bonemeal. His research began by linking outbreaks of BSE with the compulsory application of organophosphate (OP) pesticides, used to prevent warble fly infestation in cattle. Although exposure to OP can alter prion proteins, it was not the whole story. After analysing samples from various spongiform 'cluster' areas across Europe and the US, Purdey found compelling epidemiological evidence linking the various spongiform diseases to imbalances in trace elements, particularly an excess of manganese.

Needless to say, Purdey's ideas have been ridiculed and funding has been minimal. As with so many modern diseases, the real cause is likely to be much more difficult to remedy than governments and their experts would have us believe.

AJ MEIKLE *West Calder, Scotland*

JUST A QUICK WORD...

SHOP AND DROP

The food marketing barons sell us plenty of rubbish, yet none of them are bin-men. However, we can transform them into bin-men by leaving our excess packaging at their stores when we shop. If the 68 per cent of the British public (*Survey*, Vol 31 No 4) who consider themselves 'greener' than the major political party leaders exist, this is at least one thing we as consumers can do to prevent the scandalous effect that packaging/marketing has on the planet, and the economy.

Just remember, even though the survey also informs us that 46 per cent of us somehow still believe that supermarkets have a positive impact on local communities – without this packaging we would not buy half of the junk we do.

JAGO WADLEY *London, UK*

GREEN-WASH?

One aspect which wasn't mentioned in your article on nappies (*Many nappy returns*, Vol 31 No 3) was the increase in so-called 'environmentally friendly' disposables. Some even claim to be biodegradable (one brand even has 'Mother Nature says thank you' on every nappy).

JENNY HOGAN *Oxfordshire, UK*

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KATE EVANS

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THE CLIMES THEY ARE A' CHANGIN'

Climate change is causing massive disruption in Pakistan

The same drought which has forced the migration of half a million Afghans in search of food and water has been the cause of widespread protests and violence in Karachi, the Pakistani capital. The police recently used teargas and batons to disperse 4,000 people protesting at the water shortage, two bombs killed one person and injured two others, and after a night of violence in mid-April during which dozens of cars were set alight and 230 people arrested, schools and businesses were closed and paramilitary police patrolled the city.

And the solutions? According to *The Guardian*, Pakistan's military government has

asked its met office to examine the 'feasibility' of melting the glaciers of the Hindu Kush and the Himalayas, using dustings of charcoal to conduct more of the sun's heat and increase the annual melt by 15 per cent.

Qamar-uz-Zaman Chaudhry, the Met Office's director-general, stated that it was 'premature to say anything final on this subject', as possible consequent effects of flooding, river blockages and the destabilising of glaciers were still being considered. Cloud seeding, however, has apparently been started to try to 'produce' rain. Techno-solutions, in other words, for a systemic problem.

MEANWHILE, OVER IN JAPAN

Climate change is introducing new 'pest' plagues

It will be mosquitoes, and the viruses they carry, scientists predict, which will plague the populations of the South as their climates become hotter and wetter over the coming decades. But Tokyo, in a bizarre foretaste of how nature adapts to conditions altered by human behaviour, has seen a quadrupling of the numbers of south-east Asian jungle crows (*corvus macrorhynchos*) in its streets over the last 15 years. The birds, which scavenge on waste and have wingspans of up to a metre, have been known to carry off small dogs, and enjoy the artificially high temperatures caused by high volumes of traffic, dense populations, and the heat-retaining concrete buildings. Is climate change already biting in Japan?



"Jack! All you got for that old cow was a few beans. That's terrific - it wasn't worth anything with Foot and Mouth!"

A monthly roundup of George W Bush's recent words of wisdom

'I say things because I believe them'

D'OHBYA!

'First, we would not accept a treaty that would not have been ratified, nor a treaty that I thought made sense for the country.'

On the Kyoto treaty, in an interview, Washington Post, 24 April, 2001

'It's very important for folks to understand that when there's more trade, there's more commerce.'

Quebec, 21 April, 2001

'There are some monuments where the land is so widespread, they just encompass as much as possible. And the integral part of the - the precious part, so to speak - I guess all land is precious, but the part that the people uniformly would not want to spoil, will not be despoiled. But there are parts of the monument lands where we can explore without affecting the overall environment.'

Media round table, Washington, DC, 13 March, 2001





BRING OUT YOUR DEAD

The Netherlands is clearing up foot and mouth faster than Britain

With the rate of spread of the foot and mouth epidemic in Britain apparently slowing, the traumatised farmers whose livestock has been exterminated are waiting for the agriculture ministry to translate their burned and buried animals into financial compensation. They're also making the calculations to see whether, after whatever period of compulsory inactivity is decided for the area, and after buying new herds, they can afford to continue farming.

Meanwhile, the Netherlands, which was forced by the EEC to change its policy on foot and mouth from vaccination to eradi-

cation when the UK, Ireland and Denmark joined in 1973, has reacted to its 20-or-so confirmed cases with a combination of slaughter and vaccination which seems, in a country where farming still accounts for around 10 per cent of GDP, to be proving very effective. Berend Pastoor, of the LTO, the main Dutch farm union, was quoted in the *Financial Times* as saying that public revulsion at Britain's mass slaughter policy had prompted the authorities to opt for ring inoculation of affected farms.

'There's a strong call for vaccination of all animals [in the Netherlands]... I think the societal and moral values are somewhat different to those in Britain.'



SAVING SIBERIA

The communist legacy is being exacerbated by the global market

'30 years of intensive energy resource exploitation has caused great damage to the nature of the Russian Federation, especially to the northern parts. The area of contaminated soils and water basins is constantly growing as a result of the production of energy resources. The quality of flora and fauna is not only affected at the production sites; constant hazards and oil pipeline ruptures distribute the damage widely. Today, the accumulated amount of oil emulsions and sludge in the environment is estimated to be 1.2 billion tons. Every year, about 30,000 hectares of land is damaged.'

This is how a World Bank study a couple of years ago described the devastation to the tundra and boreal forests of Siberia, from where around 80 per cent of Russia's oil and gas is extracted. Oil-polluted rivers, razed forests, gas flares and forest fires; native people who live traditionally off reindeer herding forced to give up their land. Foreign aid to clean up the Siberian environment has been promised since the collapse of the Soviet empire in exchange for Western access to the vast oil and gas reserves.

Political and financial instability in the region made foreign companies unwilling to invest, but following Boris Yeltsin's re-election in 1996, there was a rush by almost all the major Western oil companies to ensure a presence in the region, and massive loans were granted by both public and private banks. The collapse of the economy in 1998 led to the withdrawal of the majority of foreign investors and the refusal of further loans, but now the European Bank of Reconstruction and Development has promised new funds. Yet the conditions attached relate almost exclusively to financial safeguards rather than environmental assurances. The area seems no closer to any sort of environmental recovery programme, and further exploitation of resources seems certain.

NOTES & QUOTES

We are not alone. Last month, *The Ecologist's* Great British Environmental Survey revealed startlingly high levels of public dissatisfaction with the current economic model, the actions of politicians and the state of the environment. Now, a poll by America's *Los Angeles Times* has revealed that the US public feel similarly divorced from the words and actions of their political and economic leaders.

The poll's results, published on 30 April, showed that Dubya Bush is far from representative of his people. Some of the most telling results included:

59% oppose Bush's decision to pull out of the Kyoto climate Protocol. Only 21% support it.

58% of Americans believe that Bush puts business interests ahead of environmental protection. Only 18% disagree.

41% say Bush is doing too little to protect the environment. 38% disapprove of his handling of environmental issues.

55% oppose oil drilling in the Arctic National Wildlife refuge. Only 34% support it.

A **50% to 36%** majority say that protecting the environment should take priority even when it conflicts with economic growth.

The percentage of Americans naming environmental issues as the most important problems facing the nation has risen from **2% to 13%** in just three years.

A **58% to 34%** majority say that protecting plants and animals should take priority over personal property rights.

'A post-democratic Magna Carta.'

Journalist Gregory Palast on the GATS agreement

'The chances of catastrophic climate change in this century - resulting from a five degree centigrade temperature rise - are some 700,000 times greater than the odds you will win the jackpot on the Saturday lottery.'

Caspar Henderson, in *Environment Agency Review*

continued on page 10

NOTES & QUOTES

'We will inspire the world by our achievement. Together, let us go forward to build an age of prosperity in a hemisphere of liberty. Together, let us use this summit to launch the century of Americas.'

George Bush, at the summit meeting in Quebec

'There were times when I was a kid when we went to bed without food but my aunt and mother never begged: it was critical to our sense of dignity. I think it is absolutely wrong that poor people should be forced to beg for medicines.'

Zackie Achmat, hero of the drugs patents lawsuit in South Africa

Cost of 1 year of treatment of AIDS with retroviral drugs – \$10,000

Cost of 1 year of retroviral treatment at the 45%-90% discount promised by Western drug companies to poorer countries in the South – \$1,000

Annual government health spending per capita in South Africa – about \$100

Annual government health spending in most other African countries – below \$10

Estimated number of people with the HIV or AIDS virus on the African continent – 23.3 million

'The hope of the industry is that over time the market is so flooded [with GM] that there's nothing you can do about it, you just sort of surrender.'

Don Westfall, vice president of Promar International

'I am a great believer in human rights.'

James Wolfensohn, president of the World Bank, speaking in Prague last year

'bicaudal' – fruit fly mutant with anus at each end of the body, and no head

'antennapedia' – fruit fly mutant with legs instead of antennae

from *Fly: An Experimental Life* by John-Paul Flintoff

Experienced Ecologist and Professional Photographer require physically fit, environmentally aware individuals to participate in an expedition to open up new tourist routes in remote areas of East Africa. You will be travelling in a 4x4 vehicle, encountering villages where the children have not seen a westerner before. Advertisement in the Africa Centre, King Street, London

AT LAST, SOME GOOD NEWS

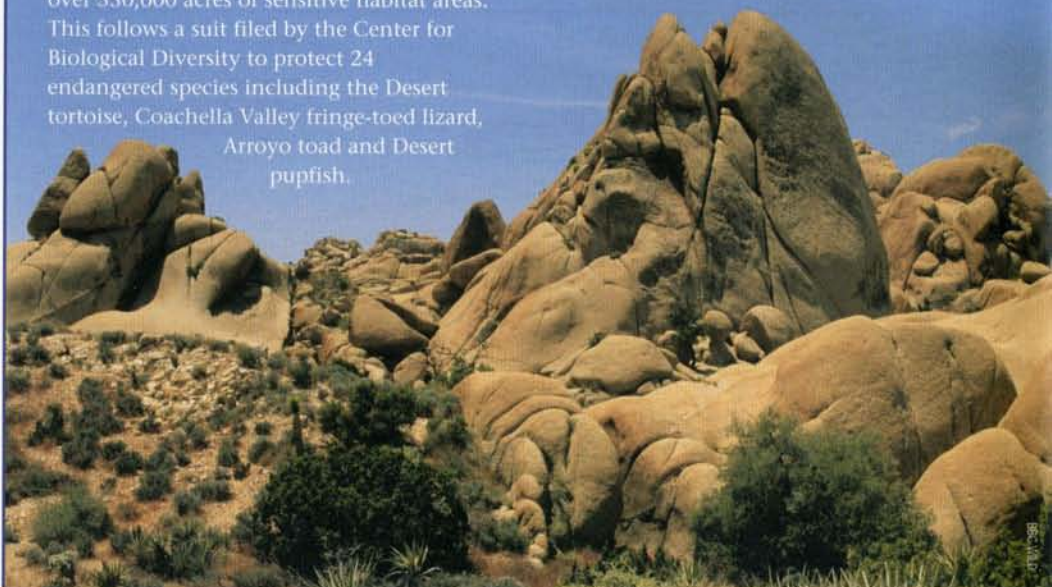
Some US wildlife, at least, is getting more protection

A federal judge approved a legal settlement on 20 March between the Center for Biological Diversity, Public Employees for Environmental Responsibility, the Sierra Club, and the Bureau of Land Management (BLM) which will institute sweeping biodiversity reforms within the important California Desert Conservation Area.

Amongst other measures, the settlement requires BLM to close over 4,500 miles of roads and prohibit new mining projects on critical Desert tortoise habitat, close a sand and gravel mine threatening the arroyo southwestern toad and prohibit ORVs on over 550,000 acres of sensitive habitat areas.

This follows a suit filed by the Center for Biological Diversity to protect 24 endangered species including the Desert tortoise, Coachella Valley fringe-toed lizard, Arroyo toad and Desert pupfish.

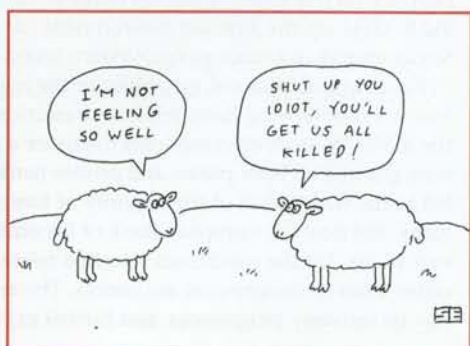
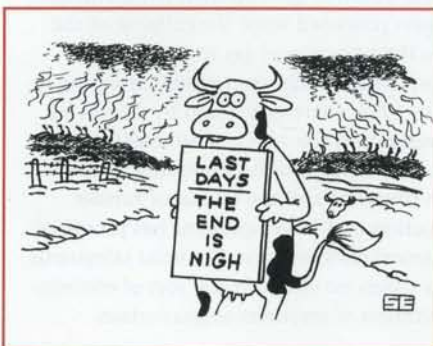
As the result of another lawsuit, the Center has also achieved the withdrawal of a permit granted to the Blue Rock Country Club, a 614-home, 18-hole golf course, luxury complex in the Bay Area following critical habitat being designated for the California red-legged frog and the Alameda whipsnake. It's the first time a previously-approved development in the Bay Area has been stopped to protect a critical habitat. Some good news, at least, for American wildlife despite the reign of Bush and Norton. See www.biologicaldiversity.org for more details.



BUT ALSO SOME BAD

As Republicans continue their eco-onslaught

Meanwhile, in Washington, Western Republicans are pressing for a revision of the Clinton administration's ban on road-building in one-third (58 million acres) of national forest lands to a framework under which decisions would be made on a forest-by-forest basis. The petroleum industry claims it needs access to federal lands to meet the demands of the supposed energy crisis. 'This industry is very concerned that the roadless rule has withdrawn 60 million acres,' Edmund Segner, president of EOG Resources, one of the country's largest energy corporations, recently said. 'We need to balance energy needs with environmental needs.'



LOUISIANA VS BUSH

One US state has thrown out Dubya's attempt to weaken the Endangered Species Act

The US Fish & Wildlife Service and the National Marine Fisheries Service's recent regulation which drastically weakened the protection of 'critical habitat' areas has been overturned by a federal appeals court in Louisiana. According to Mike Vandeman, the EDA 'distinguishes between the minimal need to avoid driving species extinct and the more proactive requirement to recover them to more endangered status. Critical habitat is defined in terms of recovery and was clearly intended to provide greater protection than mere avoidance of extinction. Nonetheless, federal agencies developed their own regulations limiting critical

habitat protection to situations where species are threatened with extinction... Indeed, the refusal of the US Fish & Wildlife Service to designate or protect critical habitat areas is probably the single greatest threat to endangered species in the United States.'

The appeals court struck down the regulation, stating that it 'sets the bar too high', undermining critical habitats' proactive value. Robert Wiygal, who argued the case for Earth Justice: 'This decision is a return to the original intent of the ESA to recover species and move them off the list. The ESA has been criticised for not recovering enough species, but this decision tells us the Act has never been given a fair chance.'

FEELING ENERGETIC

Some positive suggestions for energy renewal

Meanwhile, the US Natural Resources Defense Council (NRDC) published a report in February under the title *A Responsible Energy Policy for the 21st Century* which challenges the present administration's insistence that the only response to the US's ever-escalating energy needs is increased energy (ie fossil fuel) production.

The NRDC report proposes increased energy efficiency relying on already available, cost-effective processes and technologies, using natural gas in the short-term as a bridge to renewable and sustainable energy sources, and calls for a reduction in the US's reliance on coal and oil.

Amongst other recommendations, the NRDC is calling for the provision of tax credits for hybrid gasoline-electric vehicles and raising fuel economy standards to a 39 mpg average over the next decade; tax credits for energy-efficient buildings and incentives for 'smart-growth' development patterns that reduce urban sprawl; a comprehensive pipeline approach to maximise the efficiency of the existing fossil fuel supply and ensure that it complies with environmental standards. Well... it's a start. See www.nrdc.org/air/default.asp for more.

HOT SMOLTS

Dams and warm weather are threatening rare fish

A warm winter has meant that snow packs on the Rocky Mountains are about half their normal volume and, consequently, water levels in the vast Columbia river basin are among their lowest since the 1950s. Turbines in the cores of the Bonneville Dam, Grand Coulee Dam and dozens of other huge dams that block the Columbia and tributaries such as the Snake river, provide power for nearly half of the Pacific northwest. The problem at the moment is that the low water levels are bringing young salmon, or smolts, dangerously close to the turbine blades, and that instead of fast, cold rivers along which to make their migration to the ocean, the smolts are trapped behind the dams in still, warming water.

Declaring a power emergency in April allowed the Bonneville Power Agency, a fed-

eral agency that sells most of the electricity produced in the area, to override its obligation to ensure continuation of the 12 salmon runs protected by the Endangered Species Act. Using water stored to irrigate potatoes, at a time when farmers are producing a surplus, in order to drive the young salmon over the dams, is one option, but one unacceptable to the farming lobby. The dam managers propose transporting smolt downstream in barges, a measure that has been used before; but Jim Martin, formerly director of Oregon's fish and wildlife service, claims that this led, in 1997, to the loss of nearly 90 per cent of the young fish. And the water must be kept running through the turbines because of the power shortage. Or over-consumption, whichever you choose to call it. Once again, a question of priorities.

FISH PHARMING

More evidence of the dangers of fish farms

It's bad news, either way. Amnesic poisoning affecting stocks on Scottish oyster, scallop and mussel farms and leading to bans on scallop landings off Scotland's west coast, have resulted in shellfish growers voting to call for a moratorium on the 'further expansion of seaweed finfish aquaculture, with the associated use of new chemicals' until the results of a forthcoming government enquiry into the Scottish salmon farming industry have been published.

According to the Scottish newspaper *The Herald*, the chairman of the Association of Scottish Shellfish Growers, Doug Macleod, claimed that there was widespread unease over the impact of fish farming discharges on the marine environment and the rising number of applications for chemical use and increase of existing farm capacity.

The burgeoning salmon industry in Scotland (see the special report with this issue) and Norway demonstrates perfectly our insistence in the West on viewing food, whether plants or animals, as a commodity like any other, subject to the laws of supply and demand. The salmon's current status as a 'fashionable' food, which in Scotland has led to an industry worth £650 million, is not only having an effect where the farms are sited, but also, as with many other industries, exporting its less acceptable aspects to the 'Third World'. Demand for large volumes of fish meal to feed the farmed salmon results in coasts studded with reeking treatment plants, and to highly damaging fishing practices.

Dr Colin Moffat, head of the Aquatic Environment Programme at the Fisheries Research Service laboratory in Aberdeen, considers that the shift northward at a rate of about 500 km per decade of wetter and warmer weather and stronger winds had impacted on plankton on which the scallops feed. 'We think this is more of a handle on what is causing this increase than specifically marine pollution,' he told a food safety conference, and said that little was known about why the plankton or algae were producing such levels of toxin, but that it was possibly a mechanism to ward off predators.



in brief

GOOD NEWS FOR GREAT BEARS

In a landmark agreement backed by the Natural Resources Defence Council, Greenpeace and ForestEthics, as well as four Canadian and US logging companies, the Canadian government and timber industry officials have agreed to protect 3.5 million acres of British Columbia's ancient coastal rainforest, one of the world's last temperate rainforests, from wholesale logging. The intensive campaign by the Rainforest Action Network (which helped negotiate the agreement), together with Greenpeace and other groups has resulted in several large US chains phasing out their purchase of wood from ancient forests.

BEWARE THE PROTEOME

Myriad Genetics, in Salt Lake City, Utah, has formed a new subsidiary, Myriad Proteomics, which plans, in conjunction with computer giants Hitachi and Oracle, to map the identity and function of every protein in the human body. The map, a more complex one to compile than that of the human genetic structure, is intended to reach completion in three years, after which the results will be available from the company on subscription.

GERMANY'S GM CRACKDOWN

Following the German government's decision to declare a moratorium on all GM planting and research, the farm ministry in the north German state of Schleswig-Holstein said, at the end of April, that genetically modified maize had been found mixed in with normal seed imported from Chile and Canada. It urged farmers who had bought the seeds not to sow them but to return them to their dealers. The seeds from Chile were apparently of a type modified to be resistant to herbicides but were not allowed to be grown for food in Europe, whilst those from Canada had been found to have several unspecified genetic modifications.

ZAPATISTAS 'RESUME THE STRUGGLE'

In a blow to Mexico's president Vicente Fox, the Zapatista Army of National Liberation has rejected an amended version of an indigenous rights bill recently approved by the Mexican Congress. A law change recognising Indian rights has been a key Zapatista demand since they rose up in Chiapas state in 1994. Their recent 'march of indigenous dignity' took them to Mexico City, where a Zapatista spokeswoman



Dung deal: Greenpeace activists dump muck and manure at the European Patent Office's entrance in Munich, demonstrating their protest against plans of the US biotech group Monsanto to get a patent on its genetically modified seeds

addressed the Congress to appeal to them to pass the bill. But the watered-down version now passed has been described by the Zapatistas as an 'insult'. 'The communique [dialogue with the government] is off' wrote Subcomandante Marcos in early May. 'Yes, we already know what's coming: a great media campaign about 'Zapatista intransigence', an increase in military and police pressure, reactivation of paramilitary groups, offensives, etcetera... Know that it's not over for us.'

FOOD AID PETITION

About 100 consumer and green groups around the world have urged President Bush to halt exports of GM corn and food aid that might be contaminated with an unapproved bioengineered variety of corn. A letter, signed by Friends of the Earth, Greenpeace and other groups in Australia, Germany, India, Ghana, Bangladesh and Brazil, said the US should block further exports that may contain traces of Starlink corn. More than 300 US snack foods, taco shells and other products containing corn flour were recalled last October because of Starlink contamination.

GM OVER ASIA

Thailand, which had already banned all commercial growing of GE crops, halted all approvals for GE field trials. This should also mark the end of ongoing field trials on Bt (*bacillus thuringiensis*) Bollgard cotton and Bt corn, both genetically engineered to kill insects, being conducted by Monsanto, the second-largest seed provider in Thailand. In the Philippines, meanwhile,

hundreds of farmers from all over the archipelago protested outside the International Rice Research Institute which has applied for open-field testing of various strains of GE rice. At a meeting on biotechnology in Beijing, Professor Chen Zhang-Liang, vice-president of Beijing University and director of the National Laboratory of Protein Engineering and Plant Genetic Engineering, said that commercialisation of GM crops was likely to undergo a 3-5 year moratorium, while the issues were debated.

GATS GETS NOTICED

250 UK MPs have called for an 'independent and thorough assessment' of the World Trade Organisation's General Agreement on Trade in Services (GATS). The motion's sponsor, Labour MP Dr Phyllis Starkey said she had been 'heartened by the response' of fellow MPs. 'For many MPs it was the first time they had heard of this trade agreement and I think they were shocked that something with such profound implications could be subjected to so little parliamentary scrutiny. We have all had quite a postbag on this matter.'

GENETIC PROTECTION

The head of Monsanto's Washington lobbying office, Linda Fisher, has been nominated deputy administrator of the US Environmental Protection Agency (EPA). The EPA is currently considering a request from Aventis to approve StarLink, the corn genetically modified to repel pests, for human consumption, and also whether to renew the registration of Monsanto's Bt corn, cotton and potato varieties.

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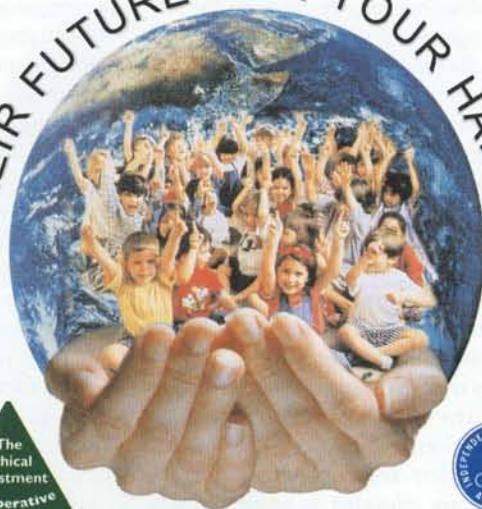
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THIS PAGE: PANOS PICS



'I don't know if we have a future because without our land we can only be slaves to the settlers... If all you people who own the world will not help us, the tribal people, then we are bound for destruction.'

These words, from a Philippines Aroman Manobo tribesman, head a bulletin issued in October last year by Survival International, calling for major changes to the UN and World Bank's indigenous peoples and resettlement policies.

Since its foundation, the World Bank has been involved in projects resulting in the displacement of millions of people. In the words of its own 1990 operational directive (OD 4.30), the consequences are far-reaching: 'Production systems are dismantled, productive assets and income sources are lost; people are relocated to environments where their productive skills may be less applicable; community structures are weakened; kin groups are dispersed; cultural identity, traditional authority and the potential for mutual help are diminished.'

The Bank's Involuntary Resettlement Policy (OP/BP 4.12) outlines standards for client nations and companies in their treatment of indigenous peoples displaced by Bank-assisted schemes and NGOs have for years called for a tightening of both its terms and implementation.

In 1996, changes, presented as simple

'clarification' of existing policy, were begun, accompanied by a two-year period of public consultation in line with the Bank's stated aim of improved transparency. NGOs, community organisations and academics united in calling for improved standards.

Consultation ended in 1999 and a year's silence from the Bank followed, ended only by the release in March of a definitive final draft which *lowers* existing standards. Amazingly, they permit forcible relocation of indigenous peoples even when, in the words of the policy, it results in 'significant adverse effects' on their 'cultural survival'.

According to the Forest Peoples Programme, the redrafted policy contravenes a number of international human rights conventions and, whilst mentioning indigenous peoples and rights to land, offers little or no guarantee of their legal protection leaving the field open for World Bank borrowers to use loopholes in the policy to disregard indigenous rights altogether.

The suspicion is that those redrafting the policy were influenced by borrower governments to weaken policy requirements. Reported complaints by some borrowers that implementing existing policy is too expensive and time-consuming seems to have led to the reclassification of once-tough mandatory requirements as optional extras.

Displaced

A small selection of World Bank projects:

Since 1977, the World Bank has provided loans to coal mines, power plants and transmission lines in **Singrauli, India**, that have transformed the area, once rich and biodiverse, into an industrial wasteland. 300,000 people have been displaced, often more than once, to make way for a dam, power plants, ash dykes, coal mines and associated industrial development.

Uganda's Forest Rehabilitation Project involved the eviction of 130,000 people from areas intended for a biological corridor between two national parks. Years after the project ended, displaced people remain in resettlement villages without basic services and increasing rates of infant mortality and infectious disease.

India's notorious **Narmada Dams** scheme, meanwhile, still threatens to flood the homes of 200,000 people, including 60,000 indigenous peoples. The resettlement programme denied the rights of those without individual land titles. The World Bank was forced to withdraw its support in 1993 following a major popular mobilisation and an independent review which found that the Bank had seriously violated its involuntary resettlement and environmental assessment policies.

The draft needs only the approval of the Bank's executive directors to become policy. It is no longer open to public consultation, but can be viewed 'for information only' at: <http://wbln0018.worldbank.org/essd/essd.nsf/81f3f0192ec0edee852567eb0062fb33/eccc741f851ed3ca852567ed004c9be8?OpenDocument>. Just try.

The Bank considers that the policy is not subject to further changes, so the only way prevent the redrawn policy from becoming official is to write directly to James Wofensohn, and to do so now.

See *Evicted! The World Bank and Forced Resettlement in The Ecologist*, Vol 24 No 6 (available from *The Ecologist* offices) and visit www.ciel.org for more information.

MAKE A DIFFERENCE

Write to James Wofensohn, President, The World Bank, 1818 H Street NW, Washington, DC 20433. Tell him that the Bank's policy contravenes human rights, breaks his previous promises and should not be implemented.

If you can, fax your letter to his direct line on +1 202 522 1677 and +1 202 522 3433.

Send emails to Joanne Salop at jsalop@worldbank.org and Ian Johnson at ijohnson@worldbank.org



INDIA MEANWHILE, IN MAHARASHTRA

The lessons of the Narmada have still not been learned it seems. The rare and remarkable tiger forests of Melghat, Maharashtra, India, are threatened with submergence and fragmentation by the Upper Tapi Stage II project, which involves the construction of the Kharia-Gutighat dam on the Tapi river.

Upper Tapi Stage II project will involve the construction of a 67.5m high, 10km long dam across the river Tapi. The project will submerge at least 5,836 ha of forest land and probably much more. Cumulatively, the project will require over 17,000 ha (170 sq km) of land, and cost an estimated 907 million rupees.

Unbelievably, 244 ha of the Melghat Tiger Reserve is within the stated submergence area. The Reserve is part of an important wildlife corridor in the Satpura range, and the reservoir created by the Kharia-Gutighat dam will sever this, isolating what wildlife it doesn't drown, as the backwaters and distribution canals will disconnect wildlife corridors. This from a government which has publicly committed itself to pulling back the tiger from the brink of extinction.

Melghat and the surrounding forests are already facing threats from poaching and logging by the illegal timber mafia and the territorial wing of the forest department. This project could be the death-knell for these forests, which are critical to tiger breeding in Central India. Apart from disconnecting wildlife corridors with the forests of Madhya Pradesh, secondary pressure exerted on the forests by those displaced will also rise sharply.

Ironically, the Executive Summary of the Environmental Impact Assessment (EIA) report states that the dam will 'benefit' the Melghat Tiger Reserve as 'a perennial water source will be made available to wild animals' and the creation of a permanent water body will attract migratory water birds! Inevitably, too, there will be large-scale displacement of predominantly tribal people, with 72 villages (a population of 54,132) to be either partially or completely submerged.

Even a cursory glance at the EIA report bares deep flaws inherent in the EIA system. While the report lists a wide array of species to be affected, the Executive Summary and its conclusions laud the project as a boon for

the area and dismiss the costs as 'justifiable'. On the agricultural front, the EIA admits that the land to be submerged is rich, yielding a variety of crops. As many as 14 rare plants are located in the region, the report mentions. Eight species of mammals, six species of birds and two rare reptile species are found in the submergence zone.

Meanwhile, the Ukai dam, built further downstream on the river Tapi, is not performing to capacity, primarily because its catchment area is in ruins. The same fate is bound to befall the Kharia-Gutighat dam. If it were to go ahead, the only beneficiaries would be the timber and construction lobby. For the tigers in the Satpura ranges of Maharashtra and Madhya Pradesh, it would mean the end of the road.

MAKE A DIFFERENCE

Write to the Chief Minister of Maharashtra, Mantralaya, Mumbai 400 032. Tell him that the proposed Tapi Stage II project will be enormously destructive both for people and wildlife, and ask his government to think again.

US BOYCOTT BUSH!

If the oil, chemical, nuclear, logging and other eco-crimes industries had sat down to draw up a profile of their ideal President, they could scarcely have come up with anyone better than George 'Dubya' Bush. Bush's record in his first 100 days has been a veritable onslaught on the environment.

So far, corporate America's White House puppet has killed off government lawsuits against tobacco companies, scrapped restrictions on the construction of logging roads, dumped rules on environmental clean-up of water supplies and laid the path for oil drilling in Alaska's last wilderness. Killed off as well is America's tiny commitment to limit its greenhouse gas emissions, with Bush's dismissal of the Kyoto Protocol. And in order, we are told, to deal with the very climate change he has doubted, Bush plans to build new nuclear power stations in America for the first time in 25 years.

And every single industry let off the hook by these dramatic changes financed Bush's elec-

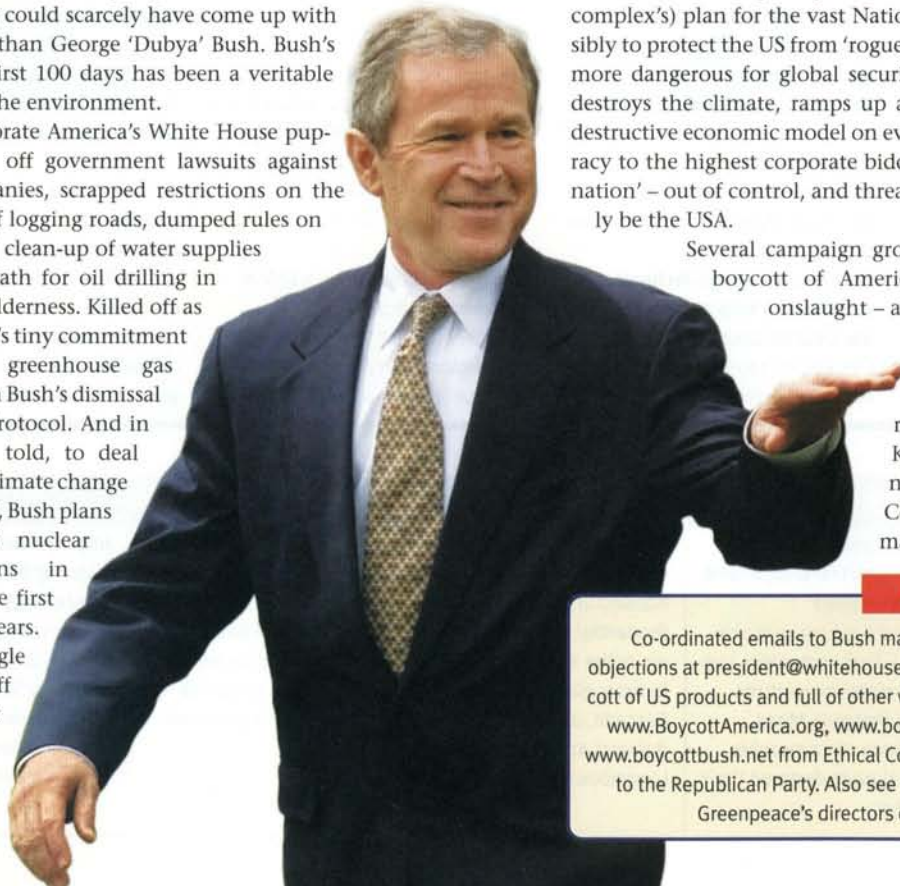
tion campaign to the tune of tens of millions of dollars...

Maddest of all, perhaps, is Dubya's (read: the military-industrial complex's) plan for the vast National Missile Defence system, ostensibly to protect the US from 'rogue nations'. But what nation could be more dangerous for global security than one which systematically destroys the climate, ramps up a new arms race, imposes its own destructive economic model on everyone else, and sells off its democracy to the highest corporate bidder? If any country is now a 'rogue nation' – out of control, and threatening the rest of us – it must surely be the USA.

Several campaign groups are now openly calling for a boycott of American products in protest at this onslaught – and particularly at Bush's scrapping of Kyoto. Exxon oil company – which trades as Esso in the UK – tops the list as Exxon played a key role in persuading Bush to dump Kyoto, but other American companies such as Texaco, Chevron, Pepsi, Coca-Cola & McDonalds, should be made to feel the cold in Europe.

MAKE A DIFFERENCE

Co-ordinated emails to Bush may help – send him your personal objections at president@whitehouse.gov. Good websites calling for a boycott of US products and full of other ways to express your outrage include: www.BoycottAmerica.org, www.boycott-bush.org www.iyi.org.uk and www.boycottbush.net from Ethical Consumer which lists the top 20 donors to the Republican Party. Also see the replies to a letter to Bush from Greenpeace's directors on www.greenpeace.org.



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REUTERS

five genetically modified websites

<p>www.fiveyearfreeze.org Website of 121 national organisations campaigning for a genetic engineering moratorium</p>	<p>www.psrast.org Includes this independent scientific advisory body's response to genetic modification, together with an article on tacit censorship</p>	<p>www.btinternet.com/~clairejr GM-Free's website features lists of campaigns, articles, plus info on supermarket chains and where they stand on GM</p>	<p>www.foe.co.uk/camps/foodbioindex.htm The website for the Friends of the Earth campaign</p>	<p>www.gn.apc.org/pmhp/ See the Genetix Snowball handbook for 'safely removing genetically modified plants from release in Britain'</p>
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- 5 June 2001
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- 6-8 June
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Contact Mia Ronka on +35 82 333 6009 or visit <http://figare.utu.fi/notice.html>
- 8-17 June 2001
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- 9-13 June 2001
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- 10-13 June 2001
Gloucestershire, UK
The FuturePresent Programme for Business Leaders
WWF/Breakthrough Technologies workshop to help businesses create a sustainable future.
Call +44 (0) 1225 337 500 or email sophie@onetel.net.uk
- 12 June 2001
Birmingham, UK
Local Food Initiatives Conference
Telephone +44 (0)845 458 9525 or email mail@localfood.org.uk
- 12-14 June 2001
Gothenborg, Sweden
Sustainability and Solidarity
Alternative summit in advance of Rio+10 organised by Friends of the Earth, Sweden and the Heinrich Boll Foundation. Call Marin Masson on +46 3112 8042 or email marin.masson@mjv.se
- 15-16 June 2001
Gothenborg, Sweden
EU Summit on Sustainable Development
- 18-21 June 2001
Geneva, Switzerland
WTO Council for Trade-Related Aspects of Property Rights
Visit www.wto.org
- 19-22 June 2001
Edinburgh, UK
The Role of Disease as a Threat to National Security
Global Forum for Law Enforcement and National Security (LE&NS).
Call +44 (0) 1580 241177
- 22-24 June 2001
UMIST, Manchester, UK
12th National Hazards Conference
Event for union safety representatives and safety campaigners.
Call +44 (0)161 953 4037 or email gmhazards@hotmail.com
- 26 June 2001
Tarleton, Lancashire, UK
Conversion to field-scale organic vegetable production
Joint HDRA/Elm Farm/Soil Association workshop.
Call +44 (0) 117 914 2418
- 30 June 2001
London, UK
Statewatching: the new Europe
Statewatch's 10th anniversary conference on the state, civil liberties and secrecy.
Call +44 (0) 20 8 802 1882 or visit www.statewatch.org
- 30 June - 1 July 2001
London, UK
Anti-Sanctions Conference and gathering in solidarity with the people of Iraq
For information: call 01865 243 232 or email glenn@voices.freeseve.co.uk

five top campaigns

<p>http://forests.org/emailaction/png.htm Australia's SBS TV has documented horrifying abuse of rainforest people in Papua New Guinea by employees of transnational logging companies</p>	<p>http://cybercentre.greenpeace.org/t/s/ams/e?a=BigOil&s=blue2 To send a message to the Big 5 US oil companies urging them to support the Kyoto Protocol. Many European oil companies have already declared their support</p>	<p>http://headlines.igc.apc.org Find out how the UK's Natwest Bank and Prudential, both shareholders in the notorious US forestry giant, Boise Cascade, are helping to deforest an area the size of Luxembourg each year</p>	<p>www.Survival_international.org/index2.htm Stop Bushmen from the Kalahari desert being beaten by wildlife department officials to punish them for hunting on their own land</p>	<p>http://whistler.sierraclub.org:8080/takeaction/energy/index.jsp Sign on to a letter to George Bush and energy secretary Spencer Abraham to persuade them of their duty to reduce US energy consumption</p>
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MEXICO WINGS OVER MEXICO

The Spaniards drained the fish-filled lakes around the land where they built what is now Mexico City, but intensive rehabilitation work over the last 30 years has resulted in the restoration of five lakes, the planting of 30 million trees and the creation of a vital wetland area for migratory birds. Now, between 100,000 and 300,000 birds, of over

150 different species, such as the least bittern, the American widgeon, short-eared owl, blue-winged teal and Wilson's phalarope, either nest there or use the area as a vital stopping ground on their migratory routes.

But Mexico's government under the new president, Vicente Fox, the former Coca-Cola

executive elected on a neoliberal platform has, without consultation, announced the construction of a new airport on this wetland habitat. Plans are for a giant terminal, suitable for the projected massive expansion in trade with the US resulting from the Bush administration's efforts to create a Free Trade Area of the Americas, and have been drawn up without an independent environmental analysis being made.

The effect on the bird population (among them at least a dozen threatened bird species) would be devastating, but from an aspect of human safety the project is also foolhardy: birds are generally not good flight companions for aeroplanes.



MAKE A DIFFERENCE

Send messages to President Vicente Fox, Palacio Nacional, CP06067, Mexico City. Write also to Carol Hallett, President and CEO, Air Transport Association, 1901 Pennsylvania Ave NW, Washington, DC 20004-1707 opposing the proposed construction of the new airport in Mexico City.

GLOBAL ABANDON ASBESTOS

Asbestos-related diseases kill over 4,000 people in Britain each year, many of the incidences occurring in tightly-grouped clusters around shipbuilding or dockyard areas. And because these are almost all job-related, the government is making moves to amend workplace regulations by requiring employers to survey their premises for asbestos.

The TUC, which is campaigning for an end to asbestos use, estimates that some 85 per cent of commercial properties in the UK contain asbestos and is calling for a national register to be compiled. Britain banned the use of asbestos in 1999, following France, which in 1998 had introduced a nationwide asbestos ban (prompting a for-

mal complaint to the WTO by the Canadian government that France had unfairly closed its borders to imports of Canadian asbestos).

Now, with dwindling markets in the West, asbestos producers are increasingly targeting developing countries with little or no asbestos regulation and where public awareness is low.

MAKE A DIFFERENCE

Write to your MP, supporting the TUC's calls for stronger measures to protect people from asbestos, and compensation for sufferers and see www.ibas.btinternet.co.uk to join an international campaign.



UK ORGANIC TARGETS: ONE LAST PUSH

The UK government has finally promised an action plan for organic farming – and has set a target of 4.7 per cent of farmland to be organic by 2007 which represents a welcome U-turn from their previous refusal to set a national target. But while the government now supports the principle, it has yet to support the private members' bill currently going through parliament, which aims for 30 per cent by 2010.

For years, promoters of the Bill have argued that an ambitious but realistic target is the best way to promote organic production in the UK, where, though the popularity of organic food is rising steadily, most is still imported.

If we're serious about going organic, the Organic Targets Bill should become law – and pressure on the government now may just persuade them to support it.

MAKE A DIFFERENCE

Write to Nick Brown, agriculture minister, MAFF, Nobel House, 17 Smith Square, London, SW1P 3JR and your MP (phone 020 7219 3272 to find your MP's name and address), urging them to support the Organic Targets Bill. For more information on the campaign, call Catherine Fookes on 020 7837 1228

PUT THE MOCKERS ON MOX

Friends of The Earth has demanded, in an open letter to energy minister Peter Hain, a full disclosure of British Nuclear Fuel's five-year plan before the general election. The group fears that the publicly-owned BNFL intends to develop a new generation of mixed-oxide fuel reactors and that it is keeping quiet on the issue until after the election.

According to FoE Director Charles Secrett, the company has hinted for the first time publicly that the Sellafield MOX plant 'could be used to convert UK plutonium into MOX for "burning" in the UK. As there are presently no UK reactors either capable or willing to use MOX fuel, this strongly suggests that BNFL wishes to

build new nuclear generating capacity at some point in the future'.

FoE is calling for an end to the 'economic and environmental folly' of stockpiling domestic and foreign plutonium at the BNFL's reprocessing plant at Sellafield, Cumbria, stating that, 'BNFL's future lies in minimising the risks to future generations by clearing up and managing the radioactive legacy it has created'.

Join FoE in calling on all parliamentary candidates to pledge, before the general election, a doubling of the UK's current target for renewable energy and to rule out building any new nuclear power stations.

For more information call Mark Johnston on 020 7566 1672.

Human genome sequence:

SUE MAYER AND MATT RIDLEY



DR SUE MAYER

Dr Sue Mayer is the director of *GeneWatch UK*, an independent policy research group interested in the science, policy and regulation of genetic technologies. www.genewatch.org.

Dear Matt

I believe that in our current climate, the human genome sequence is less likely to be a gift for mankind than for the pharmaceutical corporations promoting a model of health based on treatment being more profitable than prevention. A frightening narrowing of the science base and the privatisation of the genome via patenting means that our society is unlikely to be in a position to reap the broader benefits that knowledge and understanding of genomics could bring.

Just look at the hype. On 23 June 2000, when President Clinton and Prime Minister Blair announced that the first draft of the human genome was complete, scientists and politicians vied with each other to hail it in glowing terms. For Clinton, it was: 'the most wondrous map ever produced by mankind'. For Blair, it was: 'a breakthrough that opens the way for massive advancement in the treatment of cancer and hereditary diseases, and that is only the beginning'. Mike Dexter of the Wellcome Trust said: 'A few months ago, I compared the project to the invention of the wheel. On reflection, it's more than that... this code is the essence of mankind'.

Yet there seems to be a lot we don't know. Sue Galloway at the University of Otago commented that 'sheep are human, basically. Ninety-eight per cent of our genes are the same,' and the UK's chief scientist at the time, Bob May, said that 'we share half our genes with the banana'. When the genome sequence was actually published in February 2000, there was another surprise – we have far fewer genes than had been predicted. Some serious rethinking had to be done and the one gene, one protein hypothesis underpinning the deterministic model of genetics has had to be rejected. Things are more complex than that both at the level of the gene and in terms of gene interactions with the cellular, whole organism and external environments.

We knew this anyway. There are very few human diseases that can be directly attributed to a fault in a particular gene and even with single-gene disorders, patients with exactly the same genetic defect can range from very sick to mildly ill to completely healthy. Environmental, social and cultural factors are extremely important in determining the course of their illness but genetic research is increasingly framed in narrow biological terms. For example, a recent article in *Nature Biotechnology* on obesity acknowledges that: 'In the past few decades, technological innovations have created a society where

most forms of work are lighter, travel less strenuous, and lifestyles more sedentary. Add to this the over-consumption of food, in particular high-fat convenience foods, and you have the perfect recipe for a ballooning public health problem – obesity.' However, the remainder of the article is devoted to reviewing developments in the mushrooming field of biotech research dedicated to developing drugs that can intervene at the genetic level to adjust the body's 'weight control system'. The problem of obesity is therefore reduced to a problem of lack of medical understanding of how body weight is controlled – a more simplistic and profitable approach than addressing the root causes even though side effects of anti-obesity drugs may be serious.

Of course complexity is acknowledged, but in passing and investigating it is not given priority. It's not likely to be profitable in the same way as a focus on genomics may be – the benefits of understanding such complexity may lead to different solutions with wealth generated being more widely dispersed rather than concentrated in the hands of the drug companies. This depressing quick-profit mentality is reflected in our research agenda – research which has an obvious commercial application is being encouraged and another £140 million has recently been committed to the Higher Education Innovation Fund in the UK.

And whilst we are anxious to invest in the science we are less willing to invest the time putting in place mechanisms needed to protect us against its excesses. There is no law to prevent the use of genetic information as a basis of discrimination in employment or insurance, for example. Quite the opposite, the thin end of the genetic discrimination wedge is in place.

Britain has just become the first country to officially sanction genetic testing for insurance purposes. In October 2000, the Department of Health's Genetics and Insurance Committee gave an official seal of approval to insurance companies asking to see the results of two genetic tests for Huntington's chorea. The arguments the insurance companies make about the need to protect themselves and other policyholders against losses if such information isn't disclosed are spurious – the numbers involved are tiny – but the people with the awful misfortune of having the Huntington's gene are the first to suffer from officially approved genetic discrimination which the insurance industry and, later, employers will want to extend – it makes economic sense to them never mind the social consequences.

Quite simply we are not behaving in the mature manner needed to take genetic knowledge on board productively. Greed feeding on naïve expectations and an unwillingness to put safeguards in place lest they hinder 'progress', typifies our attitude to the

NO

is it a gift to mankind?



SPLIT THE DIFFERENCES.

new genetics. I worry for our children and grandchildren as they become part of the genetic experiment in such an atmosphere.

Sue Mayer

Dear Sue

For the first time in four billion years a creature has read its own genetic recipe, has found a key to mechanisms underlying many miserable illnesses and has made that knowledge freely available to all members of its species. In doing so, it has brought much closer the prospect of truly curing cancer, truly preventing Alzheimer's disease and truly understanding depression, yet you wish to concentrate mainly on the problems of insurance and profiteering by the big pharmaceutical companies. I think you are scraping the barrel of pessimism.

Take Huntingdon's disease. Suppose you are right and there will be genetic discrimination by insurers (as there is already: those with a parent who has the disease are at 50 per cent risk, and insurers ask about family history). On the other hand, they can now ensure, by pre-implantation genetic diagnosis, that their children do not have the mutation, lifting a terrible curse from their lives. I suspect that most people with the disease in their families would consider that a good bargain.

A similar balance applies to commoner diseases like cancer, a disease of malfunctioning genes. Knowledge of those genes is already resulting in trials of many new promising cancer cures. Sure, one day somebody may make a profit from one of them, but he would have a cleaner conscience than the homeopaths and other quacks who currently prey on the terminally sick. Would you really wish to look cancer patients in the eye a decade hence and explain to them why we banned him from discovering the cure for their disease lest he make money out of it?

I believe the genome will not, as you argue, lead to corporate control of science but the reverse. There is a flood of corporate investment into blue-sky science, thus relieving the taxpayer of some of the burden and neatly recycling corporate profits into public goods. The big pharmaceutical firms are investing in genomics out of fear; they have had it too cosy for too long.

Now their patents will be undermined by a cornucopia of new and better treatments from public and private laboratories using the genomic knowledge freely available over the Internet. However hard the big companies bully the US Patent Office (a battle they are losing), they can never own even an angstrom of the genome. It's free and it belongs to all of us and each of us.

Nor will the new genetics lead to cures at the expense of prevention, but the reverse. Already I

could test myself for a genetic propensity to heart disease. If I find I am at high risk, I can cut out the butter. That kind of low-tech predictive diagnosis (the hypochondriac's charter, if you like) will be one of the commonest applications of the new genetics.

I don't understand why you are so concerned about the complexity of the genome. If you are right that most traits are influenced by many diverse genes and vice versa (as I think you are), this if anything makes it more important to understand the whole genome, rather than genes in isolation. Except in rare cases like Huntingdon's, the single-gene/single-trait model has for many years been a straw man used mainly by those who wish to caricature genetics.

Likewise, I am sorry to see you falling for a piece of corporate spin. The business about 30,000 genes changing the way we see ourselves was a clever story Craig Venter of Celera told journalists two days before the publication of the genome. Its effect was to grab the headlines and distract his shareholders' attention from the fact that Celera's contribution to the genome sequence was a little disappointing unless stitched together without the data provided by the public project. The 30,000 figure had been an open secret for months and nothing rested on a specific number of genes for the human species – it takes far fewer than 30,000 to make a highly complex creature. If Venter were right and fewer genes meant more free will, then bacteria would be the freest organisms of all.

Those who accuse modern geneticists of being determinists have obviously never met a Freudian. The determinism preached in the social sciences eclipses anything geneticists try to get away with (and determinism is determinism, whatever the adjective). In fact, geneticists are moving to a much subtler understanding of cause and effect in human anatomy and behaviour – one in which genes can be effect as often as cause. Cancer is only the most obvious example.

Of course, there is hype. Bill Clinton said our grandchildren would only know cancer as a star sign. Of course, there are dangers. Individuals may want to rush into human cloning or genetic engineering before it is known to be safe for the clone. But the dangers of new knowledge must be weighed against the benefits – and against the dangers of not having that knowledge. The status quo is not a morally neutral option.

Matt Ridley



MATT RIDLEY

Matt Ridley is the author of *Genome: the autobiography of a species in 23 chapters (Fourth estate)* and is chairman of the International Centre for Life in Newcastle.

YES

'We need a respectful debate that acknowledges different options and strives to find the best path. I just hope the powerful institutional and commercial forces behind genetics will allow us to do that.'
Sue Mayer

Dear Matt

I'm not saying that we shouldn't investigate genes and the influence of genes. The knowledge will be interesting and could be enriching if we can use it wisely. My main point is that from what I see we are not doing that at the moment.

Whilst everyone acknowledges complexity as you do, where is the funding supporting this work? The dominant theme is linear deterministic genetics which fits with a myopic wealth-generating agenda that fails to grapple with the wider issues. Very sadly even those affected by single-gene disorders, who may seem the most likely to benefit (and genetics is marketed in this way as your letter illustrates), are unlikely to form a large enough proportion of the population to be economically attractive. For example, in the UK there have been no applications for gene therapy trials on single gene disorders since 1996.

However, the real danger is that we may not get the best treatments and thereby allow unnecessary suffering – that's why I'm concerned by complexity and understanding it. Focusing on genes as the cause of cancer (as you do) when, even in single gene disorders there can be considerable variation between patients in severity or time of onset of the disease is not a sustainable scientific position. A much larger number of diseases can be directly linked to the negative impact of environmental abuses such as malnutrition, chemical pollution or smoking and, in practice, the majority of diseases, including cancers and heart diseases, are produced through a complex interaction between environmental and genetic factors.

This is what we need to get our heads around yet the claims for wonder gene cures from genetics abound. Looking cancer patients in the eye and telling them that prevention was possible but less exciting than gene therapy is something you will have to tangle with.

This industrial economic agenda dressed up as health promotion is growing. Later this year, the Wellcome Trust, Medical Research Council and National Health Service are expected to launch a UK 'Bio-Collection' of human samples with associated medical and personal data as a resource for genetic researchers in the private and public sectors. Whilst the aim of the UK's Bio-Collection would be to investigate disease, the Wellcome Trust has emphasised that an important function of the project would be to support the British pharmaceutical industry. The MRC has pledged £20 million in principle to the project and further 'millions' have been promised by Wellcome. Lifestyle and medical information for the proposed UK Population Collection will be collected prior to, and separately from, specific research projects using the data, so will be in severe danger of being too unfocused and superficial to be of any meaningful use. But it will send a positive message to industry and has the full support of the DTI's Genome Valley Steering Group because of that. This

isn't about good science and health but big business and the Bio-Collection will clearly be most appropriate for industrial gene hunting not promoting health.

And it's no good casting off concerns about genetic discrimination by saying pre-implantation genetic diagnosis will side-step the matter as the embryo will have been discarded anyway. Genetic discrimination must be outlawed and we have to think through the overall implications of things like embryo selection. Some may seem easy, like severe metabolic disorders, but what about the Stephen Hawking dilemma? Without a doubt, based on your approach, he'd have been flicked out of the petri dish when only a few cells in size but what would society have lost as a consequence?

Sue Mayer

Dear Sue

You use the old argument of the American pro-life movement that I would have aborted Stephen Hawking. It is an objection that applies to all abortions (and to contraception, too!). As you know, less than 1 per cent of abortions in this country are done for genetic reasons. The rest are done for the health or convenience of the mother. Would you take direct action against abortion clinics, or do you believe, as I do, in the woman's right to choose?

The caricature of the heartless scientist willfully overlooking the holistic picture to concentrate myopically on his reductionist prejudices is a figment of the imagination of woolly social scientists. The press is also at fault because it needs simplified stories, and the lazy way to get them is to report genetics simplistically. Even the reading of the genome was reported as just a new way of curing the simple inherited diseases like cystic fibrosis.

That's 10 years out of date. There was a time when people studied human genetics only in order to address these rare diseases, because that was all genetics could do. But if you trawl the genetic literature now, you will find the emphasis is on the complex disorders – from depression to cancer – and the many different ways that genes shed light on them, both as causes and as mediators. Indeed, the very point of reading the whole genome was to be able to move on to these more salient problems by putting isolated genes into their full context.

To complain that genetics was previously too simplistic is like criticising Harvey for failing to invent heart transplants when he discovered the circulation of the blood. You have to start somewhere.

There is a commercial reason, too, for the increasing emphasis on multiple effects of multiple genes. Industry is not that interested in the single-gene disorders. As you say, they are rare and therefore cannot reward heavy investment. So commercial and scientific pressures are both pushing in the right direction by your lights. You just would not know it from the newspapers!

By the way, you say there have been no applica-

tions for gene therapy on single-gene disorders since 1996. That's gene therapy, a very specific and high-risk approach to curing disease that I for one have never believed would be more than a footnote to the genetic revolution. Most genetic research will result in cures or preventions based on drug development, not on somatic gene replacement by virus vector which is what gene therapy is.

Talking of prevention, today coincidentally I had an email from the founder of a young biotech company in Hampshire, who described his firm's aim thus:

'Scion is offering genetic testing directly to individuals to enable people to identify and act on polymorphisms that could result in preventable diseases. Initially we will screen for genetic predispositions to sporadic cancers resulting from the metabolism of food, providing customers with a personalised preventative dietary regime. Later, we will extend the service to identify genetic predispositions to a wider range of preventable conditions, such as heart disease, allergies and drug side-effects.'

That contradicts your argument that nobody is interested in environmental prevention. It also sounds like a pretty good deal for both him and his customers if he can pull it off. If he can't, he's worse off, but we patients are merely back where we were before. I suppose he has 'a myopic wealth-generating agenda'. But so what if he helps you and me avoid disease? I wish there was even a tiny risk that in pursuing my living I might achieve so much for human well-being.

Matt Ridley

Dear Matt

Like you I support a woman's right to choose about abortion but don't want this shaped by pressure to have a 'perfect' baby which is what overemphasis on genetic testing could do. As a society we need to grapple with these things and be alert to the broader realities of the world and how they will affect and be affected by the new genetic technologies. In doing this we need help from the social and natural sciences, both of which are inevitably blurred or woolly.

I guess I get depressed knowing that whilst companies will attempt to produce 'personalised preventative dietary regimes', we are unable to act on what we know about health and diet so far. Such individualised testing is unlikely to be available on cost grounds alone to many of those most at risk from, say, coronary heart disease – the poor and disadvantaged. Very clear scientific advice points to good housing, a mixed diet with plenty of fresh fruit and vegetables, exercise and some fun (dancing makes many people happy I understand) being the way to good health. Whilst I have high hopes for how genetic information will advance medical knowledge, why is this the best or most logical starting point in terms of promoting health at the

moment?

But this mustn't be a competition about whose intentions are best. We need a respectful debate that acknowledges different options and strives to find the best path. I just hope the powerful institutional and commercial forces behind genetics will allow us to do that and that our universities are able to inform us from a broad spectrum of knowledge encompassing all dimensions of health. However, I fear we are losing a balance in public research which cannot be good for any of us.

Sue Mayer

Dear Sue

How can I be against dancing and fun? You've got me there! Sometimes these debates degenerate into ill temper, but this time we seem to have found a few bits of common ground.

The editors, wanting a fight, may not like that, but they will have to lump it.

I suppose the main difference between us is that I am an optimist about both genes themselves and the way society will apply the resulting technology and knowledge, whereas you are pessimistic. I base my optimism partly on the history of medical invention, where there is no bad consequence that even begins to compare with the good effects of vaccination, antibiotics, surgery and disinfection. I think it was PJ O'Rourke who had a one-word response to those who dreamed of being transported back to the eighteenth century: dentistry.

But my optimism is also based on the record of genetics. The reading of the genome comes 30 years after the invention of genetic engineering and 50 years after the discovery that genes are digital messages. In all that long time there has been no evidence to suggest that the dangers posed by this knowledge are either great or probable; whereas the benefits are rolling in all the time. To take the precautionary principle seriously, and discount future benefits for the sake of avoiding future dangers, would to my mind be morally wrong.

I realise that for environmentalists, pessimism is good box office. But in this case, I think that philosophy has led you to miss the fact that the reading of the genome is doing exactly what you want of science. It democratises genetics, makes it freely available to all, allows a holistic approach, gets us away from simplistic models of genetic cause and effect, encourages disease prevention and might even cure cancer.

Matt Ridley

An article on the politics of gene research in the early 1990s by Ruth Hubbard and Elijah Wild was published in 1993 in *The Ecologist* Vol 23 No 5. Copies of this issue are currently available and can be ordered from Sally Snow on +44 (0)20 7351 3578, price £4.

'I base my optimism partly on the history of medical invention, where there is no bad consequence that even begins to compare with the good effects of vaccination, antibiotics, surgery and disinfection.'
Matt Ridley

THE GOOD

There seems to be something symbolic about bananas that brings out the desire to open wallets in the British public. When, 12 years ago, *Private Eye* was convicted of libellous allegations against Sonia Sutcliffe, wife of the Yorkshire Ripper, the magazine's editor Ian Hislop stated: 'If this is justice, I am a banana,' and started a bananaballs fund to help pay costs. The readers paid up in their thousands.

Today, the money is coming in again, although the current issue seems trivial in comparison. It hasn't got the weight of the *Eye* case with its alleged character stains and focus on the power of the press; this time, it's about... well, just weight.

'Here we have the classic European issue', wrote *The Guardian* on 14 April: 'trivial, emotive, fundamental, inevitable, defining and ridiculous. It depends on where you come from.' Steve Thoburn, the man behind it all, has made it quite clear where he comes from. He comes from a land that used to sell bananas by the pound and the ounce, and he's got no intention of selling them any other way.

On 4 July 2000, two trading standards officers and two policemen marched into Thoburn's Sunderland greengrocer's shop and seized three sets of imperial scales. By trading in imperial measures (pounds and ounces), he was apparently contravening legislation that came into being on 1 January which made the kilogramme the standard unit measurement of weight for

STEVEN THOBURN

loose goods in Britain.

Knowing that a friend and fellow-shopkeeper, Neil Herron, had been similarly dealt with – Herron, a fishmonger, had been served with a Notice of Seizure in March 2000, and given 28 days to convert his scales to metric measures – Thoburn got in contact, and the pair began to take their case to the papers. Pretty soon, they were dubbed the 'metric martyrs', and the Sunderland press rubbed their hands with glee. A story was in the offing.

However, few could have been ready for the remarkable way the story grew. Arguing that Sunderland Council had illegally taken Thoburn's tools of trade, the pair demanded the return of his scales. The council held on to them while it took legal advice. Meanwhile, the metric martyrs were gaining support. The UK Independence Party came to their aid, as did many members of the press. Thoburn and Herron, armed with a 5,000-signature petition, set up a temporary stall outside the Houses of Parliament selling bananas and kippers by the imperial. Approached by a policeman, they asked him if he would like to arrest them. He signed the petition instead.

Support had grown so much by early 2001 that many a council might have backed off. But Sunderland decided to push on. The legalities had become complicated, (for further details, see www.metricmartyrs.sageweb.co.uk), and at stake for many people were the differences between law and justice, pounds and kilogrammes, and Britain and Europe. The scales – the very image of justice itself – had become an icon.

And the whole thing was symbolised by the bananas. Can Britain

sell a pound of bananas, or does European regulation say no?

The answer came on 9 April 2001 in Court Number 2 in Sunderland, when district judge Bruce Morgan found Steve Thoburn guilty of the crime of selling bananas by the pound. On 27 April, Thoburn announced his intention to appeal. The money to support him has been flooding in – over £100,000 to date has been received by the metric martyrs, but they'll need five times that amount to launch a full appeal.

'The support has been overwhelming,' says Thoburn. 'People have asked me to pursue this further, not for any political party, but just for customers and people in the street, so obviously I want to take it further and try to clear my name.'

Thoburn and Herron are not alone. 40,000 traders up and down the country are still selling their wares in imperial measures, some doggedly resisting European advances, others simply unaware that they're breaking the law. As people are pointing out constantly, the British still buy beer in pints, drive to speed limits in mph, back horses over miles and furlongs, and stand six feet tall. Neil Herron last year made the observation: 'If it is good enough for the Blair baby to be weighed in at 6lb 12oz then it is good enough for a haddock!'

Thoburn himself is a level-headed soul who can see that the issue is being adopted by political wings and media agendas everywhere. Yet for him it's not a political issue – it's a straightforward matter of the suppression of rights.

'I'm still a little gutted about it all. I just want to serve my customers the way they want to be served. If you can't give your customers what they want what's the point of being in business?' he said after the trial. 'If I am serving someone in my shop in pounds that is between me and my customer. It should be about freedom of choice.'

Meanwhile, as a certain burger chain continues cheerfully to sell and even advertise their quarterpounders, as far as *The Ecologist* knows, Sunderland City Council, or indeed any council anywhere in Britain, has yet to finger the collar of Ronald McDonald.



THE BAD



It's the saddest and the oldest story. The man who turns away from his beliefs, and the people he shared them with, and betrays his old cause. On his journey from Greenpeace founder and eco-radical to paid representative of the logging industry and green naysayer supreme, Patrick Moore has been likened to Judas so many times that he's probably given up counting. Sometimes, the attacks on him are vicious. 'Judas Iscariot', wrote a business reporter in the Canadian newspaper *The Province*, (quoted approvingly on the not-so-subtle 'Patrick Moore is a Big Fat Liar' website run by the Canadian Forest Action Network), 'had the decency to hang himself after betraying Jesus. Moore... can't even be persuaded to shut his mouth.'

Harsh words, but not that unusual. 'Patrick Moore', says Tzaporah Berman of Greenpeace International, 'has gone from being the guard dog of the environment to the lap dog of industry.' 'He is nothing more than an apologist for the timber industry,' opines Gavin Edwards of the Forest Action Network. 'He is presently paid by the timber industry to deliberately mislead the public and politicians about the acceptability of aggressive logging practices,' agrees Dr Leonie Jacobs of the University of Utrecht. For Paul George, director of the Western Canada Wilderness Committee it is, simply, 'difficult to say anything good about him'.

Ouch. To understand the enemies he has made it's important to understand his history. For Moore was one of Canada's, and America's, green pioneers. In the early 70s, wondering what could be done to stop atmospheric hydrogen bomb-testing in the Pacific, Moore and a small group of activists commandeered a rusty old halibut boat and sailed it into the proposed test site. They made news around the world and mobilised public opposition to nuclear testing. It was thanks to them that Richard Nixon cancelled the rest of the series of

tests and effectively ended atmospheric testing for good. Thus Greenpeace was born.

Over the next 15 years – always with Moore as a senior figure (he was ultimately to become its director) – Greenpeace became the world's best-known, and most effectively radical environment group. Moore took on French nuclear testing and Canadian whaling, and helped to popularise some of the key ecological causes of the time. But it didn't last.

The way Moore tells it, he left Greenpeace in 1986 because, firstly, he'd been there a long time, but also because, more significantly: 'I had been against at least three or four things every day of my life for 15 years; I decided I'd like to be in favour of something for a change.'

Fair enough, you might think; until you notice that what Moore was to declare himself in favour of was, well, everything that environmentalists are against. These days, Patrick just doesn't like activists. He prefers industrialists.

Activists, according to Moore's reasoning as explained on his website, are 'anti-human'; 'anti-science and technology'; 'anti-trade' ('in the name of bioregionalism they would bring in an age of ultra-nation-

PATRICK MOORE

alist xenophobia'); 'anti-business' ('profits are definitely not politically correct') and – ultimately – 'they are just plain anti-civilisation'. He expanded on these arguments in a recent interview, in which he explained that environmentalists have 'drifted into extremism because all their reasonable positions were adopted' by enlightened industries and governments.

So when he attacks the Seattle protesters ('to me, free trade and globalisation is part of the expression of one world family'), wades in on behalf of the biotech industry ('programs of genetic research and devel-

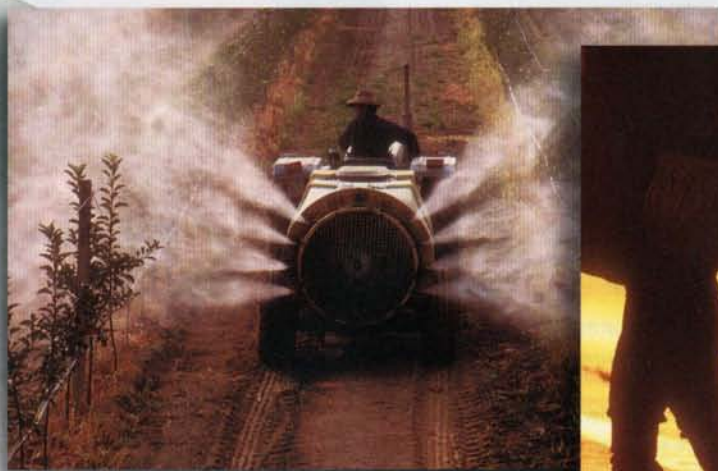
opment now under-way... [are] entirely about benefiting society and the environment'), puts the boot into his old colleagues ('Greenpeace isn't looking for solutions, only conflicts and bad guys') or wonders aloud whether it's worth doing anything about climate change ('is it possible that global warming might have more positive effects than negative ones?'), the poor lamb is only trying to save the green movement from itself.

Where Moore has again become a real campaigner, though, is on the issue of forestry. He grew up, as he fondly reminisces, 'on the northwest tip of Vancouver Island, in the rainforest by the Pacific... playing on the tidal flats by the salmon spawning streams in the rainforest' and now expresses his love of these primeval woods by sitting on the board of the British Columbia Forest Alliance – which he describes as comprising of 'people from all walks of life from across the province [of British Columbia] who want to help the forest industry'. Moore now writes prolifically about the wonders of the modern logging industry, the 'sustainability' of logging ancient forests and the benefits of clearcutting.

Strangely, though, his old colleagues still don't seem to trust him. Odd that. Still, one day, undoubtedly, the truth will out. Or let's hope so...

...AND THE UGLY

'Ralph Nader's Public Citizen lobby takes credit for scragging the MAI negotiations. Never underestimate the talents of a man who has managed to indoctrinate millions of college students with his wacky ideas over the years, getting support for the effort from college fees paid by mostly unsuspecting middle-class parents.' *George Melloan, writing in the Wall Street Journal.*



the great outdoors

Martin J Walker concludes his series on the health hazards of the modern world by looking at life in the workplace and beyond

In 1897, a novelist named Robert Harborough Sherard wrote a series of articles which he provocatively titled *The White Slaves of England*. Sherard had been researching working conditions in the factories of his time; research which deliberately ignored the stories of the managers and industrialists, and had focused instead on the view of the workers.¹

The scenes which Sherard found could have come from a Hieronymous Bosch painting. In the heart of the alkali industry in Widnes and St Helens, he saw that spring was not just silent, but never came at all: 'The foul gases which belched forth night and day from the many factories rot the clothes, the teeth, and, in the end, the bodies of the workers, have killed every tree and every blade of grass for miles around.'²

Inside the Widnes chlorine bleach factories, workers were frequently killed by chlorine gas, which they called 'Roger'.

'Roger is a green gas, and is so poisonous that the men (packers) who pack the bleaching powder... work with goggles on their eyes and 20 thicknesses of flannel over their mouths, these muzzles being tightly secured by stout cords. They can pack but a few minutes at a time. A "feed" of the gas kills its man in an hour.'³

Sherard found equally cruel conditions amongst the usually female white lead workers of Newcastle. These workers, whose jobs meant they were literally facing certain death, were gradually only able to work for short periods at a time.

'Chlorosis kills the bloom of the cheek, paralysis distorts the limbs with "knee-jerk" and "wrist-drop", and attacking the eyes also, may blind where it does not twist them...'⁴

It was these, and similar nightmares of the industrial age, that led in the 20th century, to factory acts, clean air acts, labour protection laws and a whole slew of regulations and improvements designed to

prevent such horrors inflicting workers again. The trouble is that, today, the widespread and obvious pollution of the industrial revolution has given way to less visible, but often more insidious, incidences of pollution in the workplace and in the general environment. When we look back on those times, we assume that people could never be subject to such risks again. We rarely understand that they – we – still are.

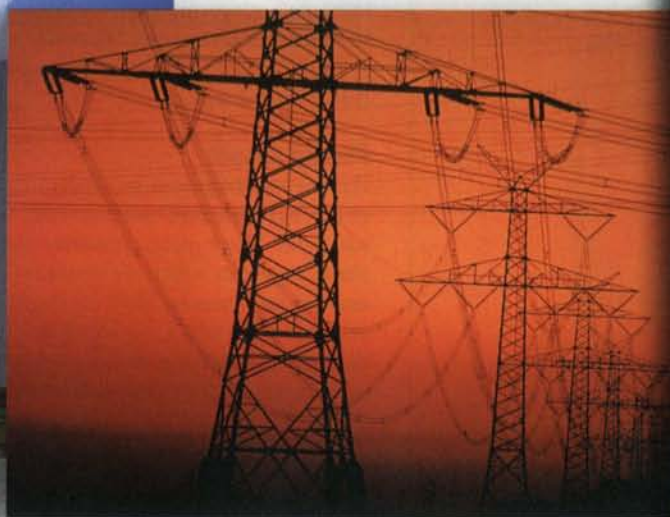
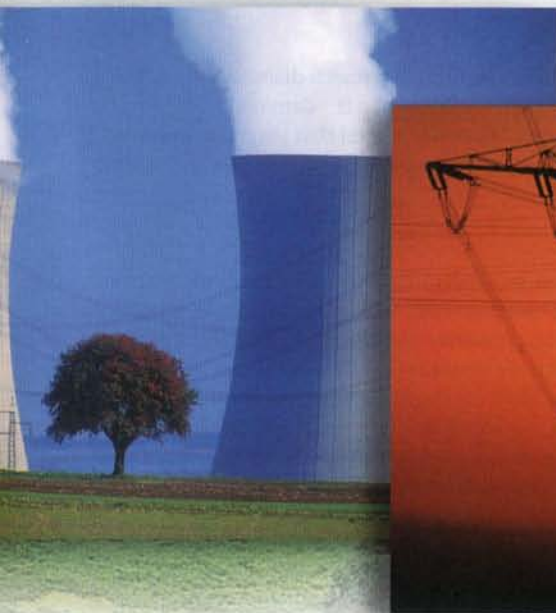
Today's toxic truth

In the Britain of 2001, bad working conditions and poor safety standards are still responsible for hundreds of fatalities and 4 million industrial injuries annually, while an ever-increasing number of industrial chemicals are responsible for growing cases of cancer, and chronic conditions like asthma. As with adverse reactions to chemical drugs, the fourth highest cause of death in Britain, the very high levels of occupational toxins and illnesses, which still affect the health of millions during their working lives, are rarely addressed in the public arena. As with the high levels of poisonous chemicals and toxins present in our homes (see last issue) there is no clear scientific position on most industrial toxic substances.

And what is truly ominous is that, unlike the 19th century and even the pre-war 20th century, today most scientific professionals, with some honourable exceptions, side with, and are funded by, the multinational companies who are the cause of so many of the problems.

Today, to read the truth about chemicals and health in the workplace, you have to read one of the few independent scientists or struggling community campaigns, or open one of the increasingly rare labour movement magazines:

'Latest evidence suggests exposure to industrial chemicals, inside



STILL PICTURES

and outside the workplace, is responsible for a large and growing proportion of cancer deaths. But instead of moving towards more stringent controls, governments and industry bodies are fighting hard to keep known killers in the workplace.⁵

In post-industrial society, industrial vested interests are often represented unchallenged in science, academia and the popular press. Large numbers of science-based professionals make a living either producing, marketing or defending recognised chemical toxins. In *The Hazards of Work*, published 20 years ago, Patrick Kinnersly stated the workers case, which has not changed:

'We cannot wait years while scientists play with statistics and computers to establish the exact risk... The technical and statistical debate misses the point: workers are expected to go on breathing an unpleasant atmosphere while the scientists find out how harmful it is... By the time you get the cancer you may have retired, you may have forgotten the six weeks, 20 years ago, when you worked in the tyre factory or the dye works.'⁶

Asbestos lives

One of the most obvious areas in which bad science and bad industry have combined to produce major health hazards is the case of asbestos. During a 50-year regulatory lacuna between the 1930s and 1980s, when the government was forced to bring in regulatory changes, medical research scientists gave asbestos production in Britain a clean bill of health.

Throughout the 1960s and 1970s, studies by the eminent Sir Richard Doll, and others, provided workers and the public with conservative estimates of the danger of asbestosis and mesothelioma. Working with data provided by the asbestos company Turner and Newall, and in conjunction with their medical consultants, Doll, who had convinced public and government that asbestos was safe, became fiercely protective of the company, eventually even advising them on legal claims.⁷

In 1965 Doll wrote, referring to asbestos production at Turner and Newall, 'it is possible that the specific occupational hazards to life have been completely eliminated'.⁸ As late as 1982, criticising *Alice - A Fight for Life*, a film on the effects of asbestos which forced the government to bring in heavier regulation of asbestos working conditions⁹, Doll suggested that asbestosis, and cancer caused by asbestos, were no longer a significant risk to workers.¹⁰

How he came to those conclusions is anybody's guess. In fact, deaths from asbestosis rose constantly between 1975 and 1995. Death certificates stating asbestosis as the cause of death doubled during this period, and disablement benefit for the illness almost quadrupled. Deaths from mesothelioma, a cancer associated with asbestosis, have increased massively over the last 30 years, from around 153 reported in 1968, to 1,527 in 1998. Analysts now believe that by 2020 there could be between 5,000 and 10,000 deaths annually.¹¹

The great majority of these deaths are now outside what is left of the asbestos industry – they are in construction and extraction, energy and water supply and in domestic work.¹² Quantities of asbestos are still to be found in houses and offices, including insulation boards in cupboards, guttering and waste pipes, roof tiles and wall-plugging compounds.¹³ And they are still killing today.

Computer workers

If asbestos is the product of an old industry, other health problems are being caused by a much newer one – the computer industry. Repetitive Strain Injury (RSI) has become well-known in recent years, and is related almost entirely to the growing number of people using computer keyboards. The US National Institute of Occupational Safety and Health estimates that the problem has grown over the last 10 years from 18 per cent of all workplace illness to 56 per cent.¹⁴ The development of RSI follows a similar pattern to other 'new' illnesses. Many doctors still refuse to recognise it as a condition, and the government refuses to accept its lay definition for fear of claims against employers.¹⁵

Research has also shown that computer users have a higher level of triphenyl phosphate in their blood than non-users. Triphenyl phosphate is used as a fire-retarding coating for many computer parts, and turns into a gas as the computer heats up. Exposure to triphenyl phosphate produces allergic reactions including skin problems and headaches.¹⁶

Computer screens, like television screens, give off low-level electromagnetic radiation, which it has been suggested can interfere with the immune system, causing fatigue, headaches, and irregular heart-beat. International surveys have concluded that up to 90 per cent of VDU workers suffer from at least one of the many VDU-related eye problems, including blurred vision, conjunctivitis, deteriorating eyesight, difficulty in refocusing, headaches and migraine.¹⁷ ■



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Industry-biased orthodox medical research dismisses the idea that low-level electromagnetic radiation is damaging to health. Independent researchers, however, suggest that pregnant women, for example, should not use computer screens because of an increased risk of miscarriage.

Plastic people

Plastics are ubiquitous in modern society, and their negative health effects have impacts both on those who make them and those who use them. Many plastic products contain xenoestrogens; oestrogen-like compounds which are fat-soluble and can be stored in human fat and cell membranes. They are found in water bottles, food containers, food wrap and some children's toys. In the 1970s, it was found that male plastics workers affected by polycarbonate chemicals developed breasts.¹⁸ Bisphenol-A, the oestrogenic chemical in plastic bottles, has been associated with breast cancer.

Polyvinyl chloride (PVC) is a gaseous material used in the manufacture of plastics. Both the gas and the plastic has carcinogenic qualities. PVC derivatives are used in bottles and food wrap products. Workers who produce these products have been found to suffer from a high level of liver and other cancers. Some researchers put the risk of liver cancer in vinyl plastics workers as high as 200 times greater than average.¹⁹

Here, too, a constant battle is waged by industry-linked researchers, who talk about a slightly increased risk only of liver cancer²⁰ amongst PVC workers, and independent, clinically-situated analysts who suggest that working with polyvinyl chloride can seriously raise the levels of a variety of human cancers.²¹

The poisoned land

It is not just in factories that workers are exposed to health risks. The countryside, too, is not as green and pleasant as it is often made out to be. In Britain, the proportion of crop land sprayed with artificial chemicals has increased markedly since the 70s; herbicide use has increased in excess of 200 per cent (some areas sprayed more than once); fungicide-sprayed areas increased from under 50 per cent in the 70s to 300 per cent in the 90s; and the use of insecticides rose from only a few per cent in the 70s, to almost 100 per cent in the 90s.²²

Farmworkers who come into contact with insecticides and pesticides are prone to chronic illnesses. Sheep dip, a mixture of antibiotics and pesticides which protect sheep from scab, fleas, ticks and mites, is a notorious chemical problem on farms. In 1990 it was estimated by campaigners that as many as 2,500 farmers could be suffering side-effects from the use of organophosphate (OP) sheep dips.²³

'Of the 3-4,000 people who have registered with us after suffering from the effects of pesticides, more than 2,500 are directly attributable to contact with sheep-dip. Organo-phosphorus compounds are designed to kill...'²⁴

OP use has led to what might be called epidemiological warfare, with industry-biased researchers suggesting that certain individuals are vulnerable because they have weak immune systems. The few independent researchers have found their warnings ignored and their voices drowned out, despite the fact that the destructive health effects of OPs have been recorded since the mid-1930s.

In 1999, one of the few independent research teams at the Institute of Occupational Medicine studied sheep-dipping farmers. They found an association between exposure to OPs and evidence of chronic peripheral neuropathy. The study concluded that exposure to concentrated forms of OPs could be associated with long term negative health effects.²⁵

Sheep dip sufferers find it hard to understand why government doctors and scientists have refused for decades to recognise their symptoms. As one farmer recounted: 'Three years ago, I first passed out after using sheep dip. Doctors and specialists could not get to the bottom of it, even after giving me every kind of test, even a brain scan.'

Only by chance did I link it all to sheep dip. I have 13 of the 19 possible side effects which can come from being in contact with sheep dip. Exposure to sheep dip has done my nerves irreparable damage. There are farmers who feel they are going crackers because no one will recognise their symptoms.²⁶

OPs can also affect the general population, not just farm workers, via the watercourse, either directly or as a consequence of sheep running through rivers. Described by the National Rivers Authority as a 'powerful pollutant', OPs also kill fish, birds and small animals.

Contamination of ground water by agricultural chemicals is now a serious environmental concern. As well as fertilisers, this concern covers many substances used above ground. A survey of levels of pesticide residues in England and Wales revealed levels above the Maximum Admissible Concentration for any single pesticide in 298 water supplies.²⁷

Car culture kills

Dr Simon Wolff was a brilliant young toxicologist at the University of London, who died with tragic swiftness in November 1995. A truly independent researcher, Wolff set about challenging the view propounded by the orthodox cancer establishment that cigarettes were almost solely to blame for the incidence of lung cancer. What he found was fascinating:

'I have worked out that road transport in the UK churns out one million tons of carcinogens every year. There are soots, all the poly-aromatic substances – lots of six chain ring stuck together with interesting nitrogen/oxygen groups. Something like 5 per cent of the output of a car is benzene, which is a well known cause of leukaemia. We know that carbon monoxide tends to accumulate in the blood of unborn babies and I would imagine that this would be a risk for low birth-weight babies – women who live on busy roads tend to give birth to low birth rate babies. Nitrous oxides in exhaust are respiratory tract irritants which probably contribute to emphysema.'²⁸

After Sir Richard Doll and others concluded that cigarette smoking was the major cause of lung cancer in the 1960s, the media swooped upon it as if it were *the only* form of cancer. Because of this myopia the petroleum industry was gifted 30 years of unquestioned production. Waking from this critical torpor, independent researchers are now pointing the finger at the petrol engine as a cause of multiple chronic illnesses.

A recent European study found that three times as many people died from the health-damaging effects of vehicle exhausts than died in road accidents. In 1999 a Swedish study, carried out at the Institute of Environmental Medicine in Stockholm, concluded that people living in areas with heavy traffic pollution over 30-year periods had a 40 per cent greater than average chance of developing lung cancer, whether or not they were smokers.

Vehicle exhaust emissions contain benzene, a dangerous volatile organic compound and a hydrocarbon, which is present in both petroleum products and cigarette smoke. Benzene causes leukaemia, and some researchers now suspect that it could be responsible for rising incidence of non-Hodgkin's lymphoma.²⁹ Benzene is easily absorbed by the lungs, and 50 per cent of an inhaled dose is retained.³⁰

Exhaust emissions also contain lead, nitrogen dioxide (which exacerbates asthma), asbestos, polycyclic aromatic hydrocarbons, various particulates associated with an increased risk of death from heart and lung disease, and sulphur dioxide (an agent responsible for bronchitis and chest complaints).

Many of the polluting chemicals present in the home, the workplace and found in vehicle exhaust emissions, are present in up to four times higher concentration inside cars in traffic. The interior of cars themselves also give off high levels of toxins. Pregnant women in America were recently advised to drive with their windows open in hot weather because interior plastics could leach an ammonia gas linked with foetal abnormalities.³¹ ■

Self-help and information organisations

ENVIRONMENTAL/MEDICAL GENERAL

- Friends of the Earth**, 26-28 Underwood Street, London N1 7JQ
Greenpeace UK, Canonbury Villas, 30 Islington Green, London N1 2PN
Green Audit, 38 Queens Street, Aberystwyth, Dyfed SA23 1PU
Green Network, 9 Clairmont Road, Lexden, Colchester, Essex CO3 5BE
Women's Environmental Network, 87 Worship Street, London EC2A 2BE
Communities Against Toxins, PO Box 29, Ellesmere Port, South Wirral L66 3TX
R.A.T.S., Residents Against Toxic Substances, 4 Ribble Avenue, Clitheroe, Lancashire BB7 4QN
What Doctors Don't Tell You, Satellite House, 2 Salisbury Road, London SW19
Environmental Medicine Foundation, PO Box 4523, Bridport, Dorset DTG 6YG
For the Safety of Home and Family, 33 Chester Road, Chigwell, Essex IG7 6AH

ENVIRONMENTAL/MEDICAL SPECIFIC

- Community Hygiene Concern** (Insecticides and head lice), 160 Inderwick Road, London N8 9JT
Toxic Shock Syndrome Information Service (Tampons), 24-28, Bloomsbury Way, London WC1A 2PX
Patients Against Mercury Amalgams (Dental fillings), 9, 6-9, Bridgewater Square, London EC2Y 8AH
COUR-AGE (Adverse effects of Radiotherapy), Advice and Guidance 24, Lockett Gardens, Trinity, Salford, Manchester M3 6BJ

RADIATION

- Low Level Radiation Campaign**, Ammondale, Spa Road, Llandrindod Wells, Powys LD1 5EY
CORE, Cumbrians Opposed to a Radioactive Environment, 98 Church Street, Barrow-in-Furness, Cumbria LA14 2HT

POWER

- Electromagnetic Hazard & Therapy**, Box 2039, Shoreham, West Sussex BN43 5JD
Coghill Research Laboratories, Ker Menez, Lower Race, Pontypool, Gwent NP4 5UH
Circuit: Electromagnetic sensitivity, PO Box 1Uz, Newcastle upon Tyne, NE99 1UZ
Powerwatch, 2 Tower Road, Sutton, Ely, Cambridgeshire CB6 2QA

FOOD AND FARMING

- Additives Survivors Network**, 63 Downlands Road, Devizes, Wiltshire SN10 5EF
Food Additives Campaign Team, Science Policy Research Unit, Mantell Building, University of Sussex, Brighton BN1 9RF
Food Commission, 94 White Lion Street, London N1 9PF
National Pure Water Association, 12 Dennington Lane, Crigglestone, Wakefield WF4 3ET
Soil Association, Bristol House, 40-56 Victoria Street, Bristol BS1 6BY
Elm Farm Research Centre, advice for farmers on organic production, Hamstead Marshall, Newbury, Berkshire RG20 0HR
Pesticide Action Network, (Pesticides Trust), Eurolink Centre, 49 Effra Road, London SW2 1BZ

OCCUPATIONAL HEALTH

- Derbyshire North TUSC**, Plastics & occupational illness, 54 Saltgate, Chesterfield
London Hazards Centre, Interchange Studio, Dalby Street, London NW5 3NQ
Manchester Hazards Centre, 23 New Mount Street, Manchester M4 4DE
Hazards Magazine, Information for safety reps., PO BOX 199., Sheffield S1 4YL
WHIN; Workers' health international newsletter., PO BOX 199., Sheffield S1 1FQ
Asbestos Disease UK, 26 Tolliton Green, Bulunee, Nottingham NG6 9EX
Centre for Occupational and Environmental Health, De Montfort University, Scraftoft Campus, Scraftoft, Leicester LE7 9SU
OEDA, The Occupational & Environmental Disease Association, Mitre House, 66 Abbey Road, Bush Hill Park, Enfield Middlesex EN1 2QH.
RSI Association, 380-384 Harrow Road London W9 2HU

✦ The American company, Lex Vehicle Leasing, recently launched a campaign to protect the health of its 93,000 company car drivers. Lex claimed that vehicle manufacturers were not telling the public the truth about the 60,000 allergens which are emitted from treated textiles and leather and which might be present in cars. The International Society for Research and Testing in Textile Technology is trying to institute strict new standards, known as Oeko-Tex 100, for car manufacturers. Despite the Society's warnings that process chemicals used in car interiors could have a 'dangerous effect' on health, only Volvo has so far agreed to submit its interior components to these tests. But pressure is likely to grow.³²

Power and the people

If health in the workplace and health while you're getting there are still very much at risk in modern society, other dangers are even more widespread. It was back in the 1970s that an American report first revealed high levels of leukaemia in children living near overhead power cables in Denver, Colorado. In Britain, however, successive government agency reports ruled out any connection. As the evidence grows, though, they may have to start backtracking.

In June 2000, Dr Alan Preece, an independent researcher at Bristol University Medical School, announced research findings that agreed with research carried out by Professor Denis Henshaw of the university's physics department.³³ Both pieces of research suggested that people living near to, and downwind of, power lines, could be up to three times more susceptible to airborne cancer-causing pollutants.³³ Dr Preece's research estimated that around 3,000 deaths a year, particularly from lung and mouth cancer, could be caused in this way.³⁴

Preece and Henshaw both suggested that the reason for the increased risk was that ions – electrically-charged particles created by power installations – attached themselves to airborne pollutants. Inhaled, this combination pollutant sticks to the surface of the lung and breaks down cell walls.

Both scientists concluded that no new houses should be built near power cables – nor cables near houses. Such a ban has existed for some time in America and Sweden. On the announcement of Dr Preece's research results, Dr John Swanson, scientific adviser to the National Grid, reportedly said: 'We have never said in a categorical way that power lines are safe. What we have always said is that when you look at the totality of studies, then you come to the conclusion that the balance of evidence is that power lines and the fields they produce do not have an effect on health.'³⁵

Meanwhile, the National Radiological Protection Board's Advisory group on Non-ionising Radiation (Agnir), and the UK Co-ordinating Committee for Cancer Research, has consistently maintained, as they did in a 1992 report, that there was no evidence 'of the existence of carcinogenic hazard'. Six months after Preece's authoritative research, however, Agnir announced the results of a literature review, coincidentally begun at the end of 2000, which tentatively suggested that 'there is a slightly elevated risk of cancer near to power lines'.

The Agnir research team consisted of Sir Walter Bodmer, a retired cancer charity administrator, Professor Colin Blakemore, a member of the Research Defence Association, and Sir Richard Doll, Britain's most renowned epidemiologist. The new report, which made no reference to Preece or Henshaw's work, suggested that a small number of children each year might develop cancer from living near power lines.³⁶

The link between power cables, suicide and depression was investigated by Dr Stephen Perry in the West Midlands. When Perry disclosed his preliminary findings – a threefold increase in suicides in urban roads carrying heavy underground cables – to the previously helpful Central Electricity Generating Board, access to their information was quickly cut off. His final paper suggested that people living within high magnetic fields next to power lines were 40 per cent more

likely than the average to commit suicide.³⁷ Perhaps unsurprisingly, his findings were passed over by most of the people who matter.

Chemical soup

The growing recognition that chemicals in diverse forms are responsible for a new genre of illnesses like multiple chemical sensitivity (MCS), as well as long-recognised older ones, is of course a good thing. But it has led to the chemical companies adopting new strategies to avoid responsibility and to keep business booming. They range from arguing that individuals are idiosyncratically susceptible to chemicals, to suggesting that cancer sufferers have increased their chances of cancer by adopting a risky lifestyle.

Science and industry have also attempted to convince the public that human life inevitably involves a degree of risk; that there are thus no 'risk-free' foods, environments, or medicines. Through these arguments, industry is gradually denying the consumer information which could aid choice of low or no-risk alternatives.

A favourite and timeless way of promoting such arguments is the industry front group.

Two of the most notorious organisations to

scientific argument to propagandise about the safety of chemicals in the US are RISE (Responsible Industry for a Sound Environment) and the ACSH (American Council on Science and Health). Both serve as models for groups in Britain and elsewhere.

Taking the RISE

The goal of RISE is, allegedly, 'to communicate environmental health, safety and benefits of the proper use of pesticides to policy makers, regulators, end-users and the general public'.³⁸ It is RISE's position that there is no documentary evidence that pesticides, 'when used in accordance with label instructions', have caused harm to human health.³⁹

Unsurprisingly, the governing board of RISE is composed of representatives from some of the largest chemical and pharmaceutical companies in America. The strategies by which RISE hopes to achieve its goals include becoming 'the recognised industry resource and primary voice of the specialised pesticides industry for media, regulators, legislators and academia', and 'responding to media coverage', which means publicly replying to television and radio programmes or newspaper journalists who are critical of pesticides.⁴⁰

RISE has its own PR company which places positive ads in trade papers and retains its own scientists to argue its case. It has developed a 'safe use' argument, which is similar to the Wise Use movements in other areas of US industry.⁴¹ And in the battle against the recognition of multiple chemical sensitivity, RISE has joined with other industries to form the Environmental Sensitivities Research Institute. The Institute aims to 'bring science back into the discussion of MCS', and 'diffuse the emotion surrounding the phenomena'.

ACSH – telling it like it is?

Set up in 1978, the American Council on Science and Health places great emphasis on the scientific objectivity of its 'position papers' on a wide range of products and substances, and their effect upon health. The organisation was pump-primed by the Gulf Oil-based Sarah Scaife Foundation with a grant of \$125,000. ACSH, too, is funded by many of the largest oil, chemical, food and pharmaceutical companies⁴² and receives money from all the industrial sectors about which it commissions 'scientific' papers. For example, whilst writing such papers about the health effects of sugar and sweeteners, ACSH is funded by Coca-Cola, sugar companies and processed food companies.

Independent scientists who reviewed ACSH reports for the Centre for Science in the Public Interest (CSIPI) concluded that the reports were biased and unscientific with many omissions of fact.⁴³ An early ACSH report on cancer, for example, failed to discuss the involvement of industrial production and products in relation to cancer, and the

'A survey revealed levels above the Maximum Admissible Concentration for any single pesticide in 298 water supplies.'

discussion on diet and cancer was considered by the experts to be 'inadequate'.

More recently, ACSH has been involved in the debate on electromagnetic fields and human health. Elizabeth Whelan, the founder and President of ASCH, wrote in the *Wall Street Journal*, 'we now know' that electro-magnetic fields risk is a 'phony health risk'. It is typical of the sort of statement they regularly make. ACSH is intimately connected to the American Council on Health Fraud, sharing members and views in defence of pharmaceuticals and orthodox medicine.⁴⁴

Moving on

Yet try as industry and front groups might, it is no longer possible to escape the conclusion that a substantial proportion of modern-day illness is caused by manmade chemicals and environmental pollutants. Unfortunately, there is no sign that causal scientific reasons for the escalation in modern illnesses will be consensually agreed by scientists.

The abdication of independent science in the area of public health has led to epidemiological anarchy, with corporations, their apparatuses and agencies, as well as government, constantly broadcasting inaccurate or partial information about health threats. One simple fact shows very clearly the extent to which a genuine cover-up of the truth exists. When, in 1991 and 1992, the American Environmental Protection Agency offered an amnesty on large-scale fines to any manufacturer turning in health studies previously kept from the Agency, more than 10,000 studies which showed that chemicals already on the market could pose a 'substantial risk of injury to health or the environment' were turned in.⁴⁵

What we need now is the will to regulate and police industry in

favour of worker and consumer health. Where communities find that they need new epidemiological evidence about threats to their health, they should steer well clear of the industry-sponsored university and think-tank epidemiology factories, and try to organise their own independent studies.

As well as constant lobbying for stricter regulation, consumers must also make personal choices about boycotting products which contain toxic chemicals. In 1995, the American Cancer Prevention Coalition, chaired by Samuel Epstein and working with Ralph Nader, hit upon the regular publication of a 'Dirty Dozen' list of toxic, mainly carcinogenic, ingredients in household products and processed foods.⁴⁶ The first and most significant personal change that people can make is a move to organic food and towards a chemical-free home. High on the list of priorities, after the domestic situation is resolved, must be the fight for pollution-free public transport.

The orthodox medical and scientific establishments, industry and government will continue to claim that they are concerned about the welfare of workers, consumers and the public. But until scientists disengage from industry and the state, and begin to come clean about the effect of modern chemicals on the health of the people, they will remain a conspicuous part of the problem rather than the solution. ♦

Martin J Walker is a writer and researcher, author of Dirty Medicine and five other books. He is presently writing about alternative cancer treatments in Britain since the 19th century. Any information on this subject, or on Dr Franklin Bicknell, will be gratefully received. Contact him at Slingshot Publications, BM Box 8314, London WC1N 3XX.

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howard's way

How should we move forward from the foot and mouth disaster?

Patrick Holden draws inspiration from the teachings of Sir Albert Howard.



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After the 2001 outbreak of foot and mouth disease, the possibility of a 'fundamental review' of our response to the disease and of the future direction of UK agriculture provides at least some hope that lessons will be learned. This is the least we can expect as the legacy of a disease that it is now being estimated will have an indirect cost to the UK economy of £20 billion, has condemned up to three million animals to death, 95 per cent of which were perfectly healthy, has decimated our rural economy, tarnished our overseas image of a green and pleasant land and destroyed for ever genetic heritage in our livestock community which in its own way is as valuable as our ancient architecture and landscape.

But of what will the review consist? The danger is that our response will be as shallow and misdirected as official analyses of previous food scares have been. The Government will appoint an eminent scientist, in all likelihood someone who conforms to its own reductionist mindset. The objectives will be quite narrow; to identify how the disease got into the country, whether a different strategy should have been adopted and if we can prevent the next outbreak from causing so much damage. In other words it will be a ritualistic witch-hunt to identify the culprits. No one will be exempt – ministers, MAFF, sci-

entists, the farmer's unions, the food industry. Individuals will be named, those responsible will be called to account.

The report may even go on to point out how it could have been different and produce a bland action plan for a more stable and sustainable agriculture and recommendations for a new disease control strategy based on vaccination.

But what would be the useful outcome, apart from our vicarious pleasure in witnessing other people's mistakes in deciding whether MAFF officials have acted like sheep, Nick Brown had lost the plot, Prof David King didn't know what he was talking about or Jim Scudamore was too slow to recognise he should change his attitude towards vaccination. After all, can one really think of anyone who could have possibly responded adequately to a request to oversee the organised mass slaughter of at least a million animals, supervise their disposal by burning and burial (both of which were agreed to be environmentally unacceptable), alienate half the farming community on the one hand and a growing body of public opinion on the other, preside over deep splits of opinion even amongst your own scientists and officials about how best to deal with the disease and then come out smelling of roses? No, inquests and enquiries will be largely a waste of time. The only useful legacies from foot and mouth, will be

a speeding up of the process of radical reform of our agricultural policy and a change in our attitude towards our management of health and disease.

One of the best sources of inspiration in this field was a man called Sir Albert Howard. Howard was an agricultural thinker of huge stature and his ideas were so powerful that they had, and still have, the capacity to change the future of farming. Although Howard's work is not widely discussed today, he was probably the single most important influence which led Lady Eve Balfour to establish the Soil Association in 1946. Howard was an agricultural researcher of some eminence who had already developed a fairly wide sphere of expertise when he was sent by the British Government to India in 1905 to establish a research base to develop improved crop husbandry at Pusa in Bengal.

He observed that the methods of crop and livestock husbandry which were still widely employed among the more traditional farming populations improved soil fertility and produced crops and livestock which did not seem vulnerable to pest and disease agents even when these were present. He pursued the hypothesis that correct husbandry was the key to the health of plants, animals and people over the next 35 years at three research institutes, and in 1940 published *An Agricultural Testament* which is probably one of the greatest books about agriculture ever written. In it he summed up his life's work and advanced the views shown in the box below.

These principles, he argued, should form the basis of an agricultural strategy for the future in which we should cease to regard health as the absence of disease, but rather a vital state where an organism is in a dynamic equilibrium with its environment, this being the result of sound husbandry. One of his most powerful ideas was that pests, diseases and parasites are, as he put it, 'Nature's professors of good husbandry' and that they should be seen as indicators of bad management and thus the best possible means of identifying mistakes and applying corrective management solutions.

After having developed this hypothesis based on the study of plants and plant diseases he quickly realised that the same principles would also apply to livestock. So he obtained permission to acquire six pairs of oxen on his 75-acre research station at Pusa where he subjected them to a regime of good husbandry aimed at promoting their general health and well-being. This included sound nutrition based on good crop husbandry and spacious accommodation combined with good stockmanship, skills which he had learnt through his family background in cattle farming in the UK. Howard decided to expose these healthy animals to a range of diseases, all of which were endemic in India at that time, to test his hypothesis that just as he had observed in plants the animals would be able to withstand this exposure without contracting the diseases as a result of their positive state of vital health.

Before doing so he had to discourage, in his own words, 'the official veterinary surgeons who often visited Pusa from inoculating these animals with various vaccines and sera to ward off the common diseases'. He went on to say: 'I achieved this by firmly refusing to have anything to do with such measures, at the same time asking these specialists to inspect my animals and to suggest measures to improve their feeding, management and housing so that my experiment could have the best possible chance of success. This carried the day, the veterinarians retired from the unequal contest and took no steps to compel me to adopt their remedies.'

Howard then brought his animals in direct contact with diseased stock by allowing them to use common pastures on which diseased cattle sometimes grazed, or by allowing them to graze a field which was only separated by a low hedge from diseased animals over which the animals could rub noses. Howard observed: 'I have often seen

this occur between my oxen and foot and mouth cases. Nothing happened. The healthy well fed animals reacted to this disease exactly as suitable varieties of crops when properly grown did to insects and fungus pests – no infection took place, neither did any infection occur as a result of my oxen using common pastures.'

He then repeated this experiment over the next 26 years on three different research stations (Pusa, Quetta and Indore) with several different groups of livestock. During this entire period the only time when the cattle contracted foot and mouth disease was during a summer drought in 1925 when 40 recently acquired cattle were subjected to a poor diet combined with heavy field work. He said: 'I had to deal with a very few cases

of foot and mouth disease in the case of some dozen animals. The patients were rested for a fortnight and given better food and the trouble disappeared never to return. From 1927 to 1931 these animals were often exhibited at agricultural shows as type specimens of what the local breed should be.'

It is arguable that this research gave Howard an insight and depth of understanding about the nature of foot and mouth disease which has not been replicated since and from which the world could learn much today. He concluded: 'This experience convinced me that foot and mouth disease is a consequence of malnutrition pure and simple and that the remedies that have been devised in countries like Great Britain to deal with the trouble, namely, the slaughter of the affected animals, is both superficial and also inadmissible. Such attempts to control an outbreak should cease. Cases of foot and mouth disease should be used to tune up practice and to see to it that the animals are fed on the fresh produce of fertile soil. The trouble will then pass and not spread to the surrounding areas providing the animals there are also in good fettle. Foot and mouth outbreaks are a sure sign of bad farming.'

But how exactly should the lessons from Howard's work be applied today? The most important application is to ensure that his thinking influences the next chapter of our agricultural policy and practice.

Much of his thinking would still be regarded, even by many of

Chain reaction: the principles of Howard

The birthright of all living things is health.

This law is true for soil, plant, animal and man – the health of these four is one connected chain.

Any weakness or defect in the health of any earlier link in the chain is carried on to the next and succeeding links until it reaches man.

The widespread vegetable and animal pests and diseases which are such a bane to modern agriculture are evidence of a great failure of health in the second (plant) and third (animal) links of the chain.

The impaired health of human populations (the fourth link) in modern civilised countries is a consequence of this failure in the second and third links.

This general failure in the last three links is to be attributed to failure in the first link: the under-nourishment of the soil is at the root of all. The failure to maintain a healthy agriculture has largely cancelled out all the advantages we have gained from our improvements in hygiene, in housing and in our medical discoveries.

If we are willing to bear in mind Nature's dictates a) for the return of all waste to the land, b) for the mixture of the animal and vegetable existence, c) for maintaining an adequate soil reserve system for feeding the plant, we shall rapidly reap our reward, not only in a flourishing agriculture, but in the immense asset of an abounding health in ourselves and in our children's children.

'Foot and mouth has provided an immense shock and in doing so it has precipitated the conditions for change. Such circumstances must not be wasted.'



REUTERS

Scapegoats?: It's likely – although missing the point – that Nick Brown (left) or Jim Scudamore might take flak for the foot and mouth disaster.

those who challenged the slaughter policy, to be radical to the point of heresy. The Soil Association was faced with this dilemma in its response to the foot and mouth crisis. We were familiar with Howard's work and our organic standards reflect the premise that the primary responsibility of all livestock producers is to manage for positive health, with veterinary intervention only being considered as a means of dealing with husbandry failure.

So the question arises why the Soil Association would be so widely associated with promoting a vaccination strategy, when leaving the disease to take its course would be what Howard would have advocated? The honest answer is that whilst not abandoning our principles (which permit the vaccination of animals only where there is a 'known farm problem') we concluded that confronted with a national livestock population which were for the most part intensively farmed and overstocked, likely to be sickly and vulnerable to infection by a virulent virus to which their immune systems had had no previous exposure, that the use of a strategic vaccination programme to dampen down the spread of the disease seemed the least worst option.

But this pragmatism has in no way altered the Association's deeply held conviction, which I have found to hold true during my own 15-year experience of organic dairy farming, that healthy animals do not succumb to infection and that our responsibilities as producers is to improve husbandry so that our stock may be able to resist future disease challenges out of their own health and vitality.

The best way to achieve this change of attitude towards positive health would be to adopt a new set of principles which should inform the development of all future agriculture in Britain. These should be based on the production of high quality safe food using farming systems which build soil fertility, minimise any use of non-renewable inputs, conserving wildlife and the environment, treating livestock with dignity and respect, encouraging diversity of cropping, protecting the indigenous nature of our plants and animals, encouraging decentralised distribution systems, involving and interacting with urban populations and enhancing the wider cultural diversity of the countryside.

Such systems should become the norm rather than a niche in the next chapter of our agricultural history. Organic farming, as a well developed representation of these principles, would prosper if they are adopted, but we should be constantly vigilant that the pressure of the expansion of the market does not water down the standards in the chase to satisfy any short-term undersupply of the commodities which consumers are demanding after all the recent food scares.

That said, there must be a degree of pragmatism mixed in with our ideals because it is inevitable that in the short-term at least all our stock will not be healthy as they will be effectively convalescing both genetically and physically from the long chapter of industrial agriculture that lies behind us. In any case, even organic animals sometimes get diseases and all 'virgin stock' are vulnerable to the occasional invading virus to which they have had no previous exposure as we know from the experience of the St Kildan islanders when they encountered the flu bugs of Victorian tourists to which they had no immune resistance.

So we need evolution, not revolution. But the ideal must always be management for health so that when disease does strike, as will inevitably sometimes be the case, the thinking must be based on the least draconian form of intervention most compatible with the concept of management for health.

From this viewpoint, death and disinfectant represent the most unsophisticated and peculiarly British disease treatment strategy lying at the furthest end of the spectrum. At the other end is the promotion of health through sound management. In between, if and when good husbandry fails, we should start with herbal and dietary supplements which enhance the immune system, moving on to homeopathy including remedies such as borax then vaccination, and finally more draconian and longer lasting drugs such as antibiotics. If Howard's principles were properly applied we would only kill animals either to avoid suffering or to prevent transmission if there is no useful life ahead for the animal concerned.

Whether all this comes to pass will depend entirely on whether a sufficient number of people become aware that the chain of the health of soil, plant, animal and man is one and indivisible. In 2001, time is on our side as it wasn't in Howard's day. He was witnessing the birth of industrial agriculture. Fifty years later, if we are lucky, we might be experiencing its death. The public are so alarmed, that it has become a political necessity for some kind of fundamental change to be announced as part of the post-election agenda. But the real question is will it reflect Howard's principle of positive health. I believe it could and indeed it must. Occasionally there are moments when major changes are possible, often after disasters. Foot and mouth has provided an immense shock and in doing so it has precipitated the conditions for change. Such circumstances must not be wasted. ♦

'Death and disinfectant represent the most unsophisticated and peculiarly British disease treatment strategy.'

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Patrick Holden is director of the Soil Association.

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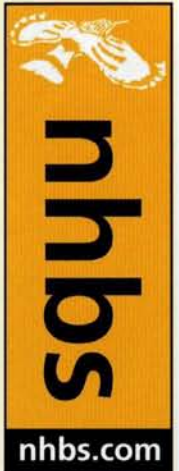
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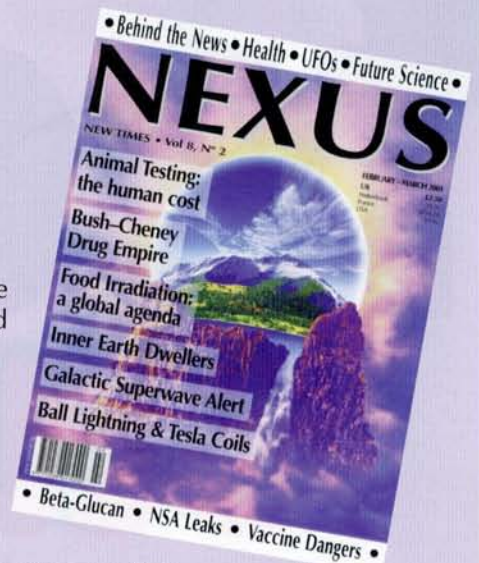
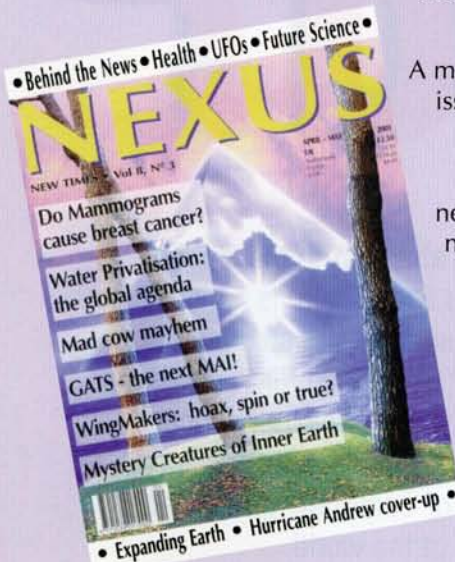
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feeling stuffed?

It can often take a tragedy such as foot and mouth to draw attention to the ills that lie behind what we put on our plates. Yet as *Ecologist* writers show, there is a bigger picture to our increasing food and drink plight: what we consume is directed almost entirely by profit margins and marketing ploys. Is it good for us? Judge for yourself. On these pages **Peter Bunyard** starts by examining the effects of our overall agricultural practices, while **Iain Elliott** summarises a tell-all study of the fast food industry on pages 36–37. Finally, we present a modern paradigm of corporate greed and hubris, as Coca-Cola reveals its ambition to become mother of the world.

Spurred on by the deadly crises that are afflicting the industry, it is now becoming clear that we have got the basics of agriculture seriously wrong. Nor is it just the impact of modern agriculture on soils, on groundwater, with its annual billion-pound cost to the water industry for chemical removal, or on animal welfare with thousands of animals being carted the length and breadth of the country. It's far more fundamental than that. Research now shows that the produce we obtain from our farms, with much heralded efficiency, is in reality downright unhealthy and not really fit for human consumption.

The conventional view is that British agriculture has made great strides over the past 50 years in achieving high productivity while keeping costs down, an achievement that has been won through pumping into the system high energy feedstuffs in place of a more 'natural' diet. But, the gains are largely spurious, and much more energy is expended in gaining higher yields than is ever returned in the produce. Add to that processing and transport, and modern intensive agriculture is shown up for what it is: a highly inefficient system for producing food that if applied globally would be wholly unsustainable.

But the process is not just inefficient. What if the high volume of food being produced through industrialised agriculture, whether in the UK or elsewhere in the world, were lacking in essential nutrients, while being swamped in others that lie behind the degenerate diseases of modern times?

What if the rising trend in obesity, diabetes, cardiovascular disease, high blood pressure, as well as other diseases of modern civilization, were the result of the way we now raise livestock, with our obsession for higher and higher yields?

Working at the Institute of Brain Chemistry and Human Nutrition, Queen Elizabeth Hospital for Children, in London, K. Ghenremeskel and MA Crawford have been investigating the extraordinary changes in the composition of meat and other animal products as a result of intensification. They take as their base wild relatives and then observe the changes in domesticated animals, depending on whether they are intensively or extensively reared.

'In the past it would have taken over six years for a steer to reach about 500kg body weight; with the feeding of high protein and energy feed it takes less than 20 months to attain the same body weight. A 2kg broiler is now produced in six to seven weeks instead of about 14 weeks. Similarly, a dairy cow now produces about 9,000kg of milk a year as compared to 2,000kg about 40 years ago.'

And they point out in *Nutrition and Health* (Vol 9 pp237-253, 1994) such intensive animal production – paradoxically based on a high protein diet – is turning meat from being 'protein-rich' to 'fat-rich'. The fat, instead of being made up of polyunsaturates, now largely features saturated fats. Indeed, the gain in weight of both beef and chicken is 'counterbalanced by excessive deposition of fat'.

For the chop

Pigs, in particular, show the changes. 'A pig fed on a high energy diet produces a pork chop with over 40 per cent of its energy as fat and a ratio of polyunsaturated to saturated fatty acids of only 0.2 to 1. The corresponding values for the wild pig would be about 20 per cent and 2 respectively.'

Concern over the excessive fattiness of meat led to the UK Meat and Livestock Commission calling on farmers to reduce carcass fat to 25 per cent. Yet where does that take us? According to Ghenremeskel and Crawford, 'a carcass with 25 per cent fat carries

about 50 per cent lean meat with a protein content of nearly 10 per cent. In contrast, the average reported values for 220 wild animals of 16 different species from East Africa was just 4 per cent fat, 75 per cent lean and 15 per cent protein'.

In fact, wild species provide more than three times as much protein as fat, compared to twice as much fat as protein in domesticated animals. Meanwhile, the proportion of polyunsaturated to saturated fatty acids is about 1 to 50 in domesticated animals compared to approximately 1 to 2.3 in wild animals.

Supplementary problems

To compound the problem of an imbalanced diet in the intensively reared animal and the resulting lack of the alpha and beta carotene precursors of vitamin A, livestock is now routinely fed supplements of the vitamin. As a result, excessive amounts of vitamin A are now accumulating in the liver of cattle, making it dangerous for human consumption and especially for pregnant women.

There is no exception to the rule, claim Ghenremeskel and Crawford. Whether fish, fowl or mammal, intensive rearing produces the same kind of distortion.

They found the yolk of eggs from free-range chickens to have a supersaturated to unsaturated fat ratio of 1.3 compared to 19.4 for an egg obtained from a US supermarket. A doubling or tripling of the ratio was found in farmed trout, salmon and eel compared to fish raised in the wild.

Our modern farming systems are generating the imbalance right through the system. Cereal and grass production now depends on a high input of fertilisers, quite apart from pesticide and herbicide sprays. Fertilisers may impede the uptake of essential micronutrients such as zinc, copper, iron, manganese, selenium and boron, and conversely the excessive uptake of calcium, magnesium and potassium, so altering the physiology of the plant and in turn having an impact on the nutritional status and health of ruminant animals.

As far as humans are concerned, changes in diet over the past century, in particular increases in sugar and fat uptake, the latter saturated, and a decline in the eating of crude fibre, combined with basic changes to the produce itself, are largely responsible for the terrible toll in the diseases of modern civilization, including cancer and diverticulitis of the colon, strokes, in addition to diabetes and cardiovascular disease.

The Middle East has seen a transformation in a matter of a few years, from people having a healthy diet based on cereals, legumes, dates and fish, with a low consumption of meat, to one similar to that enjoyed in Britain, with 40 per cent of a high calorie diet obtained from fat, 20 per cent from refined sugar, 25 per cent from starch and the remainder from protein. The diet is low in fibre and in essential fats. The consequences have been catastrophic. In just four years, between 1983 and 1987, the number of admissions for diabetes and hypertension to a Saudi Hospital in Riyadh went up by 37 and 44 per cent respectively, let alone in all the other diseases we now associate with a modern diet.

Given that the state of our food begins on the farm, 'is it credible,' ask the nutritionists, 'to advise people to eat less fat and refined sugar and more fibre, when at the same time the agriculture and food industry is producing fat animals and removing fibre from cereals and incorporating refined sugar in many foods.'

Clearly we need to rethink our food production system from the ground up.

Peter Bunyard is science editor of The Ecologist.

'As far as humans are concerned, changes in diet over the past century, in particular increases in sugar and fat uptake... are largely responsible for the terrible toll in the diseases of modern civilization.'



pulling a fast one

In his recent book Eric Schlosser exposes the unsavoury taste of the global fast food industry. Here, Iain Elliott summarises some of the meat of his arguments.

As the fast food industry has grown more competitive in the US, the major chains have looked to overseas markets for their future growth. The McDonald's Corporation recently used a new phrase to describe its hopes for foreign conquest: 'global realisation'. A decade ago, McDonald's had about 3,000 restaurants outside the US; today it has about 15,000 restaurants in more than 117 countries. It currently opens about five new restaurants every day, and at least four of them are overseas. Within the next decade, Jack Greenberg, the company's chief executive, hopes to double the number of McDonald's. The chain earns the majority of its profits outside the US, as does KFC. McDonald's now ranks as the most widely recognised brand in the world, more familiar than Coca-Cola. The values, tastes, and industrial practices of the American fast food industry are being exported to every corner of the globe, helping to create a homogenised international culture that sociologist Benjamin R Barber has labelled 'McWorld'.

The fast food chains have become totems of Western economic development. They are often the first multinationals to arrive when a country has opened its markets, serving as the avant-garde of American franchising. Fifteen years ago, when McDonald's opened its first restaurant in Turkey, no other foreign franchiser did business there. Turkey now has hundreds of franchise outlets, including 7-Eleven, Nutra Slim, Re/Max Real Estate, Mail Boxes Etc, and Ziebart Tidy Car. Support for the growth of franchising has even become part of American foreign policy. The US State Department now publishes detailed studies of overseas franchise opportunities and runs a Gold Key Programme at many of its embassies to help American franchisers find overseas partners.

The anthropologist Yunxiang Yan has noted that in the eyes of Beijing consumers, McDonald's represents 'Americana and the promise of modernisation'. Thousands of people waited patiently for hours to eat at the city's first McDonald's in 1992. Two years later, when a McDonald's opened in Kuwait, the line of cars waiting at the drive-through window extended for seven miles. Around the same time, a Kentucky Fried Chicken restaurant in Saudi Arabia's holy city of Mecca set new sales records for the chain earning \$200,000 in a single week during Ramadan, the Muslim holy month. In Brazil, McDonald's has become the nation's largest private employer. The fast food chains are now imperial fiefdoms, sending their emissaries far and wide. Classes at McDonald's Hamburger University in Oak Park, Illinois, are taught in 20 languages. Few places on earth seem too distant or too remote for the golden arches. In 1986, the Tahiti Tourism Promotion Board ran an ad campaign featuring pristine beaches and the slogan 'Sorry, no McDonald's'. A decade later, one opened in Papeete, the Tahitian capital, bringing hamburgers and fries to a spot thousands of miles, across the Pacific, from the nearest cattle ranches or potato fields.

As the food chains have moved overseas, they have been accompanied by their major suppliers. In order to diminish fears of American imperialism, the chains try to purchase as much food as

possible in the countries where they operate. Instead of importing food, they import entire systems of agricultural production.

Seven years before McDonald's opened its first restaurant in India, the company began to establish a supply network there, teaching Indian farmers how to grow iceberg lettuce with seeds specially developed for the nation's climate. 'A McDonald's restaurant is just the window of a much larger system comprising an extensive food-chain, running right up to the farms,' one of the company's Indian partners told a foreign journalist.

In 1987, the American ConAgra Beef Company, the biggest meatpacker in the world, took over the Elders Company in

Australia, the largest beef company in the country that exports more beef than any other in the world. Over the past decade American multinationals Cargill, and IBP, have gained control of the beef industry in Canada. Cargill has established large-scale poultry operations in China and Thailand. Tyson Foods, one of the biggest chicken processors in America, is planning to build chicken-processing plants in China, Indonesia, and the Philippines. ConAgra's Lamb Weston division now manufactures frozen french fries in Holland, India, and Turkey. McCain, the world's biggest french fry producer, operates 50 processing plants scattered across four continents. In order to supply McDonald's, JR Simplot, America's great potato baron, began to grow Russet Burbank potatoes in China, opening that nation's first french fry factory in 1993. A few years ago Simplot bought 11 processing plants in Australia, aiming to increase sales in the East Asian market. He also purchased a 3-million-acre ranch in Australia, where he hopes to run cattle, raise vegetables, and grow potatoes. 'It's a great little country,' Simplot says, 'and there's nobody in it'.

Targeting children

As in the US, the fast food companies have targeted their foreign advertising and promotion at a group of consumers with the fewest attachments to tradition: young children. 'Kids are the same regarding the issues that affect the all-important stages of their development,' a top executive told the audience at a recent Kid Power conference, 'and they apply to any kid in Berlin, Beijing, or Brooklyn'. The Kid Power conference, attended by marketing executives from multinational corporations such as Burger King, was held at the Disneyland outside of Paris. In Australia, where the number of fast food restaurants roughly tripled during the 1990s, a survey found that half of the nation's nine- and ten-year-olds thought that Ronald McDonald knew what kids should eat. At a primary school in Beijing, Yunxiang Yan found that all of the children recognised an image of Ronald McDonald. The children told Yan they liked 'Uncle McDonald' because he was 'funny, gentle, kind, and... he understood children's hearts'. Coca-Cola is now the favourite drink among Chinese children, and McDonald's serves their favourite food. Simply eating at a McDonald's in Beijing seems to elevate a person's social status. The idea that you are what you eat has been enthusi-



astically promoted for years by Den Fujita, the eccentric billionaire who brought McDonald's to Japan three decades ago. 'If we eat McDonald's hamburgers and potatoes for a thousand years,' Fujita once promised his countrymen, 'we will become taller, our skin will become white, and our hair will be blonde'.

The impact of fast food is readily apparent in Germany, which has become one of McDonald's most profitable overseas markets. Germany is not only the largest country in Europe, but also the most Americanised. Although the four Allied powers occupied it after World War II, the Americans exerted the greatest lasting influence, perhaps because their nationalism was so inclusive, and their nation so distant. Children in West German schools were required to study English, facilitating the spread of American pop culture. Young people who sought to distance themselves from the wartime behaviour of their parents found escape in American movies, music, and novels. 'For a child growing up in the turmoil of [post-war] Berlin... the Americans were angels,' Christa Maerker, a Berlin filmmaker, wrote in an essay on post-war Germany's infatuation with the US. 'Anything from them was bigger and more wonderful than anything that preceded it.'

Open door

The US and Germany fought against each other twice in the 20th century, but the enmity between them has often seemed less visceral than other national rivalries. The recent take-over of prominent American corporations – such as Chrysler, Random House and RCA Records – by German companies provoked none of the public anger that was unleashed when Japanese firms bought much less significant American assets in the 1980s. Despite America's long standing 'special relationship' with Great Britain, the underlying cultural ties between the US and Germany, though less obvious, are equally strong. Americans with German ancestors far outnumber those with English ancestors. Moreover, during the past century both American culture and German culture have shown an unusually strong passion for science, technology, engineering, empiricism, social order and efficiency. An electronic paper-towel dispenser in a Munich men's room is the spiritual kin of the gas-powered ketchup dispensers at the McDonald's in Colorado Springs.

The traditional German restaurant, serving schnitzel, bratwurst, knackwurst, sauerbraten, and large quantities of beer, is rapidly disappearing in Germany. Such establishments now account for less than one-third of the German food service market. Their high labour costs have for the most part been responsible for their demise, along with the declining popularity of schnitzel. McDonald's Deutschland, Inc., is by far the biggest restaurant company in Germany today, more than twice as large as the nearest competitor. It opened the first German McDonald's in 1971; at the beginning of the 1990s it had 400 restaurants, and now it has more than 1,000. The company's main dish happens to be named after Hamburg, a German city where ground-beef steaks were popular in the early 19th century. The hamburger was born when Americans added the bun. McDonald's Deutschland uses German potatoes for its fries and Bavarian dairy cows for its burgers. It sends Ronald McDonald into hospitals and schools. It puts new McDonald's restaurants in gas stations, railway stations, and airports. It battles labour unions and – according to Siegfried Pater, author of *Zum Beispiel McDonald's* – has repeatedly fired union sympathisers. The success of McDonald's, Pizza Hut, and TGI Fridays in Germany has helped spark a franchising boom. Since 1992, the number of franchised outlets there has doubled, and about 5,000 more are being added every year. In August 1999, McDonald's Deutschland announced that it would be putting restaurants in Germany's new Wal-Mart stores. 'The part-

nership scheme will undoubtedly be a success,' a German financial analyst told London's *Evening Standard*. The kiddie factor alone – children urging their parents to shop at Wal-Mart because they have a McDonald's inside the store – could generate an upsurge in customers'.

The golden arches have become so commonplace in Germany that they seem almost invisible. You don't notice them unless you're looking for them, or feeling hungry. One German McDonald's, however, stands out from the rest. It sits on a nondescript street in a new shopping complex not far from Dachau, the first concentration camp opened by the Nazis. The stores were built on fields where Dachau's inmates once underwent forced labour. Although the architecture of the shopping complex looks German and futuristic, the haphazard placement of the buildings on the land seems distinctively American. Across the street from the McDonald's there's a discount supermarket. An auto parts store stands a few hundred yards from the other buildings, separated by fields that have not yet vanished beneath concrete. In 1997, protests were staged against the opening of a McDonald's so close to a concentration camp where gypsies, Jews, homosexuals, and political opponents of the Nazis were imprisoned, where scientists performed medical experiments on inmates and roughly 30,000 people died. The McDonald's Corporation denied that it was trying to profit from the Holocaust and said the restaurant was at least a mile from the camp. After the curator of the Dachau

Museum complained that McDonald's was distributing thousands of leaflets among tourists in the camp's car park, the company halted the practice. 'Welcome to Dachau,' said the leaflets, 'and welcome to McDonald's.'

The McDonald's at Dachau is one-third of a mile from the entrance to the concentration camp. The restaurant recently

staged a 'Western Big Mac' promotion. It was decorated in a Wild West theme, with paper place mats featuring a wanted poster of 'Butch Essidie'. The restaurant was full of mothers and small children. Teenagers dressed in Nikes, Levis, and Tommy Hilfiger T-shirts sat in groups and smoked cigarettes. Turkish immigrants worked in the kitchen, 70s disco music played, and the red paper cups on everyone's tray said 'Always Coca-Cola'. This McDonald's was in Dachau but it could have been anywhere – anywhere in the US, anywhere in the world. Millions of other people at that very moment were standing at the same counter, ordering the same food from the same menu, food that tasted everywhere the same.

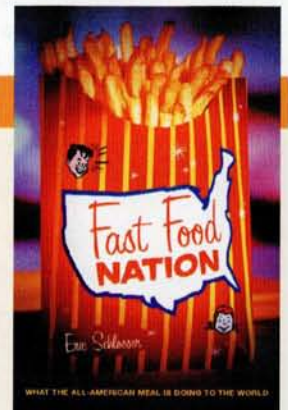
Iain Elliott is a freelance journalist.

SPECIAL ECOLOGIST OFFER

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mother's milk

Coca-Cola's latest world domination plans could have dire consequences. Paul Kingsnorth reports.

A few months ago, reports started appearing in the financial sections of newspapers, and on the websites of some campaign groups, about the latest, secretive, mission of the vast Coca-Cola company. No-one took much notice, but if the reports are true, they may have to start doing so soon. For the implications are far-reaching.

Coca-Cola, it was reported, is working on a project with the stunningly arrogant name of 'Project Mother'. The idea is simple: with the market for its various fizzy, sugary drinks increasingly saturated, Coca-Cola is looking into new lines which it can develop; in the words of one of its spokesmen, it is moving towards becoming a 'total beverage company'. And one of the most potentially lucrative new fields is milk drinks for children.

Children all over the world drink a lot of milk, and Coca-Cola knows it. The potential market for a global line of milk products, pushed with the vast marketing and distribution power of the Coca-Cola company thus makes good business sense. Coca-Cola isn't giving much away about Project Mother, but it has made some things clear. Milk is a potentially huge market, but it apparently has 'image problems'. It isn't 'hip, refreshing or something kids will want to drink in public'. Coca-Cola thus wants to develop a new line of milk drinks, aimed at the under-12s, which will counteract this image, and make milk as cool as Coca-Cola seems for children.

Any day now, it plans to test-market some new milk-based drinks in the US, Europe and Latin America. Indeed, Coca-Cola spokesman Rob Baskin said back in December that there were already 'literally dozens of new projects going on worldwide' in which Coca-Cola was test-marketing new ideas. If they work, the future is already mapped out: it will be all systems go for the Cola-nisation of the dairy industry.

The implications are huge and disturbing. Most obviously, if Project Mother succeeds, it could lead to the domination of the global milk industry by the world's most powerful drinks company. But the problems it could cause for the environment, farming and animal health are also potentially huge.

Industrial milk production is already one of the world's grimmest industries. The more milk we drink, the more cows need to produce, and this has already led to a system of intensive dairy farming that increasingly treats cows as simple milk machines for humans. According to the animal welfare group PETA, over half of America's

cows already live on intensive farms, spending their whole lives in barns with concrete floors, attached to milking machines, which often give the cows electric shocks. Mastitis, a bacterial infection common to intensive farming, infects millions of cows, and often leaves pus residues in the milk they produce.

But this is only half the story. Today, due to increased milk demand worldwide, the average cow produces about twice as much milk as 30 years ago; and often up to 100 times more than it would produce in its natural state. Cows of the 1990s live only about five years – as opposed to 20–25 years 50 years ago. They are stuffed with an array of drugs and chemicals to prevent illness and increase their productivity, including the notorious genetically modified Bovine Growth Hormone. Meanwhile, the calves which the cows have to give birth to regularly to stimulate their milk supply are usually taken from their mothers within 24 hours and sold for veal or beef. Within 60 days, the cow will be impregnated again. A typical factory-farmed dairy cow will give birth three or four times in her five-year life. None of her calves will taste her milk.

If the situation for the animals is horrific, the situation for small, family and organic farmers is increasingly grim too. As with other areas of agriculture, dairy farming is dominated by economies of scale, and the buying power of vast corporations. The result has been a drop in the number of small dairy farms all over the western world, and an increase in huge, corporate, intensive farms, where the animals are subjected to the grim conditions described above in the name of efficiency and competitiveness. Then there are the environmental implications. Intensively-farmed cows in the US, according to PETA, are fed more than 81 lb of food, including grain, hay and silage, plus 45 gallons of water – all of which is, itself, intensively produced on deteriorating agricultural land.

Project Mother, if it were to work as Coca-Cola wants it to, would have the inevitable effect of spreading intensive farming techniques all over the world, as milk consumption expanded and new markets were broken into by the world's biggest drinks company. Animals, the environment, small farmers and – yes – mothers around the world would all suffer from Coca-Cola's grandiose ambitions. Coca-Cola, of course, would undoubtedly make a mint. Unless opposition to its intended colonisation of the world's milk begins to build...

Paul Kingsnorth is deputy editor of *The Ecologist*.



SLOW-MOTION POISONING

The importance of 'multiple' in multiple sclerosis.

What we term 'multiple sclerosis' doesn't really exist as a recognizable entity. Although the main problem is damage to the myelin sheath, symptoms vary so widely that the end result is a collection of quite disparate problems looking for a tidy label. That label, up until now, has been MS.

The other reason that MS isn't really a 'disease' is that these symptoms can be produced by many causes, often man-made. Chief among these, according to Patrick Kingsley, is mercury from amalgam fillings. Of the 3,800 MS patients he has treated thus far, only five didn't have evidence of mercury poisoning.

Systemic candida overgrowth, allergies and food intolerances, pesticides, moulds, nutritional deficiencies, drugs – the entire gamut of 20th century toxic rubbish in our environment conspires to poison us in slow motion.

The more susceptible among us may experience a bugging up of the signalling going to the muscles via the brain and begin to evidence some of the symptoms that we have up to now called MS. Others of us will just get hay fever.

Dr Kingsley is currently interested in the role of certain viruses in acting as an initial trigger. In an overwhelming number of cases of his patients with sensory problems – pins and needles in the extremities and loss of sensation in other parts of the body – the patient invariably reports a bout of shingles, herpes or chick-enpox before the onset of the problem.

'Maybe what they then go on to develop,' muses Dr Kingsley, 'is not MS but an unusual presentation of shingles.' Dr Kingsley has also seen a number of cases of patients who develop meningitis during MS. After the meningitis was treated, it led to improvement. In other patients, he discovers a spinal injury, such as whiplash, occurred before the onset of symptoms. Could that injury, also, have played a role?

Other culprits in MS can be high-fat diets, low levels of essential fatty acids, the Pill and even vaccinations.

Dr Kingsley often finds that a patient with MS has a deficiency of vitamin B12. Several studies have borne out his clinical experience, showing that MS patients tend to have far lower levels of B12 than



By Lynne McTaggart

healthy people (*J Appl Nutri*, 1973; 25: 16–40). One US study found a link between MS and B12 deficiency caused by pernicious anaemia. This form of anaemia by the body's inability to process B12,

'In order to conquer MS, we need to stop giving it a name. Once we do this, we may stop looking for the single culprit behind it.'

which is vital to the production of red blood cells (*Lancet*, 26 May, 1990). In another study, six patients with MS given vitamin B12 complex for six months showed improved ability to see and hear (*Int Med*, 1994; 33: 82–6). Indeed, there is even some evidence that damage to the myelin sheath, always thought to be irreversible, can be undone, in part with the use of B12 (*Drugs* 1994; 48:137–52).

Another early sign of MS is penetration of the blood-brain barrier. A type of filtering system in the body's blood vessels prevents all manner of impurities and toxic

substances from damaging nerves or entering the brain. Stress, emotional upset, even eating too much fat can damage this barrier, allowing toxic substances, including environmental chemicals, to cross over into the nervous system, causing neural damage.

One of the most common causes of poisoning in slow motion is mercury, usually from amalgam fillings. In a recent study, the spinal fluid of MS victims had six times the level of mercury of healthy individuals. The conclusion of the Swedish researchers was that dental fillings were the most likely cause, particularly as MS patients often improved when their mercury fillings were removed (*Swed J Biol Med*, January 1989).

But pesticides, moulds, a candida overgrowth – even food allergy – can overwhelm the body and cause blood-brain toxic poisoning.

This notion of overload or a viral trigger is a far cry from the idea of a 'bug' invading our bodies and causing all the damage on its own. It is akin to the viral (or vaccine) trigger that often seems to precipitate ME.

Understanding all the most puzzling illnesses like MS, or ME, or even cancer and AIDS requires that we dispose of our notion of illness as having any one cause or acting similarly in all of us.

Labelling diseases is ultimately limiting, forcing very different symptoms and individual causes into a very small box. What causes what we call cancer in you is not what causes cancer in me, and my body's individual 'symptom picture' and response to it will ultimately be very different from yours. Because MS is so individual, it is virtually impossible to treat it with drugs. The best that a single drug can do is to suppress symptoms.

In order to conquer MS, we need first to stop giving it a name. Once we do this, we may stop looking for the single culprit behind it.

Lynne McTaggart is the editor of What Doctors Don't Tell You, a monthly publication which exposes dangers and unproven practices in modern medicine. Annual subscriptions: £34.95. For details: Satellite House, 2 Salisbury Rd, London SW19 4EZ or tel: 020 8944 9555.

SLAVES IN ALL BUT NAME

ANITA RODDICK'S VISIT TO NICARAGUA TOLD A HARSH STORY ABOUT THE REALITIES OF GLOBALISATION FOR THE POOR.

IF YOU'RE A flexible, forward-looking multinational company looking for a manufacturing base with no ties or commitments (complete with compliant workforce, of course) you don't have to look far. These days, in fact, a quick trawl of the Internet can solve your location problems in one go. Type 'Free Trade' into any search engine, and up comes a tempting menu of global fare for the profit-hungry.

Of primary concern to Nicaraguan lawmakers is the 60 per cent rate of unemployment. Because of this, free zone operators enjoy laws that provide them with maximum freedom and benefits. 'For ease of operation and profitability, Nicaragua is your best alternative.'

To your average multinational manufacturer, Nicaragua's Las Mercedes Free Trade Zone must seem like heaven on Earth. But when I visited it early one morning in February it looked more like hell, as an amorphous mass of over 20,000 souls (mostly young women) poured into its featureless, prefabricated factories. Six days a week, 10 hours a day, the workers of the Free Trade Zone are making jeans, shorts and shirts in the vast Taiwanese, Korean, and US owned 'Maquilla' (from the Spanish, 'to assemble') factories for sale through US retailers like Kohls, Kmart, Wal-Mart, and J C Penney. The US military also sources jeans from the Maquillas, sold through its Army and Airforce Exchange Service, one of the largest retailers in the world.

There are 38 steps involved in sewing an average pair of jeans. Workers are paid according to a piece-rate system, with 'pieces' of the garment allocated to different workers. One woman's allocation was to sew on the small-change front pocket and the hem on the back pockets. Her payslip showed she achieved 90 'pieces' an hour – one operation every 40 seconds. Her reward came to about 20 cents for each pair of jeans, retailed in the US at \$20–\$30. At this mark-up, the Free Trade Zone would be more accurately termed the 'Free Labour Zone'.

According to independent economic studies, a basic living wage in Nicaragua is \$200 per month; yet these workers, even with forced overtime, make around \$130 a month. Wages, as I saw when I visited workers' homes at Tipitapa Barrio, that will buy them a place in cramped dirt-floored huts, made out of scavenged plastic waste, cardboard, wood or breeze-blocks, and by a single light bulb, with no plumbed-in sanitation. Zenayda, 24, who'd worked for five years at Chentex, one of the Taiwanese companies, before being fired for union involvement, told me what it was like to work there.

'We worked from 7 am until 7 or 9 at night. Sometimes, when there was an urgent order, they made us work 24 hours straight. We worked weekends. They treated us like animals, or as if we were



GOVERNMENTS, INSTEAD OF PIMPING THEIR PEOPLE, SHOULD ENCOURAGE COMPANIES WHO RAISE QUALITY OF LIFE

a machine. Often they wouldn't give you permission to go to the bathroom. And they wouldn't give us permission to go to the clinic; when we got sick we had to work sick.'

With 60 per cent unemployment, perhaps beggars can't be choosers. The harsh reality is that these workers might even be termed the lucky ones. This is the harsh reality of globalisation for many of the world's poorest people, exposing the truth about the fallacy of the 'trickle-down' effect that proponents of 'free' trade claim comes from the profits of companies that settle upon their countries. And often settle all too briefly. Not for nothing are the Free Trade companies called 'swallows' in Central America – all the time they are threatening to flit off to more profitable climes offering cheaper labour, and more tempting concessions at a moment's notice.

There are other choices. Companies should be seeking to secure the best conditions and pay locally, to build a long-term relationship and commitment with and from their workforce, and contribute to developing a sustainable, long-term local economy. And governments instead of pimping their people to unscrupulous predators should only encourage companies who commit to

raising the quality of life of their citizens. Utopian poppycock? Commercial suicide? I don't think so.

For my trip to Nicaragua had two purposes; to visit the Free Trade Zones, and see the worst that modern business has to offer; and to see the other side too. I also visited a co-operative of sesame seed farmers in the north-west of Nicaragua who community-trade with my company, The Body Shop. From a tentative two tonnes in 1993, the co-op now supplies 72 tonnes of sesame oil, an essential ingredient in many of our products worldwide. The community trade project began when the farmers approached us after world market prices for sesame seed plummeted from \$35 to \$18 per hundred-weight. The deal's guaranteed price and long-term partnership has enabled the co-op farmers to plan and diversify. As well as supporting the farmers, the co-op runs an agricultural merchant's, has built a school and supports a natural health clinic.

The Body Shop is by no means the only company supporting such a model – and neither should it be. The point is that alternatives to forced labour, sweatshops and the iniquities of the global economy are already in practice; they are workable. They are real alternatives, and we need more of them – fast.

Anita Roddick is the founder of The Body Shop. For more information on Free Trade Zones and the situation in Nicaragua contact The National Labour Committee. www.nlcnct.org

BRINGING UP THE LOCAL ISSUES

JOHN PAPWORTH BELIEVES ALL OF US ARE CAPABLE OF RUNNING OUR OWN LIVES – WE DON'T NEED OTHERS TO RUN THEM FOR US.

I WAS REARED in the 20s and 30s in an orphanage. It was built in the 1880s by The Board of Guardians of the Parish of St Leonard's in Shoreditch. The parish was in one of the poorest parts of London and it had a problem of hundreds of homeless children.

The members of the emphatically working-class Board of Guardians proceeded to purchase several hundred acres of open farmland in Essex. They commissioned an architect to build 'cottage homes', each of the dozen or more cottages housed 30 boys in the care of a married couple and 30 girls in the care of a single woman.

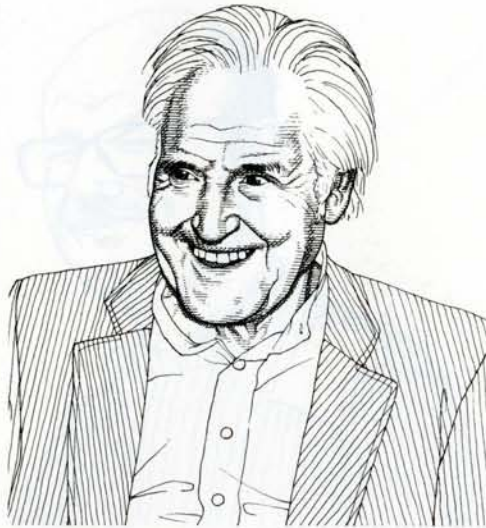
The cottages were set in lawns and flowerbeds either side of a broad winding gravel drive and at a central point there was, on one side, a school, a gymnasium, and a chapel, whilst on the other side was a yard surrounded by offices and workshops. Each cottage had a large playground surrounded by garden plots in which the children, if they wished, could grow whatever flowers or vegetables they could get hold of.

What rivets my memory today is that all this was accomplished by a group of ordinary people in a poor London parish. They had a problem and they solved it in a quite exemplary and commendable fashion with no suggestion of any interference by an almighty ministry of this or that and, like hundreds of children who passed through it, I have always been profoundly grateful that I was so well cared for.

By modern standards the place might be regarded as seriously deficient. There was no central heating and in winter a grate piled high with mostly coal dust might yield little warmth. If we were judged to have stepped out of line the superintendent had a cane which was seldom far from some bare backside, and I was about six before somebody thought to inform me that there was a girl who had the same name and who might be, as she was, my sister. No doubt the finer points of childcare might be little regarded as seen through modern eyes, but no doubt too, had the place not been shut down in the 60s, those responsible would have kept pace with the times and made changes accordingly. But 'those responsible' are no longer there. The Board of Guardians has vanished, as has the Parish of St Leonard's as a local government unit. Why?

What has been achieved by this satanic abolition and the creation of units of 'local' government which are about as local as a moon rocket and as responsive to citizen needs as a dead dinosaur? This is not just a matter of 'politics' or efficient administration, but a matter of whether the quality of life is being enhanced or degraded.

Each of us possesses a need to create as a basic element in our endless quest for fulfilment, a need expressed not simply in great art, in poetry, literature, painting, sculpture, music or architecture, but in a multitude of mundane forms once known by every trades-



EACH OF US POSSESSES A
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man who once served our daily needs. It was the democracy of creativity throughout society which was the seedbed of all the cultural achievements of the past; in our day, now that vital seedbed has been virtually abolished by boardroom get-rich-quickery, is it any wonder that high art forms have become increasingly sterile, discordant and uninspiring?

And the damage the boardroom brigands have done to work is reflected in what the politicians have done to our social structures. Local government once involved the energies, dedication, commitment and genuinely altruistic spirit of service to the community of a high proportion of local people. Today a kind of Fabian fascism has brushed all this aside as being of no account.

Instead of members of a local community hospital or welfare committee being involved in the day-to-day running of local institutions, organising fêtes and celebrations to raise funds and keeping the show on the road; doing it in ways which gave their lives meaning, status and, again that word, fulfilment, they are now relegated to the role of voting fodder in the mass political charade.

We now have 'national' schemes and ministries for health, education, welfare and other essentially local matters. The evidence abounds and grows that these bodies are increasingly wasteful and inefficient, where they are not indeed riddled with the maggot of corruption, and not least of course they operate on organisational parameters which make a mockery of democratic principle. Somehow the illusion has been fostered, for example, that people who have devoted their lives to clambering to the top of the greasy pole are better qualified to ordain how children should be educated than are the parents and their local committees. So our public prints are loaded with otiose speculation about 'national' examination standards and results, and about the content of 'national' educational curricula; meanwhile, in rural areas, large numbers of children are bussed to giant 'comprehensive' schools where they learn about computers and nothing about how to grow food.

Local government, instead of being a power in its own right but working in tandem, where necessary, with national government, is now the pawn of the latter, which is making a mess of the whole works. It is time to cry halt to the assault on freedom involved in all this centralisation; time to restore the power and the spirit of local power, responsibility and commitment of genuine local government as a precondition of a healthy democratic way of life.

John Papworth is editor of Fourth World Review, the only magazine for which the readers decide what they pay. For information write to 26 High Street, Purton, Wiltshire SN5 4AE.

DOUBLE TROUBLE

AIDAN RANKIN LAMENTS THE DESTRUCTIVE POWERS OF THE TWIN TERRORS OF CAPITALISM AND COMMUNISM.

IN EASTERN EUROPE, during the Cold War years, a popular graffito adorned the walls of Communist capitals. It ran like this: 'Capitalism is the exploitation of man by man. Communism is the opposite: the exploitation of man by man'. Irony was a potent weapon for dissidents in the lean years between the Prague Spring and Glasnost. It was loathed by the authorities, because although they lacked humour, they knew that powerful truths were being expressed that no people's censor could ever obscure. In this case, the truth was that exploiters the world over resemble each other. The ideologies and systems through which they justify their power are not opposites, but run parallel to each other. They are based, as Norman Mailer once observed, on 'many people hurting many people, but it is just who does the hurting that is forever in dispute'. Capitalism and communism diminish the status of the individual, both as a citizen and as a human being.

The symbiosis between 'monopoly capitalism' and state-controlled communism was recognised by George Orwell, who like most men ahead of his time was deeply unfashionable with the liberal elite. In *Animal Farm*, he notes the resemblance between the once rebellious pigs and the farmers they overthrew. Orwell's tale is widely interpreted as a parable about the failure of revolutions, those of the leftist variety especially. In the era of globalised conformity and resistance to it, we may discern a more profound meaning. For it is becoming ever clearer that communism and capitalism have the same ideological underpinnings. They are not rivals, after all, but quarrelsome bedfellows.

The drive for change

Communism and capitalism both claim to be 'modern' ideologies above all else. Yet their roots lie in the same 19th century 'liberal' world view. Both believe in the inevitability – and the desirability – of continuous 'progress' and permanent change. Both believe that humanity is subject to universal laws, regardless of cultural and historical variations, distinctions of ecology and climate, or differences between individuals themselves. Both elevate abstract rights for interest groups above freedom and responsibility for individuals and communities. Both favour the material over the spiritual and both believe in *homo economicus*: the human being in thrall to economic forces, outside of his or her control. This is why the targets of capitalist and communist scorn are so often the same. They hate tradition, ridicule enduring values, despise the stability of family life, belittle the richness of friendship and deride all spiritual aspirations. These areas of



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human activity are seen as forces of conservatism, standing between mankind and material progress, 'mystifying' us and making us hostile to change. And in the secular morality of communist-capitalism, hostility to change is the worst of the New Sins.

I am writing this article in a spring-like central London, but I have recently returned from frost-bound rural Yorkshire. An historic 'North-South divide' once governed economics, culture and voting patterns. It is still reflected in the jokes of my London friends about flat caps, whippets, Tetley's beer and working men's clubs, or the jokes of my Yorkshire friends about croissants and *caffe latte* in Islington, home of *bien pensant* political correctness. Yet the North-South divide is yielding quickly to a larger economic and cultural chasm: town versus country.

Most readers will know that the British countryside is in increasing crisis, reeling from an outbreak of foot and mouth disease amongst livestock and an impending rural recession. Much loved footpaths are closed to walkers, hotels and bed and breakfasts are empty, cafés deserted. The delicate, human-scale economy of agriculture, tourism and local craftsmanship is

fighting for its survival.

In upland Britain, we could be witnessing the disappearance of an historic, deeply traditional way of life. For the hill farmer is, it seems, post-modern society's Red Man. He is resilient, independent of the state and big business and conscious of nature, both as ally and enemy. He has his own mythology and his own ethical code. They are based on loyalty to friends, distrust of authority, a history that is largely unwritten and a rigorous sense of fair play. Like the Red Man, he is the target of urban prejudice, from corporate planners who consider him a temporary inconvenience and settlers who wish to implant a 'civilised' monoculture. The culling of healthy livestock, under the pretext of disease control, is sinisterly akin to the slaughter of the buffalo herds.

The organisation of economy

Foot and mouth is not exclusively the Blair government's fault. It does, nonetheless, raise larger questions about the way our economy is organised. Global capitalism has no interest in local production for local needs. Its champions, be they in London, Brussels or Beijing, think nothing of transporting livestock and foodstuffs for hundreds, even thousands, of miles – in the name of 'consumer choice' for a relative few. Self-sufficiency, to them, is wasteful, insular and outmoded. The disempowerment of our rural communities is part of the process of economic globalisa-

tion. It is accompanied by an upward devolution of power: from local to central government, from nation-states to artificial structures such as the European Union, the regional economy to the World Trade Organisation. Intensive farming for export and quick profit brings to agrarian life the values of the urban sweatshop. Pigs who sleep on concrete or metal, never seeing the light of day, are economic pawns, like women and children toiling in Third World factories to make shoddy designer goods for the West. 'Napoleon and Snowball, where are you now that your species needs you?' the more rhetorical of our porcine cousins might ask these days. But from Cumbria to Ladakh, traditional farmers surely have equally just cause to rebel. Global 'free trade' means social security for them if they are lucky, grinding wage slavery if they are not.

Agribusiness is an urban invention, disrupting the rhythms of country life and imposing the 'targets', 'strategies' and management jargon of the city. It will suffer less from the consequences of foot and mouth than the small, independent farmers. This is both because of its wealth and because of its utilitarian view of agriculture. Livestock are commodities to make more commodities. Like sweatshop workers, they are expendable because they can always be replaced. The land bears no cultural associations or personal memories. It is also a resource to be exploited, whether to grow genetically modified crops for export or to plough over and make way for tracts of identical houses, serviced by uniform shopping malls with indoor sports facilities.

Rural ruin

For Britain's rural communities, meanwhile, foot and mouth is the latest in a series of tragedies, presided over incompetently by far-off politicians and bureaucrats. The Labour government is blamed, because it is perceived as anti-rural. It is more interested in banning country sports than helping country businesses survive, more interested in Balkan separatists than its own rural minorities. Multiculturalism, it seems, stops at the city limits. The government does not represent the countryside, as a democratic administration should. Instead, it merely exercises power and issues decrees. Rural communities, in turn, do not reflect the tidy New Labour vision of the future. For they are made up of self-reliant men and women well used to taking decisions for themselves. They do not wish to have their thoughts and words controlled by politically correct edicts or their property rights encroached upon by the state.

Rural communities are suspicious of outside influence but welcoming to strangers. What they lack in 'internationalism' they compensate for in human-scale economics. Farmers and traders know each other and depend on each other, skills are transmitted from father to son or, quite frequently, from mother to daughter. Women are independent and resourceful, which means that true feminists should be ruralists, too. Men are more forthright, less neurotic, than their urban counterparts. Whilst narrow-mindedness exists, there is a great practical tolerance, especially for eccentrics and 'characters'.

Livestock are individuals with well-remembered pedigrees, not mere statistics. Above all, country life is still based on continuity. In the Yorkshire town where I live, there is a man who can relate the family trees of every local to anyone who will care to listen. This sense of history is anathema to New Labour's ideologues. It is just as alien to the other parties as well, for shire Toryism is all but dead, the Greens are the most urban movement of all and the Liberal Democrats believe devoutly in a pan-European state, which would ride roughshod over local culture and custom. The function of modern government, it seems, is to forge a people without memory. Bertold Brecht, the communist playwright, proclaimed in a moment of rare insight that 'the government has dissolved the people and elected another'.

We are looking, then, at something far larger than an urban-rural divide. The division is better understood in terms of two ways of looking at the world. One is human-scale, based on continuity, individual and communal endeavour and respect for the past as well as the present. The other is based on mass production and consumption, change as an indicator of 'progress' and abstract charters of rights in place of freedom under the rule of law. In party terms, this means a divide

between 'conservers' and 'progressives', in economic terms between the global and the local.

Capitalism and communism are both unequivocally 'progressive' ideologies. Marx realised this in *The Communist Manifesto*. He admired capitalism for its vitality, its polarisation of classes and its assault on 'the idiocy of rural life'. Perhaps this explains why China, Maoist so recently, has embraced capitalism with such fervour whilst preserving its communist state.

Closer to home, New Labour apparatchiks, products of our own 1960s 'Cultural Revolution', called themselves socialists until the word embarrassed them. Today, they recite the mantras of globalisation with the same irrational zeal with which as students they mouthed left-wing slogans. For they see in free-market fundamentalism the same antipathy to tradition, the same contempt for 'old-fashioned' sentiments like patriotism or community spirit that they found in the 1960s Left. Neo-liberal economics and 'New Left' politics are both collectivist in spirit and practice. To one, 'the masses' are but passive consumers, to the other they are 'liberated' zombies who live and breathe for the state. Through political correctness, the two schools of dogma overlap. They find common enemies and hence common ground.

In the utopias of global capitalism and world communism, there is no place for the independent farmer, the shopkeeper or the craftsman. They are unwelcome reminders of a past when individuals might have counted for something.

That is why county folk are fast turning into the kulaks of Brave New Britain. By their very existence, they defy the iron law of 'progress'.

Aidan Rankin is deputy editor of New European magazine. His book The Politics of the Forked Tongue: Authoritarian Liberalism will be published later this year.

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RECLAIMING THE COMMONS

DAVID CROMWELL SAYS THAT DESPITE WHAT MANY BELIEVE, GLOBALISATION IS NOT AN INEVITABILITY.

DESPITE RHETORIC TO the contrary from politicians, business and the mass media, global capitalism is not as pre-ordained as the laws of physics. The present system of conducting trade and investment, by which a few prosper and the many struggle or die, is surely not the end product of the human capacity for organising society. Nor is global capitalism inescapably entwined with economic efficiency, democracy and freedom.

Economic globalisation is, of course, being shaped with vigour by powerful corporate bodies you're probably sick of hearing about – the WTO, the World Bank, the IMF – not to mention several you may not be so familiar with – the European Roundtable of Industrialists, the World Economic Forum and the World Business Council for Sustainable Development. It's little wonder governments are bending over backwards in a desperate attempt to create a 'business-friendly environment'. Corporate plunder of global resources and public services is matched only by the state's willingness to withdraw from protecting these assets.

How did we get to this point of corporate 'enclosure of the commons'? First, some potted history. Enclosing the commons arose as a means for the private control of land, forests, rivers and natural resources which had hitherto been public property in pre-industrial Britain. In England, the process first reached a peak in the 15th–16th centuries when landlords fenced in previously open land to which their tenants traditionally had access for grazing livestock. In Scotland, during the Highland Clearances of the 18th–19th centuries, people were evicted from their land and many were forced to emigrate to make way for the more profitable business of sheep farming.

The new enclosure movement of recent decades – driven by powerful corporate and political forces – is a continuation of the same process, demanding access to: land and cheap labour; biodiversity, including the very genetic makeup of plants and people; the food chain; and even the global atmosphere and oceans for dumping industrial products. Today, humankind's ability to respond to the threat of catastrophic climate change has been all but destroyed. How? By private interests, motivated by short-term profits at any cost.

If there is ever going to be a healthy, just and ecological future, we must comprehend, then overturn, the corporate-driven mechanisms by which the transfer of public resources into private hands is taking place. But, curiously – and overlooked by many activists – it is also vital that we recognise the illusions that conceal Western complicity in abuses of human rights and the environment.

At this point, we must unashamedly shine a spotlight on the mass media, because this is the source of most people's information – or rather, misinformation – about politics, democracy, the arms trade, the environment – in fact, the state of the planet. The



IT IS TIME TO DEFY POLITICAL DOUBLESPEAK

Such an argument plumbs new depths of Orwellian doublethink. The WTO, in fact, protects the strong (corporate interests) from the weak (public interests). As Noam Chomsky rightly says, today's global economy means 'socialism for the rich and capitalism for the poor'. In the political arena, 'consumer choice' is largely between Tweedledum and Tweedledee – Blair/Hague, Bush/Gore, Third Way/global capitalism. We may have the ability to choose, but we don't get to set which choices are available.

The unsustainable corporate thirst for profit cannot deliver 'consumer freedom' to choose fresh air, clean water and healthy soil; food grown organically and untarnished by GMOs; the freedom to use energy from renewable sources; the freedom to live near where we work, shop and relax; and the freedom to live in a society untarnished by big-monied political lobbying.

But, if there is an alternative, what could it be? There is no one single obvious prescription. As the US economist Robin Hahnel says, the bottom line is that 'what we are fighting for is merely the substitution of the human agenda for the corporate agenda'. It is more vital to build a broad-based movement, he says, than to have the correct 'model of alternative living' worked out in advance.

That there is no clear path should not be an excuse to dither. Writer Susan George compares today's movements with the pre-revolutionary times of mid-18th century France and America: 'They too were groping, not entirely sure how to get out from under an absolutist monarchy and move to... democracy; to change their status from subjects to citizens.' The difference between then and now, I hope, is that it will be achieved peacefully and irrevocably.

It is time to defy political doublespeak, shake off the corporate yoke, and reclaim both the planet and our own humanity.

*David Cromwell is a freelance writer. His first book, **Private Planet**, is published later this month (June 2001) by Jon Carpenter Publishing.*

STEVE CARROLL

LOCALISE, LOCALISE, LOCALISE

THE CASE FOR LOCALISATION, BELIEVES HELENA NORBERG-HODGE, CAN'T BE MADE TOO OFTEN OR TOO FORCEFULLY.

ACROSS THE WORLD, deregulation is leading to a breakdown of local enterprise and ever-greater dependence on long-distance trade and transport. This in turn, of course, means ever-increasing consumption of fossil fuels. So globalisation is directly and inextricably linked to climate change.

If we want to avoid the havoc and hardship that further climate change will inevitably bring, we must as a matter of the highest priority begin to make a u-turn: away from globalisation towards the strengthening of local and national economies. Since globalisation goes hand-in-hand with urbanisation, this means actively working to protect and strengthen rural life.

Localisation is about shortening the distance between producers and consumers. It is not about eliminating all trade, but rather about reducing to an absolute minimum the exorbitant waste now caused by having everything from butter to raw logs criss-crossing back and forth across the globe.

The process of localisation needs to happen simultaneously in both the North and the South. As things stand today, roughly 50 per cent of the world's population is still rurally based – the majority of them are in the South. It is vital that everything is done to prevent this proportion from declining.

A common assumption, even among environmentalists, is that the nations of the South need a little more time to 'catch up' with the North (in other words, more access to global markets) before they can be expected to reduce their fossil fuel consumption and begin to localise. But such thinking flies in the face of reality. Contrary to the propaganda, the global economy cannot possibly enable villagers in rural China or Bangladesh to live the life of middle-class Westerners. For the vast majority, it cannot even provide the most basic needs of housing, education, clothing, health care, nutrition and employment. As recent experience has shown, what it does do is increase the gap between rich and poor, pulling vast numbers of people away from the land into squalid urban slums.

If the South had colonies to exploit, as the North was able to do, the situation might be different. But they don't – and simple arithmetic tells us that it's impossible for everyone to emulate a model that allows people to use vastly more than their fair share of the earth's resources.

In the rural villages of the South, life can undeniably be hard. But villagers can at least grow a few vegetables, maybe keep some chickens, or even a cow; and they can rely on friends and family for help with agricultural work. In the slums of the big cities, by contrast, they suddenly become dependent on hard cash for all their basic needs. What's more, every single thing they consume has to be brought in from outside, increasing CO₂ emissions and



THE PROCESS OF LOCALISATION NEEDS TO HAPPEN SIMULTANEOUSLY IN NORTH AND SOUTH

placing a further burden on the environment. The major beneficiaries are the large transnational employers, for whom the migrants represent a source of cheap and compliant labour.

Preventing further urbanisation in the South requires programmes to actively support the rural economy. In this regard, renewable energy technologies can play a vital role. Many parts of the South are blessed with abundant sunshine, which could be tapped for a range of both domestic and commercial uses. Other areas have wind, water or geothermal potential. Renewable energy technologies hold out the possibility of truly sustainable development. They are non-polluting, and can be adapted to different cultural and ecological environments. They are also inexpensive. In fact, they would cost a fraction of the sums of money currently being poured into huge dams, greenhouse gas-emitting coal-fired plants and nuclear power. (Despite the rhetoric of sustainability, these large-scale infrastructure projects continue to be funded by bilateral and multilateral aid programmes – not to mention private direct investment. There's never a shortage of willing agencies. For example, when the

World Bank decided not to support the gigantic Three Gorges Dam in China, due to pressure from environmentalists, the ECAs of several European countries jumped in to take the Bank's place.)

Changes such as those outlined above cannot come about without a major shift of emphasis in the economies of the North. For many decades, northern-based corporations have been using the South as both larder and dumping ground – stripping whole countries of their natural resources, then taking advantage of relatively lax environmental and labour standards to undermine them still further. This process is now accelerating, as corporations comb the globe for ever-cheaper resources and labour.

Clearly, the North too needs to localise – and among many other things that means producing vastly more of the goods it consumes closer to home, so that no more of the best farmland in Kenya is turned over to growing cut flowers for the Netherlands, no more Brazilian rainforest is cut down to produce grain to feed the animals that will furnish Americans with hamburgers.

The consequences of allowing globalisation to continue uncontrolled are hard to predict in detail, but would certainly include massive and irreversible damage to the earth's climate. We have no choice but to promote a decentralised development model that would both strengthen local economies and reduce pollution. Neither the North nor the South can afford to wait. We all need to localise now.

Helena Norberg-Hodge is a director of ISEC.

WHY VOTE GREEN?

COLIN HINES WILL BE VOTING GREEN IN THE GENERAL ELECTION. HERE, HE PUTS HIS CASE FOR WHY YOU SHOULD TOO.

WHAT'S THE POINT of voting? Opinion polls show that increasing numbers of people in Britain seem to be asking themselves this question and coming up with a simple answer: there isn't one. Turnouts at elections fall almost every year, and political apathy is increasing with every promise a politician breaks.

But why? If the point of voting is to change things, one answer may be that we are now faced with a choice at the ballot box of two parties who buy into exactly the same economic model; offer the same answers to the same questions. If you don't like them, it seems, you have nowhere else to go.

Economically, the two main parties in Britain are Tweedledum and Tweedledee – both buying into Tony Blair's view that the globalisation of neo-liberal corporate economics is 'irreversible and irresistible'. This kind of defeatism is increasingly common to mainstream political parties around the world. Politicians everywhere have, essentially, given up in the face of the vast power of multinational corporations and the centralising tendencies of the Western-style export economy.

Yet there is a political alternative. There is a party which does not give in to the mantra of corporate economics, and which reflects the growing concerns of people in Britain about the way our country is going – and the state of the planet. That party is the Green Party, and in my view it represents the best political hope for real change in Britain.

At the last European elections British Green MEPs were elected for the first time. The Greens hold seats in the London Assembly and Scottish Parliament. They have more councillors now than ever before. They are, slowly, becoming a real political force. But what do they represent? And why should you give them your vote?

Successive governments have, after all, realised the importance and popularity of our Green solutions. They have made speeches, issued white papers, and signed international treaties. They have boasted from rooftops about their environmental credentials. Yet almost always, they have failed to act. The environment gets worse, and profits get bigger. But why?

It's not as if politicians have failed to act because they were too busy delivering benefits elsewhere. There might be more material wealth in our society than ever before, but it is bought at a heavy price. It is spread increasingly unfairly between rich and poor. It is not used, as it should be, to provide decent public services and quality of life for all. As a result, our health service is failing and our railways are crumbling. Stress, depression and juvenile delinquency stand at record levels. It is an increasingly grim picture, and the reasons for it, in the end, come down to economics. The increasingly centralised, corporate, profit-driven economic model



THE GREENS ARE THE
ONLY PARTY THAT CAN
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ENVIRONMENTAL AND
SOCIAL SOLUTIONS

conflicts directly with the wider interests of society and the environment. Buy into that model, and you cannot deliver real and lasting change.

And that, in a nutshell, is why the Green Party matters. In my view, the Green Party is the only party that can deliver real environmental and social solutions – precisely because the Greens reject the economic model that all the other parties take for granted.

The Greens are the only party making a real economic alternative – localisation – a key plank of their election campaign. They are the first political party to challenge the existing political and economic theology of globalisation and instead call for its replacement with an emphasis on local production and the rebuilding of local economies.

The Greens' key economic principle is simple – to ensure that everything that could be produced within a nation or region should be. Long-distance trade is then reduced to supplying what could not come from within one country or geographical grouping of countries. This has the environmental advantage of no longer transporting so many goods over unnecessary distances, and the economic advantage of promoting diverse, small, local businesses over vast homogenised multina-

tionals.

This localisation approach is not against rules for trade. On the contrary, it needs rules – designed not to protect the big producers, but rather local economies. The rules for the diminished international trading sector would become those of the fair trade movement, where preference is given to goods supplied in a way that benefits workers, the local community and the environment.

The Green Party's new election manifesto contains a programme of realistic, mutually consistent and self-reinforcing measures to achieve localisation. They include:

- the reintroduction of protective safeguards for domestic economies (tariffs, quotas etc);
- a 'site here to sell here' rule for manufacturers and services;
- keeping money local via policies ranging from exchange controls through to a Tobin Tax on currency speculation;
- resource and progressive taxes to fund the transition, whilst protecting the environment;
- the reorientation of aid and trade rules so that they contribute to the international rebuilding of local economies. Poor countries could then concentrate on meeting basic needs, not out-competing with their already impoverished neighbours for exports to the North. Technology and information would be encouraged to flow, when and where it can strengthen local economies.

Such a dramatic change would, of course, need to overcome fierce opposition from the major beneficiaries from globalisation – the big transnational companies. What this means, realistically, is that effective Green governance cannot come from one country alone. It will need regional groupings of countries to get together and agree on this re-orientation of economics; and Europe and North America, the richest parts of the world, will be the key. Only these blocs can introduce adequate reforms. Unfortunately, four years of Bush means that little can be expected from the US, and so Europe will need to take on the mantle as the major engine of change.

The UK Greens are fully aware of this need to work on a pan-European level; they know that change in the UK alone will not be enough. Caroline Lucas, one of the two UK Green Members of the European Parliament elected in 1999, is already working with the European Greens to make localisation more central to economics. When the Nice Summit was discussing expanding the European Union eastwards, she kicked off such a debate by publishing *From Seattle to Nice: Challenging the Free Trade Agenda at the Heart of Enlargement*. In this, she called for a bolder, more ambitious vision of a Europe of genuine stability and co-operation, based on the rebuilding of sustainable local economies both East and West.

The Green Party are in favour of a very different Europe from the corporate-dominated superstate model on offer today. Co-operation Europe-wide is key, but not through the remote and unaccountable channels that characterise today's European Union. The Greens oppose the Euro as a symbol of a centralised, one size fits all EU.

There is no doubt that this vision of change is hugely ambitious; and that the Green Party has a long way to go to get anywhere near achieving it. But that, of course, is precisely why they need as much support as they can get come election time.

How to go local?

In a short manifesto there is obviously inadequate space to spell out the far-reaching improvements that would be possible under the Greens' localisation programme. However, its main strength is its potential to provide an overarching political framework that will enable a wide range of goals to become achievable. This holds true for matters as disparate as tackling climate change and reducing global poverty.

Look, for example, at the Greens' plans to rein in corporations. In conjunction with the phased introduction of tariffs, quotas and subsidies to ensure the protection and diversity of local economies, the Green Party's 'site-here-to-sell-here' legislation would, over time, considerably reduce levels of imports. Market access would be dependent on the exporter being able to supply goods and services not available in the importing country.

This approach would stop big corporations relocating, or threatening to do so, since their doing so would result in lost access to the national market. Their activities could then be brought back more under the control of citizens and their governments. Among other things, these measures would swing the pendulum of power back into the hands of governments.

Fair levels of company taxation would then become feasible, since the excuse of unfair competition from low tax/ low wage foreign competitors would no longer be valid. The levels of other taxation could then be raised to pay for social provision, since under localisation, countries would no longer need to curb taxes in order to lure foreign investment. The same would be true of resource

taxes such as those on energy, which at present are easily constrained by business arguing that they would render domestic producers uncompetitive. But the real achievement would be the rebirth of local and diverse economies.

Real control of corporations

The failures of the present system of corporate regulation are emphasised every time a company threatens to relocate or drop its standards in order to maintain its competitiveness. In recent years, anti-corporate campaigns by citizens' movements – the anti-Nestlé baby milk campaign, for example; or fights against loggers like Mitsubishi and MacMillan Bloedel – have grown in size and power. Activists lobby, demonstrate, boycott, demand the introduction of codes of conduct and insist on adherence to international standards. But while these approaches have had some success in changing the behaviour of the specific company targeted, there has been very little significant change in the overall activities of global corporations.

Why? Because while companies can play governments off against each other, and hop from state to state to avoid taxes or seek the least-regulated environment, even high-pressure campaigns can only have limited success. This is why the Greens' new framework is so vital – and must be global.

Taxing for change

Ecological taxes on energy and pollution will also be needed to help pay for the radical economic transition that the Greens propose. They would be envi-

ronmentally advantageous, and could allow for the removal or reduction of taxes on labour and limitations on direct taxation. These, along with the necessary legislation and inducements, could provide the revenue to rebuild public transport, turn organic farming from niche to the rule, phase out polluting chemicals and reduce carbon emissions by the minimum 60 per cent required to tackle climate change.

Competition from regions without such taxes would be minimised by reintroduced tariffs and controls. Also, any adverse environmental effects would be experienced locally, increasing the pressure, impetus and potential for control and improved standards.

What is stopping this green transition is the fact that, at present, as soon as even mild taxation is muted, big business from the pro-fossil fuel Climate Coalition to the CBI shrieks that 'international competitiveness' is threatened. This, allied with judicious threats of closure and relocation, ensures that any plans for adequate green taxes are dropped. A real restructuring of the economy would remove this problem.

A Green future

The growing number of anti-globalisation protesters across the world are coming under increasing fire from their critics for failing to offer an alternative. The UK Green Party have done just this; it is both radical and practical, and in my view, they deserve wide support for it at the coming election.

The Greens are standing in around 130 constituencies, and if they gain significant support it will send a much needed wake-up call to the New Labour, Conservative and Liberal Democrat globalisers. More importantly, it could trigger the debate about alternatives to globalisation that could help encourage the growing international protest movement to shift from opposition to much needed proposition. It can be done.

*Colin Hines is an Associate of the International Forum on Globalisation and author of *Localization – A Global Manifesto* (Earthscan).*

THE GREEN PARTY ARE IN FAVOUR OF A VERY DIFFERENT EUROPE FROM THE CORPORATE-DOMINATED SUPERSTATE MODEL ON OFFER TODAY

LIES, DAM LIES

EDUARDO GONCALVES EXPOSES HOW THE EU IS FUNDING AN ILLEGAL MEGA-DAM THAT COULD BRING THE IBERIAN LYNX TO THE BRINK OF EXTINCTION.

THE VALE DO GUADIANA in south-eastern Portugal, home to the rapidly disappearing Iberian lynx, is an extraordinary place. A patchwork of working farms, the product of a sustainable tradition of agriculture combining forestry and pastoralism, it is considered by some biologists to be the best living example of humanity and nature co-existing in harmony.

Just the right place, then, to build one of the biggest mega-dams ever seen. The Alqueva project, part-funded by the European Union in order to 'develop' the region, includes 10 dams, 3,000 miles of irrigation canals, 114 pumping stations, as well as nine bridges and 12 new roads. The total cost is expected to come to more than £1 billion.

In fact, the EU's environmental own impact assessment study report's conclusion is shocking: 'This project will bring some species closer to extinction in Portugal.'¹ Yet the green light has been given on production, creating more than a whiff of scandal. An official study detailing the valley's wildlife habitats has disappeared, and the area was removed from a list of proposed sites for special environmental protection in mysterious circumstances.

What on earth is going on?

Contractual agreements

One of the companies that has won lucrative contracts to supply the works is ABB Asea Brow Boveri – a member of the Ilisu dam consortium, and renowned for its involvement in a host of other controversial 'Third World' mega-dams, including India's Narmada valley and in the Brazilian Amazon rainforest.² Over 300 important archaeological sites, including ancient human settlements dating back thousands of years, will disappear under water – in spite of an international outcry that followed the disclosure that another Portuguese dam, at Foz Coa, would flood unique Stone Age engravings found in local caves.

Alqueva was loudly hailed as a jobs creation scheme, but just 13 locals are



employed in the construction work. Instead, many labourers are immigrants from Moldova, Ukraine and Romania, suspected to have been smuggled into the country by a Russian human-trafficking Mafia.

As for the hundreds of local people who will be forced to abandon their homes, they say they have been given little choice. But for multinational tourism operators, the Alqueva dam – with its 160 square-mile artificial lake, and 460 'new' islands – is a boon. Dozens of multimillion-pound planning applications have already been filed for golf courses, luxury hotels, casinos, health spas and island resorts complete with jetties and interconnecting tunnels.

The Portuguese government insists the dam is being built to provide irrigation for local farmers, and 'rescue' them from poverty. But local farmers' leaders say that the promises of riches are 'a mirage', whilst Eugenio Sequeira – one of the country's top agronomists – has warned that the area's thin soils are unsuited to intensive agriculture, and that the result will be massive erosion and pollution.

'There are no guarantees of sufficient water of the required quality to make the project economically viable,' adds Green/EFA MEP Alexander de Roo, who is demanding the European Commission justify its decision to sink millions of pounds of European taxpayers' money into the scheme. 'Upstream of the Alqueva dam there are several pollutant sources in Spain.'

Even if local farmers could afford to convert their land and buy the reservoir water,

there is no guarantee they will be allowed to increase output under the EU's quota system.

In fact, the area already has an irrigation network – used at less than 50 per cent capacity – but the authorities have allowed it to fall into disrepair. Critics claim the supposed benefits to local farmers of the new dam were used primarily to win public support – and foreign backing.

'It was only with this argument that an enormous financial investment could be justified

before the country and the EU,' claims an editorial in Portuguese daily *O Publico*. 'Now, in the face of the facts, it only remains for us to ask ourselves whether we were by chance all deceived by the supposedly essential need for Alqueva. How (else do you) explain an investment of hundreds of millions of 'contos' of public money to create jetties for leisure boats and golf courses for the wealthy?'³

But if the economic motives are questionable, there can be little doubt about the dam's colossal environmental impact in such a unique and sensitive region. It will reduce the Portuguese habitat of some plant species by up to 90 per cent. Similar fates will befall aquatic life-forms and birdlife.

And then we come to the Iberian lynx. The lynx is concentrated in five main populations in Portugal, as well as a number of others in Spain. One of the Portuguese populations is here in the forests, scrub and river banks of the Vale do Guadiana. This group represents up to 13 per cent of the Portuguese lynx population, whilst the habitat corridors linking it to another at the western end of Spain's Sierra Morena help make this one of the biggest on the peninsula.

It is also one of the few remaining areas where reproduction still occurs. The network of streams and tributaries link the territories of individual animals, including those in neighbouring Spain. Such genetic exchange is vital for a species whose numbers are so low that it is threatened by disease through excessive in-breeding.

But the clearances now taking place

threaten to destroy an important part of the lynx's potential habitat, including an area identified as one of the four nuclei of the Vale do Guadiana lynx population, called Alcarache-Guadelim.

Yet, with almost breathtaking complacency, the logging teams have been given instructions to watch out for lynx injured or killed during the operation, including young cubs who may still be in tree dens, but not told what to do with them.⁴

And in the longer term, the Alqueva complex – with its huge reservoir, sprawl of irrigation canals and roads – could eventually decimate the lynx population here, as the EU's environmental impact assessment study clearly suggests: 'Animals will lose their habitats by the flooding of the area of the reservoir and by alteration of the living conditions in the irrigation zone... habitats would also be fragmented by the new roads... (irrigation canals) represent obstacles which cannot be crossed... the result will be an isolation of populations which can lead to a decrease in genetic diversity.'

Crossed lines

Its findings merely highlight the dam's illegality in the face of the EU's own laws. The EU's Habitats Directive lists the Iberian lynx as a 'priority protected species', and – under article 12 – expressly forbids the 'deliberate disturbance of these species, particularly during the period of breeding, rearing, hibernation and migration'.⁵

The same directive also instructs member states such as Portugal to identify and include lynx habitats in special conservation areas as part of a new Europe-wide network known as 'Natura 2000' in which development or habitat alteration for economic purposes is banned. Vale do Guadiana was included in the Portuguese government's list, but then removed from a 'revised' version. No official explanation has ever been given for the turnaround.

However, EU officials contacted by *The Ecologist*, are adamant that they have never known about the Vale do Guadiana lynx. 'The original environmental impact study makes no reference at all to the lynx,' said one, who asked not to be identified. 'This is new information. If we had had it at the time, perhaps the dam would not have been approved,' she added, without irony.

They pointed an accusing finger at the Instituto da Conservacao da Natureza (ICN), the Portuguese government's official conservation agency. In 1995, the ICN was given a grant by the EU to undertake research into the lynx's habitats in Portugal. A draft report was ready the following year, as the team of ESB investiga-

tors hired by the EU to conduct the environmental impact assessment of the dam arrived in the area.

The ICN report confirms the presence of lynx in Vale do Guadiana, and contains detailed maps of habitat areas, transit corridors between different territories, breeding areas and gives the exact locations of confirmed sightings. The report goes on to estimate population numbers in each of the four local nuclei – including that now being cleared by loggers.⁶

However, the authors of the EU's environmental impact study have told *The Ecologist* that this information was never passed to them. Tommy Brae, who led the study team for ESB International, a group of consultants appointed by the EU, added: 'We met up with ICN officials because we were looking for up-to-date information on wildlife, but we were never told about the lynx. If the ICN did have that information, they should have given it to us.'

In fact, in their report the ESB team were unable to give population numbers for 13 out of the 16 mammal species – including the lynx – that were thought to be threatened by the dam. Without that data, and in spite of ESB's general warnings about the dam's consequences on wildlife, there were no technical grounds on which the project could be stopped under EU law.

Environmentalists, though, say the EC is as much to blame for the fiasco as the ICN. 'The ICN report was funded by the EU, so there is a copy in Brussels that must have been seen by someone,' said Guy Beaufoy of WWF who is launching a legal challenge against the dam.

Campaigners also warn that the EU is now preparing to finance a number of other dams and highways in prime lynx areas. 'The Brena II dam in Córdoba will affect the largest remaining meta-population in Spain, whilst the Odelouca dam and Algarve-Lisbon motorway could literally signal the end for Portugal's largest and most viable nucleus,' said Siobhan Mitchell of SOS Lynx, which first blew the whistle on the Alqueva lynx scandal.

She added there was still time to save these areas from destruction. 'It is not too late for the EU to block the Alqueva irrigation canals network, which is the major cost component of the scheme, and without which there is no justification for such a huge project.'

The future for the lynx is grim, with successive bouts of disease affecting rabbit populations, and illegal hunting and snares continuing to take a heavy toll. But deliberate habitat destruction – much of it publicly funded in the name of 'progress' – is

now the principal threat to the species' long-term survival, as even a recent document from the Council of Europe admits.

'Whereas some (EU) programmes are aimed at implementing habitat improvement and other conservation measures, lynx habitat is simultaneously destroyed, usually at a higher rate, by developments that are financed by other European funds. Some examples include road networks, dams and irrigation projects and afforestation programmes.'⁷

Indeed, the EU recently announced new subsidies for logging companies to establish plantations of exotic fast-growing trees in potential lynx areas, threatening to accelerate a process that has already destroyed habitats in Portugal's Algarve mountains and Spain's Sierra Morena range. Plantations of pine and eucalyptus have already had a devastating effect on lynx in Spain and there are now more Tasmanian Blue Gum trees in Portugal than in their native Australia.

The EU is also cutting aid for farmers to maintain and regenerate oak trees in these areas. For Mitchell, the consequences will be the further undermining of local economies and the loss of lynx populations.

'European Commissioners say they are committed to preserving wildlife species, but so far the money they have given for lynx conservation is less than the cost of building one mile of new road.'

Along with a coalition of seven NGOs who are fighting the dam, SOS Lynx has filed a series of legal challenges against the Alqueva scheme, and is asking the European Court of Auditors to investigate the apparently illegal use of EU Cohesion Fund money for part of the dam.

However, it says that the key to the long-term future of the species is promoting the value of traditional farming methods in these areas. 'The economies of these local communities are under systematic attack by policies such as CAP, and with them the landscapes that are needed by both humans and wildlife,' said Mitchell.

'Iberia's oak forests are a vital carbon sink for the whole of Europe. They are what stands in the way of the land where agriculture began from becoming a desert. And traditional farming methods provide us all with a vital lesson in how sustainable land use produces an abundance out of apparent scarcity.'

Eduardo Goncalves is a freelance journalist who lives on a 'montado' farm in a forest inhabited by the lynx. For information about campaigns, contact SOS LYNX at sos.lynx@clix.pt References on page 66

DOWN MEXICO WAY

SOPHIE STYLE REPORTS ON THE MEXICAN GOVERNMENT'S PLAN TO OPEN ITS DOORS EVEN FURTHER TO MULTINATIONAL CORPORATIONS.

IT IS THE next stage in the 'globalisation' of central America. It is happening with little fanfare, but its implications are huge. On 12 March, Mexico's new president Vicente Fox launched the Mexican chapter of the 'Plan Puebla-Panama' – or PPP – the latest step in the creation of a vast 'Free Trade Area of the Americas' – in other words, the corporate colonisation of Latin America.

The \$8 billion mega-project that is the PPP will create a 'development corridor' from Mexico's central state, Puebla, through six Central American countries down to Panama. It is being promoted as the key to eliminating poverty and bringing peace in the region. But behind the official discourse lurk the bitter fruits of corporate imperialism in an area of strategic importance for the US export industry, and according to Mexican analyst Carlos Fazio, the final stage of a counter-insurgency plan to combat indigenous resistance in the South-East.

Until recently, very little was known about the PPP. It is based on a document designed under the previous Mexican government by Santiago Levy, sub-secretary of the Treasury Department and adviser to the World Trade Organisation and World Bank. It is this global lending institution, together with the Inter-American Development Bank, that is providing the key impetus for the Plan.

Subsidising 'free' trade

Of all the 181 countries which are indebted to the World Bank, Mexico's debt is the largest; and the PPP will increase it. As with most World Bank loans, the primary focus of the loan Mexico has been given for the PPP is the modernisation of infrastructure across the nine less-industrialised states of the Mexican South-East – effectively subsidising transnational corporations and opening the way for further privatisations. The Plan includes the expansion and construction of motorways, ports, airports and railway systems, to be completed by the end of Fox's six-year term. This year alone,



Lost childhood?: Children playing in Oaxaca, one of the sites resisting the multicorporate drive.

\$420 million have been designated for over 2,200 kilometres of motorways, and work will begin on two hydroelectric dams in Guerrero, a state that has already seen widespread environmental destruction.

In the state of Chiapas, christened by Fox as the 'central axis' in his vision to integrate southern Mexico with the neighbouring economies of Central America, the spotlight is on derelict Puerto Madero. The president (the ex-head of Coca-Cola in South America) has been using his keen marketing skills to woo US capital to invest in this crumbling 25-year-old harbour and transform it into a regional gateway – complete with industrial park and free-trade zone for fisheries. The government claims that these developments are needed to improve the health and education services in indigenous communities. In fact, they have more to do with facilitating the transportation of cheaply produced goods and natural resources out of this region, and increasing the influx of corporate goods and services for the 27 million 'consumers' in the region.

The location of these developments is not accidental. 'We need to relate the PPP to the current needs of the US economy and its lagging export industry,' says Andres Barreda, researcher at Mexico's Autonomous University (UNAM). He says that, with production concentrated in the American East, including half the world's

cars and grain, and a shift in the global economy from the Atlantic (Europe) to the Pacific (Asia), it is of primary importance to the US to be able to efficiently transport goods to the West Coast. With the Rocky Mountains presenting an overwhelming obstacle, Mexican and Central American territories gain strategic importance, providing a trampoline for the US to Asian markets. The Panama Canal has fulfilled this function but is now saturated with cargo ships.

The PPP's emphasis, then, is on relaunching a long-standing American dream – to link the Coatzacoalcos port on the Gulf of Mexico with the Salina Cruz

port on the Pacific coast across the Isthmus of Tehuantepec; the shortest stretch of land between the two oceans in this region. The PPP document explicitly refers to infrastructure investments which 'could convert the Isthmus into an exit channel to Europe for companies located in the Pacific, and to the East for those in the Gulf of Mexico'. So far, PPP investments involve modernising the trans-Isthmus railway line and building an eight-lane motorway from port to port. These projects are guaranteed to meet with strong resistance from local indigenous inhabitants who refuse to be mere pawns in the US battle to compete with Japan and Europe in the global economy. As the Zapatista caravan wound its way through the state of Oaxaca at the end of February, Subcomandante Marcos echoed the voices of local groups declaring that 'the Isthmus is not for sale'.

Green gold, black gold

Commercial eyes are also on the region for its combination of subsoil resources and rich biodiversity. Oil and gas deposits, as well as sites for hydroelectric production, are plentiful, as is the array of 'genetic resources' to fuel biotechnology developments. The PPP will facilitate access by TNCs to both of these. Investments of approximately \$7 billion are proposed for 'energy projects', including gas and oil production in Tabasco, Chiapas and

Campeche. As well as the two hydroelectric dams in Guerrero, 71 sites for new dams in Chiapas have been located, mostly in the Zapatista autonomous zones. The energy is needed to drive new industrial complexes in the region, and to be exported to the US.

A hidden element of the PPP is the opportunity for gene giants Monsanto, Syngenta, Diversa, Pulsar and others to carry out 'biopiracy' in central America. Under the banner of 'biodiversity conservation and management', the World Bank – along with private investors and so-called environmental NGOs – is promoting the creation of national protected areas across the South-East in the 'Mesoamerican Biological Corridor Project', now part of the PPP. There is growing concern that these alliances are being used to gain access to plants and micro-organisms, without the informed consent of local indigenous populations. One example is the collaboration between Pulsar and Conservation International in the Lacandon rainforest. The Pulsar Group, which includes one of the largest transgenic seed companies in the world, is headed by multimillionaire Alfonso Romo, a close ally of Fox and key promoter of the PPP. Conservation International, in spite of its name, is well-known for its collaboration with pharmaceuticals in some of the most biodiverse countries in the world, in search of medicinal plant remedies, some of which are later patented. Indigenous groups have spoken out against these projects, describing them as 'a robbery of our traditional indigenous knowledge and resources'.

As a way of drawing the indigenous populations out of these areas, and to contain immigration to the US, a further aspect of the PPP is to create industrial corridors to expand the Maquiladora model to the South. The majority of these tax-free assembly plants are now located on the Mexico-US border, but companies have recently begun to threaten to move elsewhere due to perceived high costs of production, excessive regulation, increasing labour costs and inadequate infrastructure. To prevent them leaving the country, Fox has been trying to entice them to the South-East. Here, companies are assured of cheap labour, with salaries up to 40 per cent less than in the North, and will find generous subsidies and infrastructure provisions. This year 92 Maquiladoras will move to the region, creating 37,000 jobs.

A related aspect of the PPP is the drive to turn the countryside 'into a profitable business'. This year, there will be investments of \$65 million in irrigation systems covering 220,000 hectares in the eight southernmost

states of Mexico, primarily for large monocultures. Another project proposes that small farmers go into 'partnerships' with investors and put their land up as capital, with the option of continuing to work on it for a salary. The close involvement of Romo in the PPP suggests the strong likelihood of more genetically modified plantations across the region. The World Bank, for example, sees Chiapas as 'an interesting trial area for genetic engineering'.

All of these point to the concentration of land ownership in the hands of big multinational companies, as small producers are forced to rent or sell their small plots or communally-held ejidos. Since the onset of neoliberal reforms in the 1980s, and especially under NAFTA, it often makes more financial sense for indigenous campesinos to leave their corn or coffee rotting in the fields than to sell it at rock-bottom prices on the market. As more and more abandon their land, and with it many of their traditions, the options are clear. Rather than migrating to the US, they can now become exploited salaried workers in Maquiladoras, or in the oil or agriculture industries, at the same time opening the way to corporations appropriating their land and the valuable resources in it.

Two birds with one stone

If the indigenous populations refuse to leave their lands or give up control of these resources, military repression may follow. The states of Guerrero, Oaxaca and Chiapas are simultaneously the sites of greatest resistance and guerrilla organisation, abundant natural resources and the most intense militarisation in Mexico. Since the Zapatista uprising in 1994, indigenous communities in Chiapas have undergone seven long years of low-intensity war. While striving to give an image of peace (which will help attract investors back to the region) Fox has already made it clear that there will never be a full withdrawal of soldiers from Chiapas, because they are needed to combat drug-trafficking and illegal immigration. The PPP implies granting maximum security for corporations – both in terms of infrastructure and land tenure, as well as military protection. Given the economic importance of natural resources in this area, Gustavo Castro at the Centre for Economic Research and Community Action Policies (CIEPAC) predicts an increase in what he describes as 'biomilitarisation' and 'petromilitarisation'.

Meanwhile, the US Congress has approved the financing of 38 military operations this year, which involves sending around 100,000 soldiers to 21 countries in Central America, South America and the

Caribbean. The aim is to support national armies in the fight against drug-trafficking and guerrillas, under the guise of humanitarian assistance. The US says it is needed to protect some of the 'weakest democracies' in the area. In this sense, the PPP can kill two birds with one stone – promoting economic globalisation and providing a justification for increased military presence.

Grassroots opposition

The PPP – with projects that imply the eviction of indigenous communities from their lands to make way for roads, airports, industrial centres, plantations and military bases – is bound to encounter strong grassroots opposition. Across the South-East, communities are already fighting specific projects at a local level, whether it is the resistance of midwives and healers to biopiracy in Chiapas, communal defence of forests in Oaxaca and Guerrero, protests against the industrial corridor across the Isthmus of Tehuantepec, or opposition to the expansion of eucalyptus plantations and the entry of transgenic crops. The PPP is being promoted as a plan which will 'emerge from the people' after a nationwide consultation. But what if the people decide they don't want it? And why has work already started?

At the Third National Indian Congress, held on the route of the recent Zapatista caravan in the central state of Michoacan, representatives of more than 40 indigenous groups got together and agreed on the following landmark declaration.

'For us, Indian peoples, our Mother Earth is sacred, and so are all the beings which inhabit her... They are not a commodity which can be bought or sold. For this reason, we cannot accept the destruction of our territories through the imposition of mega-projects by the federal and state governments in our various regions throughout the country... We demand a moratorium on all projects that involve bioprospecting, mining, water mega-projects, and all biopiracy activities taking place in our lands and in our country, until the Indian peoples have discussed in their own time the issues related to the control of their resources.'

It's clear what the indigenous people think of the PPP. How the Government responds is another matter entirely.

Sophie Style is a freelance journalist. For more information, contact chiapaslink@yahoo.com or see www.chiapaslink.ukgateway.net. With thanks to the Centre for Economic Research and Community Action Policies (CIEPAC), and the Mexican Network for Action Against Free Trade (RMALC).

PETROL IN PAPUA

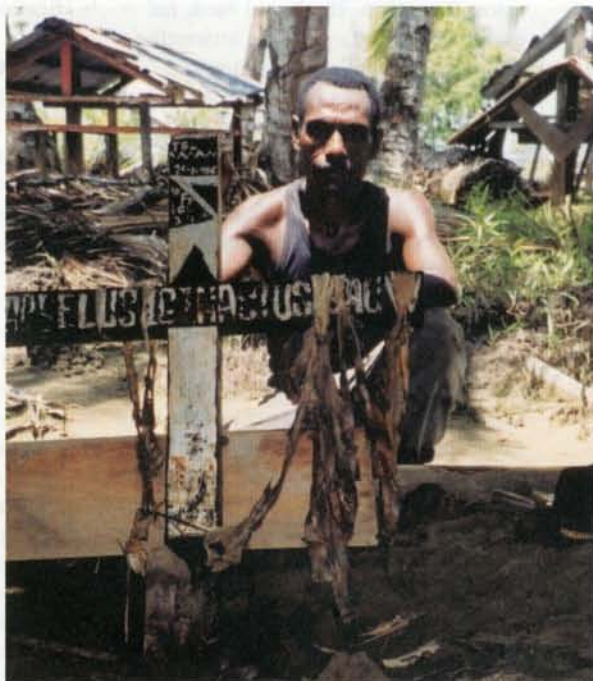
KEITH HYAMS WENT UNDERCOVER TO INVESTIGATE BP'S EXPLORATION WORK IN WEST PAPUA – AND WAS DISTURBED BY WHAT HE FOUND.

RIOT POLICE SWARMED through the airport, armed with automatic rifles. The body of Phillip Murit, one of the students they'd shot at the previous day's independence demonstration, was being flown home. I was in Jayapura, the capital of West Papua (Irian Jaya), about to fly to the small town of Manokwari in the Bird's Head region of the country. West Papua has been occupied by Indonesia ever since it was cheated out of independence by the UN in 1963. Its culture and people, even the continent in which it lies, are so different to the rest of Indonesia that the only remotely Indonesian things about the territory are the police and military posts. Thousands of indigenous Papuans have been murdered, raped, and tortured by the military since Indonesia took over, in an attempt to systematically destroy their ancient culture and 'modernise' people they see as backwards.

All this has taken place behind doors mostly closed to the international media. I'd arrived on a tourist visa, and my ability to stay out of prison would depend on whether I could continue to convince the police that I was there for the scenery.

In Jayapura, a number of people had told me that the Indonesian government had devised a plan to strip West Papua of its rich natural resource base, to bring in revenue for the government. This amounted to theft on an unprecedented scale, the Papuans said, since they would see barely a cent of the money raised. Amongst these so-called 'development' projects was the Mamberambo dam proposal, which will involve the flooding of a huge river basin, throwing 10,000 people out of their homes, destroying their lifestyles, and even threatening their very existence.

Another aspect of the plan was the exploitation of West Papua's extensive oil and gas reserves. I'd heard rumours in Jayapura that a British company, BP, was involved. Apparently they were setting up an operation in Bintuni Bay, where a huge natural gas field has recently been discovered. 'Tangguh' it had been named – trans-



KEITH HYAMS

ON 1 MAY 2001 police shot four people and arrested seven in an attempt to take down the West Papuan flag at the HQ of the independence movement in Manokwari. This latest incident in West Papua, or Irian Jaya, is the latest disaster in a disturbing sequence of events.

lated as 'All Powerful'. In Britain, no-one seemed to know anything about what was going on at Tangguh, and even in Jayapura the reports I heard were vague. I wanted to go and see for myself.

Manokwari: meeting independence leaders

In Jayapura, an independence activist had given me the name of the leader of the underground independence movement in the Bird's Head region; a man called Abraham, known throughout the country for his leading role in pioneering Papuan resistance to occupation. He'd been in hiding since his house was raided in December by the police. A large, well-built man, he sat opposite me, flanked by a muscly guy in a white military uniform, who introduced himself as Abraham's personal bodyguard.

We discussed the history of Indonesian brutality in West Papua, the struggle for

West Papuan independence, and BP's Tangguh project. One of his comrades, a crippled OPM (the Liberation Army of West Papua) commander, stated his view eloquently. 'What sort of a company is BP?', he asked, 'that they would cooperate with Indonesia in its brutal occupation of West Papua and ongoing rape of its natural resources?' He said that, whilst they would welcome BP after independence, for the moment, 'you can't have development before politics. Whilst the Indonesian government is still in charge, any revenue earned from Tangguh will be split between BP and Indonesia... if any conflict arises between BP and the local people, there is no way without a representative Papuan government to ensure that the rights of local people are respected.'

Meeting BP

The next person I'd arranged to meet was a friendly man from Jakarta called Udin. Udin was a senior BP Indonesia employee, in Manokwari for a 'conflict resolution' workshop with representatives of the villages where the Liquid Natural Gas (LNG) processing plant is to be built. Certainly consultation with local communities is a step forward, though in the light of the Ogoni, Nigeria, campaign and subsequent Shell boycott, BP has a strong incentive to exercise caution in West Papua.

I introduced myself to Udin as a student travelling around Indonesia, and told him that I had a passing interest in the project since a friend of mine works for BP. Udin was extremely helpful, giving me plenty of information about BP's plans for Tangguh. To start with, there will be two offshore oil platforms (more possibly emerging later as those reserves dry up) with submarine pipes to an onshore LNG plant covering 600 Ha of what is now primary rainforest. An adjoining fertiliser factory will be operated by another company, and a port will be needed to export the LNG to whoever they eventually find to buy it.

Rather than fly directly to BP's base

camp, I planned to sneak in by the back door so that I could talk to the villagers in the area first. On the way, at the settlement of Bintuni Bay, I spoke to the leaders of the two tribes in the areas where BP is operating. All three echoed Abraham's sentiment that they did not want BP to come until after independence had been achieved, and they presented me with a signed statement to that effect. We then had to face an interrogation at the local police station, where the Indonesian police chief was deeply suspicious of our presence in the area.

Finally, in the isolated village of Weriagar, perched above 14.4 trillion cubic feet of natural gas, we could hear first hand what the local people really thought about BP and the proposed development. Grim rumours we had been hearing about the deaths of babies were confirmed. One day in 1996, the American company ARCO (bought out by BP in 1999 shortly after it purchased oil company Amoco) barged in and started drilling for gas in the village river. The villagers were not consulted, even though the river was their only source of water and they depended on the sago trees for food. Shortly after the drilling began, the belly of 5-month-old baby Marselus Bauw mysteriously swelled up. Three minutes later he was dead. A few days later the same thing happened to 1-year-old Sutiani Brawer. Then, one by one, the same thing happened to every single baby in the village, 48 in total. One third of the families in the village lost a child.

A full three weeks after the last baby had died, a doctor from Jakarta paid a flying visit to the village. He stayed just long enough to tell the villagers that their babies had died of diarrhoea. If that was so, the villagers said to me, how come the symptoms were so different to the usual symptoms of diarrhoea? And why had so many dead fish been seen floating in the river at the same time? And why had the grass on its banks turned yellow?

After the doctor came the military. The villagers had wanted to report the deaths to the regional government and tell people what ARCO was doing to their community. But when troops arrived to protect the site, it was made clear to them that it would be in their interests not to make a fuss.

We paddled a dugout canoe across the river to the village burial ground, where the bodies of these tiny victims of the fossil fuel industry lay. The villagers are demanding compensation from BP for the deaths, but so far no agreement has been

reached and the issue has been handed over to an 'independent' commission along with all the other issues raised in the 'conflict resolution' workshop.

Shortly after the incident in Weriagar, ARCO made its way across the Bay to the village of Ottoweri, where 400 ha of sago trees were burnt down without compensation. Gas exploration is still going on in other areas of Bintuni Bay and Fak Fak regency.

Yet the most difficult thing of all to understand was that, despite this dark history, the people of Weriagar are actually angry that BP has chosen to build its LNG plant across the bay in Siangar, rather than near their own village. Why on earth was this, I asked, when in the past they'd been caused nothing but suffering by the gas under their land? Because, they replied, BP was actually talking to them, unlike the previous companies which had worked in their area. They said that they'd have to wait and see what the independent

'The bottom line is that the local people have no right of veto over the plant.'

commission had to say about their problems, though they were confident that future problems could be avoided through dialogue with the company. And in return, like the people across the bay in Siangar and Tanah Merah, they told me that BP would fund their health clinic and school, provide scholarships for particularly able students, give them new concrete houses to replace the wooden ones, fresh drinking water and, most of all, provide jobs in the LNG plant.

To BP's base camp

When I crossed Bintuni Bay to BP's base camp at Siangar, things began to make more sense. After eating a lunch worthy of a five star hotel, in a dining room adorned with glass framed billboards advertising the good work that BP is doing for the people of Indonesia, we were summoned to see the big boss. The big boss, a middle aged American named Jim, regarded us with even more suspicion than the policemen in Bintuni. After asking the usual difficult questions about what we were doing here and double checking my police travel permit, he agreed to let us stay for one night. Subject, of course, to Jakarta's approval (again).

The bedrooms were air-conditioned. The showers had hot water (the villagers bathe

in the river, and even in the cities almost no Papuans have hot showers). No luxury was spared, and large generators whirred around the clock to feed the energy hungry 'camp'. Despite the constant sunshine, there was not a solar generator in sight.

When aliens come and land next door with riches untold, who wouldn't want to join their party? For the villagers of Weriagar, Tomu, Siangar and Tanah Merah, BP seems to provide the longed-for key to an affluent Western lifestyle. It may not be for us to say that they shouldn't have it. What it is, however, for us to do is to provide an accurate assessment of what the villagers can expect if they welcome BP to their village, exchanging their rich culture, pristine rainforest and fertile fishing grounds (which even BP admits will be destroyed by the platforms) for concrete and chemicals. At the moment nearly all the information available to the villagers comes either from BP, from NGOs paid by BP, or from Indonesian government representatives. Anyone else who tries to discuss the issue with local people is liable to be arrested: I certainly had to be extremely careful what I said to villagers on the Siangar side of Bintuni Bay.

I would not be surprised if the villagers do get their clinic, their school, their concrete houses and their drinking water. After all, the cost of all these facilities for all the villages concerned for a full year is probably about the same price as one day's running cost of the base camp and its helicopter. But if West Papua had independence and a government which really looked after the needs of its people, the villagers wouldn't need to come begging to BP for these facilities. What I was less convinced about is that the benefits on offer (although more generous than most companies in the past) constitute a fair exchange for the gas, from which BP will make billions of dollars profit.

The bottom line is that the local people have no right of veto over the plant, and thus only the most minimal of control over how they are treated. As long as relations between BP and the villagers remain good, there is no problem. But should they turn sour in the future, there is no mechanism, in the absence of an independent West Papuan government, to ensure that their rights are respected and their livelihoods protected.

Keith Hyams is a freelance journalist. Names in this piece have been changed, for obvious reasons.



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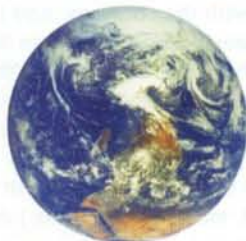
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What should be the future of the international economic and financial system? It's one of those REALLY BIG questions crying out for answers. The bad news is that you can't phone a friend, ask the audience or even go fifty-fifty.

The good news is that, even as corporate interests tighten their hold on the subsidies they extract from the rest of humanity and the biota, and move through the proposed GATS to further curtail the regulatory rights of governments, there is some useful work out there that may help us find the way forward.

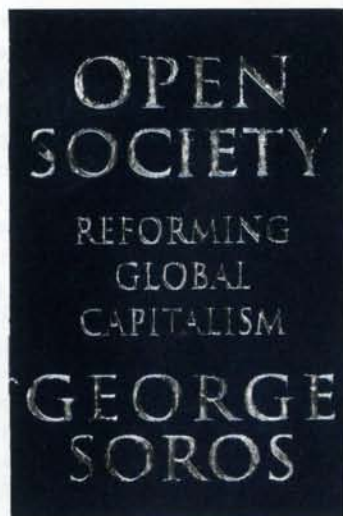
In that can(n)on, George Soros's new

book is a rather uncertain addition to the artillery, but Kavaljit Singh really delivers.

When Soros said back in 1997: 'The collapse of the present international capitalist system would have terrible consequences. But I find it far easier to imagine than a continuation of the present situation', it was bound to get attention. Here was one of the high priests of modern international capitalism speaking. He developed his case in *The Crisis of Global Capitalism* (1998), which predicted the imminent collapse of the world economy. In the event, it wasn't capitalism that fell apart but Soros's reputation as a financial magician and post-Communist guru. He was revealed as fallible, both as a thinker and as a money-maker – missing the massive ride of the Internet boom which ran for the next two years, and seeing the performance of his famous Quantum fund plunge. 'I made my bet and lost', he writes. 'It was a painful experience to endure both personally and professionally'.

Open Society is in part an effort at retrieval. It is a reworking of his much-criticised earlier work and is more modest in its theoretical claims and predictions, but no less ambitious in its policy proposals.

If you actually read this book, my advice is only to dip a toe into Soros's attempt at being a philosopher prince in the first few chapters, where he develops his theory of knowledge as a basis for an attack on which he calls economics. For the record, Soros has two organising concepts of



OPEN SOCIETY REFORMING GLOBAL CAPITALISM

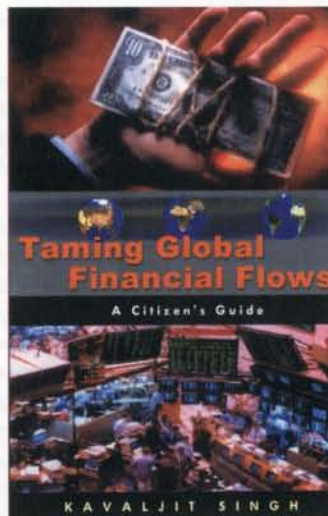
by George Soros
LITTLE BROWN 2001
£12.99 PAPERBACK

'reflexivity' and 'fallibility' as the source of much that goes wrong in human affairs. By reflexivity, he means the observer reinforcing a mistaken view of the world with false beliefs – something that can last up to a certain point until the whole system comes crashing down. This happened with the whole Soviet Union – which in later years found itself 'borrowing' large sums of money and food from the capitalist powers in order to maintain a system that supposedly protected it from those powers – and happens regularly in the boom and bust of western financial markets.

Even more to the point are Soros's ideas about, and prescription for, an international global financial system that is 'far from stable'. Prone to shocks, he writes, it lurches from crisis to crisis which the International Monetary Fund (IMF) and the World Bank are powerless to prevent. During the downturns, international capital acts like a wrecking ball on unfortunate 'developing' countries and those in transition.

Soros wants the IMF to be better resourced in order to provide contingency credit lines with access open to countries which follow sound policies, plus better banking supervision, better IMF supervision of macroeconomic and structural policies, greater transparency and so on.

He also recommends that the World Bank become a World Development Agency – a name that was also recommended by the Meltzer Commission,



TAMING GLOBAL FINANCIAL FLOWS A CITIZEN'S GUIDE

by Kavaljit Singh
ZED BOOKS 2001
£14.95 PAPERBACK

like Martin Khor of the Third World Network, who says: 'We aren't anti-globalisation: we want fair globalisation. We want the West to liberalise... [and stop] exploiting legal loopholes to avoid keeping their side of the bargain'. Khor's vision is a return to the principles which the economist JM Keynes sought to enshrine at Bretton Woods: financial markets subservient to industry; international financial organisations regulating trade and ensuring 'fair prices' for commodities; the IMF back to its original role of controlling the free flow of capital, not extolling its virtues.

And how to get there? Soros calls for an 'Open Society Alliance'. This would have a dual purpose of, first, 'promoting the development of open societies within individual countries, and second, strengthening international law and the institutions needed for a global open society'. The alliance would effectively be a form of world government, using the UN as its legislative body.

At a wild guess, the model could be his own Open Society Foundation, whose mission is to 'help open up closed societies, to help make open societies more viable and to foster a critical mode of thinking'. The Foundation distributes around US\$500m a year of Soros's personal fortune primarily to humanitarian, education, health and scientific work, primarily in eastern Europe and the former Soviet Union. It also provides generous support to independent

set up by US Congress last year. But Meltzer favoured a smaller institution, devoted to grant aid to the poorest states. Soros wants something far more ambitious: an agency providing credit for small- and medium-sized enterprises in all developing and transition countries.

So, the Soros message in full? Like some latter-day Oxford Street Protein Man, his prescription is something like: better regulated markets and stronger international financial institutions for more justice and more sustainability. Less sitting too, presumably.

It's not too far from the message of people

media opposing dictatorial regimes such as the Burmese Junta.

But it's one thing to run a foundation where you're only answerable to yourself, another thing to run the world. And Soros provides few clues as to how one could build this kind of alliance. Tellingly, he writes: 'I do not want to go on elaborating on the features of an Open Society Alliance because the further I go the more I feel enveloped in an air of unreality. The details would have to be worked out by participants'. That's a fine and democratic sentiment, but it'll take a lot more detailed thought about how to build that kind of co-operation and avoid the danger of trying to forge a future based on fallible simplistic formulae.

Kavaljit Singh may not be the new Keynes, but his new book provides a detailed and clear exposition of many elements in the puzzle. Singh suggests 'nine steps towards a better international financial architecture', including a return to capital controls, enhanced regulatory and supervisory measures, stable exchange rate systems, greater regional cooperation and a Tobin tax. There's useful material here for activists and citizens' groups to consider, if they want to engage with the realities of power.

Caspar Henderson



GRAMMARS OF CREATION

by George Steiner
FABER & FABER 2001
£16.99

'People should be able to say of me: he has lived therefore he lives' – Yves Klein

So, what is the meaning of life? Mankind's quest to explore this question has been fundamental to civilization. Creation myths ranging from Maori to Nordic to Christian-Judaic aim at assuring us that there is 'meaning'. Metaphors dif-

fer, but Creation emerges as a struggle of opposites.

Ideas on how the world was made have changed over the millennia, and according to *Grammars of Creation* have nowhere been expressed as vividly as in the arts.

One way of understanding the 'meaning' of a creation is by attributing it to its author – as in the idea of 'God's Creation'. Prior to the Renaissance, all art was geared towards glorifying the Creator; artists didn't sign their works. Glorifying Creation in its widest sense was what eventually evoked the change; a 'creation' by Botticelli became to 'be' a Botticelli. Either way, creation and meaning are closely connected; they are woven by no other power than the artist's imagination.

Grammars of Creation is more than just an observation on the nature of the relationship between God's Creation and human creativity as a means of understanding the self. It is more than just a journey taking the reader from Judaism, ancient Greece and Rome, through the arts and various stages of Christianity (Boccaccio's 'theology is nothing more than a poem of/on God') to 20th century deconstruction (Nietzsche's 'God is dead'; Samuel Beckett's 'He doesn't exist, the bastard'), to modernism (Yves Klein's 'Leap into the Void') and post-modernism (Maurizio Cattelan's 'Pope hit by a Comet'). Beside all of that, this book is a philosophical conversation with George Steiner. It is a linguistic investigation. According to Heidegger, 'language is the house of Being' – 'the limits of language means the limits of my world', said Wittgenstein.

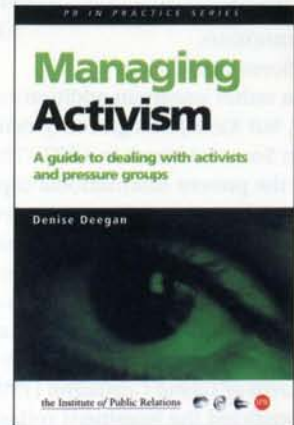
Why can't, or don't, we say 'God invented man?' All that lives procreates; life perpetuates itself. Artistic 'creations' like Dante's *Commedia* and Plato's *Death of Socrates* contain a character that makes them persist through time; that makes them perennial. 'Inventions' like the telephone are an expression of a particular point in time, eventually being surpassed, growing obsolescent; becoming meaningless and forgotten. 'A 19th century steam engine now is a historical curio. A novel by Dostoevsky is not,' writes Steiner. Creation is a product of energised thought; brought into being by an act of pure freedom (of will). Steiner suggests that 'as in the human artist, creation is the genesis of absolute freedom. Its liberality of donation, of exit from the inward of the self, is a manifest of love'.

During the 20th century, such manifestation has drastically changed. Language, the house of being, stands on shaky ground and so do the arts. Shakespeare's

'sovereign trust in the power of the word' is no more. The 20th century, more than any other, has witnessed such carnage and yet so many extraordinary inventions. Artists have expressed this dualism by questioning, angrily pushing, dissecting, trivialising the concept of 'creation' into such a tight corner as to 'reduce the trace', as Derrida put it.

Today, with progress and process proceeding so rapidly, 'Creation' is in danger of becoming less than meaningless. The changes and reactive forces are so fundamental, reaching so deeply and yet so unnatural, that we have become unable to reflect; we are speechless; we don't, can't, and even won't recognise the limits of our created worlds. During life, Creation does serve a purpose, if only as a point of departure, and whether you agree with Steiner or not, he will still fascinate you with this creative, persuasive and fascinating overview of art, life and creation.

Stephanie Roth



MANAGING ACTIVISM A GUIDE TO DEALING WITH ACTIVISTS AND PRESSURE GROUPS

by Denise Deegan
KOGAN PAGE 2001
£14.99

This is a vital book for campaigners, though this is not what the authors intended. Produced by the Institute of Public Relations, it acts as a guide for corporations faced with catastrophe. But the author, Denise Deegan, makes it clear that this catastrophe is not caused by environmental destruction or, indeed, the iniquities of the global economy – but by those trying to stop it. For this book is about 'activist-induced crises'. When there is an oil spill, for example, the real crisis is the

activist-induced one, caused when they start making a fuss.

It's a disturbing read, not least because of the offhand way in which serious issues are dealt with. Deegan lists the sorts of companies that might face pressure from campaigners, and in so doing creates a veritable pantheon of corporate irresponsibility. These include corporations with 'pollution potential'; those carrying out research on animals; those 'mistreating their employees' and those 'whose activities can be regarded as damaging'. All of these must be aware that they might attract the unwanted attention of activists.

And when they do become the centre of attention, what are they to do? At no point in this book, of course, is it suggested that the corporations stop doing the things which people protest about in the first

place. The emphasis, rather, is on dealing with the troublesome folk who insist on telling everyone what is going on. And this is the essence of the book. Campaigning activity is not to be prevented by altering the offending practices; campaigners are to be met head-on in a battle of spin. The media is to be manipulated and the moderate activists co-opted.

So Deegan stresses the importance of 'dialogue', or what she chooses to refer to, for reasons best known to herself, as 'two-way symmetrical communications'. This, though, is only to be entered into if other avenues have failed. And the communication is not necessarily about changing anything. For example, Deegan indicates that it can be a valuable exercise in information gathering. 'Building relations with less hostile groups first may lead to valuable information on

other activists, particularly more hostile ones.'

There is good news for activists though. For if evidence were needed that anti-corporate, anti-globalisation campaigns are beginning to have an impact on big business, it comes from the fact that there is a need for this book. The author says it herself: 'Activist groups,' she writes, 'represent a growing threat to organisations around the globe.'

Deegan states that: 'Learning to manage activists involves learning about activists.' But the delight of this book is that it also teaches activists about the workings of the corporate mind. It shows the machinery that is in place to respond to an 'activist-induced crisis,' and in so doing reveals its inherent weaknesses. Lessons will be learned on both sides.

Hugh Warwick

WORTH SEEING

If you take a trip down to Cornwall round about now you'll find that many of the county's resorts and tourist attractions, far from suffering a foot and mouth-induced tourist drain, are flourishing. B&Bs are fully booked, the beaches are clogged and the talk in the pubs and tourist information centres is all of increased visitor numbers. Perhaps, starved of the countryside, the public are flocking to the beaches instead.

Perhaps, too, nature starvation is increasing visitor numbers to St Austell's Eden Project – though it may not notice. Since it opened in April, and even before, as it was being constructed, so many people have visited this 'eighth wonder of the world' that it is struggling to keep up. Buoyed up by adoring media coverage, Eden is bringing hundreds of jobs to a run-down part of Cornwall, and is, on its own terms, already a runaway success.

But is it really as good as they say? My recent visit was occasionally entertaining – interesting too. But Eden presents problems for visitors – especially those of a 'green' bent – which you don't hear much about until you turn up.

First, the facts. The Eden project is a complex of two vast (and I mean vast – the biggest could contain 30 football pitches) 'biomes' – read space-age greenhouses, the world's biggest – constructed in a disused clay pit, linked by outside displays, exhibitions and other such colourful things. Inside each biome – one tropical, one temperate – is a wide-ranging show of plant life from around the world. The point of all this, says the Eden Project, is to 'promote the understanding and responsible management of the vital relationship between plants, people and resources, leading towards a sustainable future for all.'

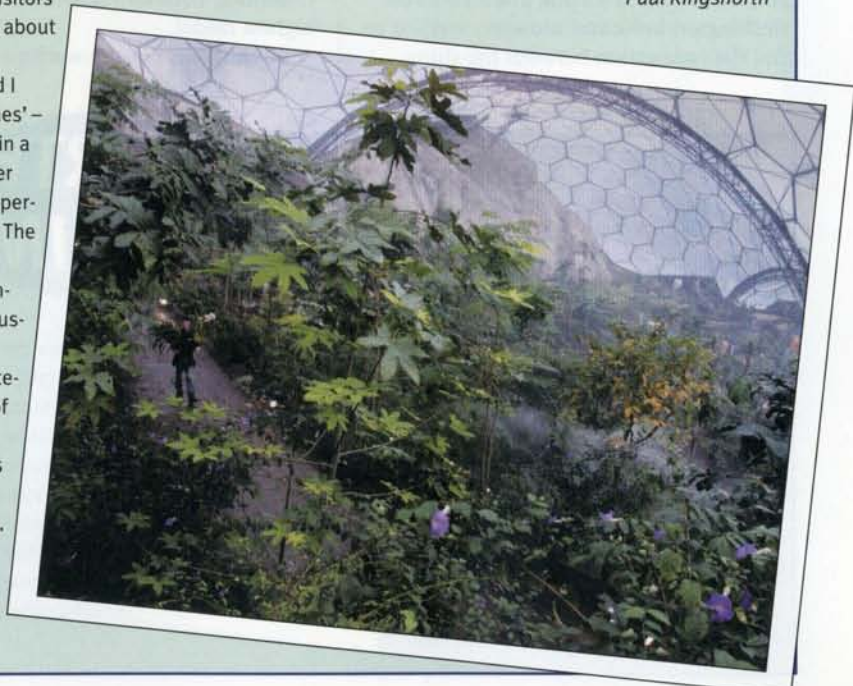
And that, in a nutshell, is Eden's problem. This place is definitely worth a visit if you happen to be in the area. The sheer scale of it is impressive, it's colourful, it has interesting plant life all over the shop and the café sells some impressively edible pasta. Kids love it, and the t-shirts are good. But when it comes to understanding 'sustainability', there's something not quite right.

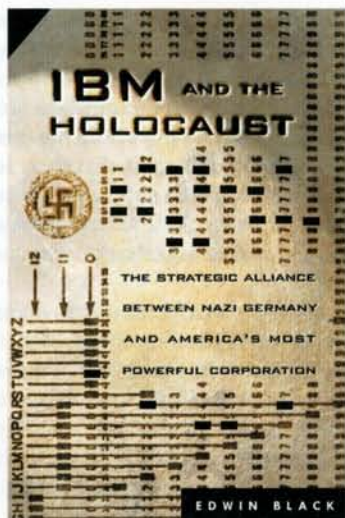
Maybe I'm being overly harsh, but a display on rice which talks about engineering the foodstuff to increase its vitamin potential without even mentioning genetic modification (as far

as I saw, it's not mentioned anywhere else either) has something missing. The general emphasis on plants as 'resources' rather than living entities grates too, and the list of donors has some worrying corporate names on it. Not that any of this is major stuff, perhaps – but the fact remains that the overall impression is of a lack of followed-through thought. For while Eden makes the occasional nod towards wider ecological issues you can never escape the overall feeling that, when all's said and done, this is a couple of very big greenhouses full of occasionally interesting plants pretending to be something far more.

Not that this should necessarily stop you going. But my overall impression was not of an Eden but of something much later; and the friend I visited with felt similarly underwhelmed. If you like wandering down crowded, sanitised, cordoned-off pathways looking at exotic plants, it's probably your place. But Kew Gardens got there first, and frankly I prefer their greenhouses.

Paul Kingsnorth





IBM AND THE HOLOCAUST

by Edwin Black
LITTLE, BROWN 2001
£20.00

Someone please put this book online. Why? Because this is history for the information age. In a sustained assault on the world's first information transnational, Edwin Black has shifted the spotlight of corporate activism away from sweatshops and ecological destruction and on to the greatest human crime of the 20th century – systematic genocide. And he has done so with all the savvy of the wired generation.

As every revisionist knows, the pursuit of history invariably begins with questions that really concern the present. Black, who gawped at an IBM sorting machine in the Washington holocaust museum, wanted to find the connection between the shiny

modern computing brand of today and yesterday's horrors in Auschwitz, Dachau and Belsen. By assembling the data, he answers the question that has bothered so many historians: how was the holocaust so efficient? Answer: just like today's corporate criminals, Hitler had IBM computers and IBM software tailor-made to carry out the task.

On one level, this is the story of a profit hungry corporation 'dazzled by its own swirling universe of technical possibilities ... self-gripped by a special amoral corporate mantra: if it can be done, it should be done'. But significantly, unlike the companies that built the bombs and designed the gas chambers, IBM escaped detection because its product, information, was invisible to the old economy – and to later historians.

In an era long before NASDAQ, Hitler understood that an arsenal of data properly applied was the essential counterpart to bullets and brown shirts. Smelling profit, IBM ('the solutions company') schemed and lobbied to become the preferred operating system of the Nazis. And IBM provided the software, knowledge and analysis that ultimately kept the ovens fed. As IBM's technicians ensured that every Jew, homosexual and gypsy was categorised, tracked and ultimately rounded up, they also designed the systems that kept the railways smoothly transporting millions to the camps, and even provided software to ensure that every punishment and torture in the concentration camps was recorded and organised up until the moment of death. Consequently, Hitler gave IBM special protection, even awarding its chairman, Thomas Watson, the Reich's highest medal.

Black shows how, in wartime Europe,

IBM New York pulled the strings, employing the same shrewd strategies that have become so familiar to modern corporate watchers. IBM maintained deniability of wrongdoing, covering their tracks. They supplied both sides of the conflict and they ruthlessly deployed capital, lawyers and staff to maintain markets and recover profits, whatever the political climate. A department of justice employee investigating IBM in 1943 had this to report: 'This world war is a conflict of warlike nationalistic states, each having certain interests. Yet we frequently find those interests clashing diametrically with the opposing interests of international corporate structures, more huge and powerful than nations. These corporate entities are manned not by staffs or citizens of any nation but by citizens of the world looking solely to the corporate interest and pledging loyalty thereto.'

As Black bitterly notes, IBM ultimately escaped punishment because, like transnational corporations everywhere it could play both sides off against each other: 'IBM was in some ways bigger than the war. Both sides could not afford to proceed without the company's all important technology. Hitler needed IBM and so did the allies'.

What makes IBM and the Holocaust fascinating is that Edwin Black has also chronicled the crossing of a threshold in the history of information. 'Mankind barely noticed', he writes, 'when the concept of massively organised information quietly emerged to become a means of social control'. We live in an age where information processing once again teeters on the edge of social control. For the census projects and racial databasing carried out on IBM's Hollerith machines, read today's genome

WORTH READING

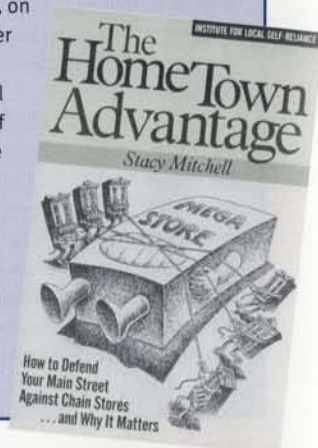
Living in a big city, especially one of the biggest in Europe, can leave you nature-starved. So thank goodness for the recently published Green Spaces Guide to London (Verdant Books, £5.95), a pocket-sized guide to the capital's green lungs. If you need a walk, a breath of fresh(ish) air or simply a means of escape it will tell you, in the nicest possible way, where to go. It guides you through all of the capitals parks and major gardens, and tells you, on the way, about their history, wildlife, architecture and botanical and horticultural interest. The big, the small, the famous and the obscure – they're all here. If you want to know what



you're about when you fancy a wander in the park, it's the place to look.

If you live in a small town, on the other hand, you'll have other things to think about. One of them might be the disappearance of your small local shops and their replacement by chain stores. If so, Stacy Mitchell's *The Home Town Advantage* (Institute For Local Self-Reliance, US, \$14.00) might buoy you up. The history of big stores, the unfair advantages they enjoy and – most importantly – how local space can be clawed back from them are all in this extremely useful little read. It's more US than UK-orientated, but worthwhile nonetheless.

Paul Kingsnorth



mapping and DNA databanks so eagerly sought by police forces, pharmaceutical and insurance companies keen to eradicate, exclude and control. Cast against the present, Hitler's ability to abuse 'massively organised information' becomes shockingly relevant.

The most astonishing hero to emerge from this history is a military technocrat by the name of René Carmille. A punchcard enthusiast and an originator of the Personal Identification Number (PINcode), he undertook the effort of conducting the French census by IBM punchcard on behalf

of Nazi Germany. Oddly, his data was never used and Black shows how efforts to round up Jews in France relying on a traditional paper population census yielded poor results. Compared to neighbouring Holland, where the punchcard data harvested a bumper crop of Jews, only a fraction of the French Jewry were ever deported to the camps. With the liberation of France, it became clear that Carmille had in fact used the census results to organise and mobilise the French resistance, having gathered details of every worker, gunsmith, farmer and mechanic.

Indeed he had never even collected the relevant ethnicity data – in record after record that part of the punchcard was left unpunched.

Although Carmille was arrested, sent to the concentration camps and died for his treason, he probably saved hundreds of thousands of Jewish lives.

In telling his story, Edwin Black has uncovered an Oskar Schindler for the hacker generation. If for his inspiration alone, read this book.

Then get to work...

Jim Thomas

LET THEM EAT DATA HOW COMPUTERS AFFECT EDUCATION, CULTURAL DIVERSITY AND ECOLOGICAL SUSTAINABILITY

By CA Bowers
UNIVERSITY OF GEORGIA PRESS 2000/US\$18.95

This latest book by the former university professor and author of *The Culture of Denial* and *Educating for an Ecologically Sustainable Culture* examines how computer-mediated learning contributes to the current worldwide ecological crisis, and suggests alternative ways of applying this over-hyped technology to the educational process. In his introduction, the author emphasises that his focus is on the correlation between cultural patterns and environmental problems: 'the impact of Western computer and consumer culture on the earth's ecosystems'.

Since the publication of *Let Them Eat Data* a new occupational hazard – akin to road rage – has begun to manifest itself in the American workplace. Called 'desk rage', it is a form of cybernetic cyborg frustration anticipated by the author, who writes that: 'Computers are making office workers redundant [and] contribute to the cruel paradox of fostering greater efficiencies... while reducing opportunities of employment.' Alas, we cannot all be programmers or web page designers! Bowers warns against the fascination with futuristic fantasies so prevalent in the West, and manifested in the globalisation of a market culture rooted in the industrial revolution – which he calls 'a now seemingly irrelevant era'.

In a chapter entitled 'Displacing Wisdom with Data: Ecological Implications', he expresses surprise at Western society's failure to recognise the symbiosis between population growth and environmental degradation. He chastises industry leaders who take pride in being able to base their decisions on vast amounts of instantly accessible data, yet seem to be blind to the human impact on natural systems. What should first and foremost be considered, when making predictions for the future of humanity, he says, is the spread of Western technology and consumerism, which, coupled with the population explosion, has led to 'critically important changes in Nature's life support systems'. To illustrate this point, he quotes some scary facts. Here are just a few:

On a worldwide basis, productive land decreased from 5.6

hectares per person in 1900 to 1.5 hpp today, in almost exact correlation to the population explosion in the last century.

The 'ecological footprint' – the amount of land required to sustain a human life – varies from 5.1 hectares in the US to a low of 0.4 in India, and averages 1.9 hectares worldwide.

While it takes many centuries for Nature to create just one inch of topsoil, it is being lost at an alarming rate, with 6 million acres of farmland abandoned yearly.

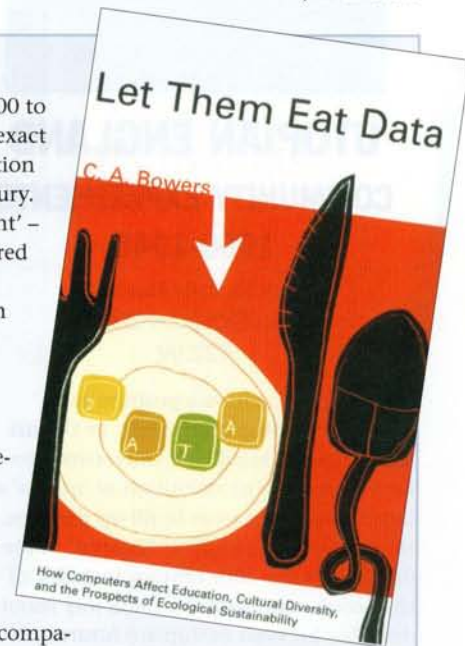
Rapid deforestation, accompanied by an increase in the release of carbon (and other so-called greenhouse gases) into the atmosphere – estimated at some 7 billion tons annually – contributes to global warming and climate disruptions, as well as to reduced agricultural productivity.

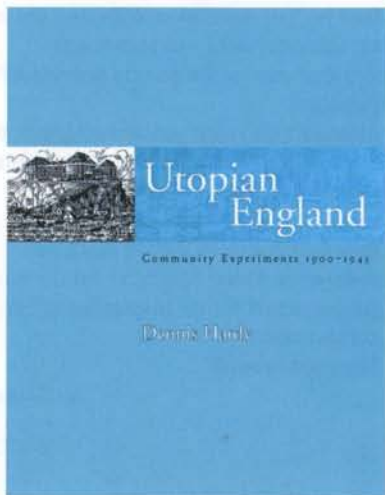
Fresh water, a sine qua non for survival of our species, is now in such short supply that urban needs can only be met by short-changing farmers. (In US cinemas, which used to have drinking fountains for their patrons, they are now paying \$2 for a pint of tap water.)

Bowers forcefully dismisses the views of those who claim that talk of an ecological crisis is but a liberal ruse used to control the lives of others: 'Contrary to such views, which rely on populist (compassionate?) conservatism [served up on] the Internet, there is no evidence that ecosystems are recovering from the rapid decline we're witnessing.' The conflict between indigenous peoples and those promoting 'development' is so harmful to the environment that survival itself has become the dominant concern of many cultures. Transnational corporations perpetuate globalisation, which 'undermines the viability of natural systems and the self-sufficiency of indigenous cultures'.

Let Them Eat Data is a welcome relief from the hubris exhibited by such digital devotees as Bill Gates, who unabashedly proclaim computers to be an Open Sesame to a brighter future for all mankind.

Gard Binney





UTOPIAN ENGLAND COMMUNITY EXPERIMENTS 1900-1945

by Dennis Hardy
E & FN SPON 2001
£22.99

I suppose if you have a position as 'Professor of Utopian History', as Dennis Hardy does at Middlesex University, you have to make your definition of 'utopia' as broad as you can so as to fill up the time. Hence, for him, 'Utopian England' in the first half of the 20th century includes all the people who wrote in some way about desirable (or even dystopian) futures – HG Wells, DH Lawrence, GK Chesterton, GB Shaw, and throw in Virginia Woolf and TS Eliot for good measure – even though only Wells, and in only a few works, is con-

'No doubt, of course, a professor of 'utopian history' has little choice but to go out and write utopian history, no matter how unpromising the period. So, this book comes under that category of works that "fill a much-needed gap".'

cerned with some imagined 'good place' as traditionally understood. ('Utopia,' as Thomas More meant it, was not only a no-place [u-topia in Greek] but a good-place [eu-topia].)

But more: it also includes anyone in that period who went off to start a community, or even a house or two, of any sort, whether or not it was intended to be

an ideal society, and most of the time there was no intention of that sort at all. Thus we have 'General' William Booth, founder of the Salvation Army, and his farms for young men at Hadleigh and Boxted, sort of agricultural reform schools with Christianity thrown in; Eric Gill's various artists' colonies; CR Asbee's crafts guilds in the Cotswolds; the Elmhursts at Dartington, an exercise in rural development rather than anything paradisaical; and the Bruderhof communities, part of a long tradition of Christian withdrawal but without political ideology.

Even with this catch-all sense of utopianism, Hardy is not able to find any groups that actually challenged the political order in any serious way, or even tried to live out a set of political and social ideals: 'Community experiments were largely self-contained,' he writes, 'and, in political terms, could hardly lead anywhere beyond the boundaries of their own existence.' In fact, to the extent that any of them succeeded, it was mostly by withdrawal and insularity.

But then it turns out that, in Hardy's view, this was really a pretty thin time for utopianism in England: the two wars and a devastating depression caused much disillusionment, and the temperament for grand experimentation along idealistic lines, where it was not subsumed by communism or fascism, was pretty well withered. 'This was not,' Hardy confesses at the end, 'a golden age for utopian ideas or community experiments. The extent of both ideas and experiments was limited, there was a marked lack of political engagement, and much of what went under the utopian banner was intellectually weak'.

Indeed, all that might make one wonder then why such a book needed to be written, particularly since there are a half-dozen books on the overall subject already, plus a number of biographies and autobiographies of the participants.

No doubt, of course, a professor of 'utopian history' has little choice but to go out and write utopian history, no matter how unpromising the period. Still, the result comes generally under that category of works where you might well say, this book fills a much-needed gap.

Kirkpatrick Sale

MAGAZINE RACK: Worthwhile reads you won't find in the shops.



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CULTURAL SURVIVAL QUARTERLY

Cultural Survival, 215 Prospect St, Cambridge, MA 02138, USA.
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A great publication reporting on indigenous people and their struggle against development. The Spring 2001 edition for example, explores the impact of mining on indigenous lands. Great case studies of places otherwise forgotten.



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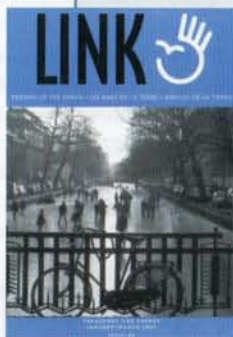
LINK

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THE CROW

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CRY, WOLF, CRY!

THE CROW is curious: when will we hear the last call of the wild?

I will never forget the day they shot the last Scandinavian wolf. Like most people, then or now, I had never seen a wolf in the wild. One person who had was Dag Hammarskjöld; on rare occasions he would glimpse one of the elusive creatures during his solitary hikes through the Arctic wilderness, 'to commune with his Creator and re-charge his batteries' — a practice which benefited him later, in his capacity as secretary-general of the UN.

A recent news item reminded me of this event that took place over half a century ago: it appears that farmers in the state of Wyoming are unhappy about the reintroduction of wolves into Yellowstone National Park, and want permission to shoot any animal who unwittingly leaves its protective territory. Last I heard, their request had not been granted.

But in the 1940s, while most European nations were embroiled in internecine warfare — an activity unique to the human species — the Swedish government decided to engage in some killing on its own. The targeted victim was *canis lupus*, paterfamilias of man's best friend and the most maligned of the species sharing this fragile planet with *homo erectus*, its prime polluter and plunderer.

Since time immemorial the grey wolf had roamed freely over the vast land under cover of the primeval forest, and as late as the middle of the 19th century an occasional stray wolf could be sighted on the outskirts of the capital, when temperatures dropped to -30°C — a starving animal in search of a morsel from the scrap heaps of his arch enemy, Man.

But a century later the last remnant of the country's wolf population, along with the brown bear, the wolverine and the lynx, had taken refuge in the most remote regions of Lapland, a sub-arctic area that transcends the national borders of Finland, Norway and Sweden. From the Interior Department in Stockholm the edict went out: 'Eradicate the last of the wolves!' The rationale was to protect the reindeer of the nomadic Laplanders from the forays of hungry carnivores, who had culled the weak and infirm animals from the herds during their annual migrations from the alluvial plains to the alpine highlands. The Laps enthusiastically endorsed this 'final solution' — a result, perhaps, of their over-exposure to Western civilisation and its skewed priorities, prompted by greed and blissful ignorance of the interdependence of all living creatures.

Perhaps we are wiser today, when the pressing demands for human living space has crowded a legion of cohabitants off the face of the earth — or confined them to zoos. Be that as it may:

for the Scandinavian countries it is too late. The biological clock cannot be set back to suit our fancy or new-found wisdom.

The usefulness to humans of a species should not be the test by which we judge which other animals are worthy of co-existing with us on earth. It is time that we tempered our hubris with a dose of humility, and abandon the arrogance which says that man alone is created in the image of God, and that all other living things are subservient to our whims.

The elimination from the Swedish eco-system of wolves predictably resulted in a population explosion among their erstwhile prey, notably moose, some 60,000 of which are now 'harvested' annually, in order to keep their numbers in check. While this may be a boon to hunters and housewives, the genetic implications for the ultimate survival of the species are less benign. For, whereas predatory animals prey principally on the sick and weak, man seeks out the finest specimens, such as an 18-pointer bull, whose cranium-cum-antlers, mounted on the wall, bears witness to nothing more than the hunter's ability to hit a large target with a high-powered rifle.

'Usefulness to humans should not be the test by which we judge which other animals can co-exist with us.'

The systematic culling of the most magnificent specimens flies in the face of everything that Charles Darwin taught us; for survival of the fittest we have substituted survival of the misfits. It is a classic example of our Icarian conceit: the belief that with our resource-depleting technology we can improve on Nature. While it may take countless generations of moose for the effects of our unwitting genetic tinkering to manifest themselves, there is no doubt as to its ultimate negative impact on the natural breeding stock.

So, until we master the art of soaring like an eagle or surviving like a wolf in a hostile environment, we would be wise to leave the selective process of eugenics to Mother Nature. Perhaps it is time that we all learn how to eat Crow, and face up to the fact that nature is not all-forgiving, but a stern taskmaster, with whose laws we tamper at our peril.

Gard Binney

POST SCRIPTUM: In recent years Sweden's wolf population has been partially restored, several individuals of genus *lupus* having sneaked across the border in flagrant violation of man-made immigration laws. But this is of greater concern to the bureaucrats than to the Lapps, who have abandoned their nomadic existence in favour of full-fledged membership in the welfare state.

THE Exchange

The Exchange is a noticeboard for environmental and ethical services and needs, open to all. Entries are FREE for individuals and NGOs, charities and campaign groups. For businesses and educational institutions, the cost is £54 per listing, to include a year's free subscription to the magazine. Repeat listings are £20 per issue, £10 extra for a boxed ad. Please send entries – no more than 40 words long – together with cheques where necessary made payable to *The Ecologist*, to Sally Snow, The Ecologist, Unit 18, Chelsea Wharf, 15 Lots Road, London SW10 0QJ, or email sally@theecologist.org For more information, call Sally on +44(0)20 7351 3578. Free listings are allocated first-come first-served, and we reserve the right to refuse any entry.

APPEALS

Help! I need 50 solar cookers at a subsidised rate or better still sponsored (free) for distribution in the Pawna area, Lonavla, Maval District, Maharashtra, India so that we can save the tree cover currently being decimated for fuel. Please email: clemd@vsnl.com

I need non-F1-hybrid seeds, preferably heritage, wildflower, edible or of medicinal value, to make seedballs (seeds encased in clay) for distribution in disused urban areas. Will Ashley, 83 Hunmanby Avenue, Hulme, Manchester, M15 5FF, telephone +44(0)7941 382386, email: wll@redbricks.org.uk

Save the survivors of Gujarat earthquake from another disaster. 470 small earthen dams must be repaired before monsoon starts in June. Please send cheques (made payable to International Service Society) to Dr K Sripada Raju, International Service Society, 2601 Cochine Lane, Okemos, Michigan 48864, USA or Dr Ravi Chopra, People's Science Institute, 252 Vasant Vihar, Phase I, Dehradun, UP 247006, India.

We wish to publish a **Handbook of Sustainable Engineering and Technology** and are seeking contributors from many fields, especially those familiar with unexploited and/or undeveloped technologies. Please telephone Andrew Stobart, 9 to 10am or 5 to 6pm weekdays on +44 (0)1568 780837.

Harrowgate Hill Junior School, Darlington has bought a solar panel and wind turbine to power a bird box web cam in the school gardens. Can you help fund its installation? Please contact Graham Temby, telephone +44 (0)1325 253300, for more information on the project.

£5 plants a tree in our Forest of Friendship. For this and other projects, contact Len Aldis, Britain-Vietnam Friendship Society, Flat 2, 26 Tomlins Grove, London E3 4NX, Email: LenAldis@compuserve.com

I am a jazz musician and would like to donate half of the proceeds from my album 'Natural Response' to the preservation of wildlife. I need help with funding and distribution. For more details, please email me, Alan Cameron, aljazzmo@yahoo.com

Funding required for **Sea Turtle Project**. Education, research and community development programmes require core funding. Endangered populations of 4 species. Ocean Spirits, PO Box 1373, Grand Anse, Grenada, West Indies. Email ocean_spirits@purpleturtle.com

HIPPO: Feeding the World with Compassion. Please support our international food and development aid that counters

malnutrition whilst opposing trends towards intensive agriculture. Donations and/or enquiries welcome: HIPPO, Llangynog, Carmarthen SA33 5BS or email HIPPOCHARITY@ukgateway.net

CALL FOR PAPERS

Special issue of **Journal of Black Studies**, Spring 2002, "Environment and the African Diaspora". Topics including environmental racism, dumping of dangerous wastes, environmental policy issues, literature, special case studies. Deadline: 30 October. For more information, contact Cecil Blake, Dept of Communication Studies, Oldfather Building, University of Nebraska-Lincoln, Lincoln, Nebraska 68588-0329, USA or telephone +1 402 472 8326.

CAMPAIGNS

Save our Environment. By using our Action Centre you are working together with the United States' most influential environmental advocacy groups in the crucial battles to protect our air and water, forests and oceans, climate, wilderness and wildlife. www.saveourevironment.org

The Campaign Against Depleted Uranium (CADU) aims to fight for a global ban on the manufacture, export and use of depleted uranium weapons. For more information, contact us at 22a Beswick Street, Manchester, M4 7HS Tel/fax: +44 (0)161 273 8293, email gmdcnd@gn.apc.org or visit our website www.cadu.org.uk

Please help us to stop the use of cruel and torturous battery cages in the egg industry. Visit our website www.banbattery cages.org/research/tour.html

The Organic Targets Bill which aims to get 30% of land organic by 2010 needs your help, e.g. lobbying your MP, providing funding, or volunteering. Find out more by visiting www.sustainweb.org and click on organic targets.

Advocates of incineration have argued for decades that there is no evidence of ill-health around incinerators. **Incineration and Human Health** summarises a number of epidemiological studies that show otherwise. www.greenpeace.org/~toxics/html/content/action_incinreport

Aldermaston Women's Peace Campaign. Based around a monthly camp at AWE Aldermaston, centre of Trident nuclear weapons production, AWPC is a women-only, non-violent campaign. For more information on how to get involved, telephone 07808 553778, Email aldermastonwpc@hotmail.com or visit www.gn.apc.org/aldermastonwpc

One million Agent Orange victims need your help. Our ongoing campaign is to raise funds and get the US to pay compensation. Will you help? Contact Len Aldis, Britain-Vietnam Friendship Society, 26 Tomlins Grove, London E3 4NX. Email LenAldis@compuserve.com

Baby Milk Action is a non-profit organisation aiming to save infant lives and end the avoidable suffering caused by inappropriate infant feeding. Visit us at www.babymilkaction.org

Help stop the first GM crop (T25 maize) being approved for UK growing. FOE has exposed a catalogue of bad science and reckless decisions. Call 020 7490 1555 for action pack.

Join **Pruninghooks** – cutting back the excess growth of industrial agriculture. Encouraging debate and action. To subscribe, email Lucy Michaels lucy@corporatetwatch.org

Scotland faces becoming the main source of opencast coal in the UK and exhausted opencast sites are being used for landfill. **Scottish Opencast Action Group** exists to network people with experience. Please contact SOAG, 42 Woolfords, By West Calder, Edinburgh, EH55 8LH, or email soag.info@virgin.net

Campaign Against Arms Trade (CAAT) Our campaigns happen only with the support of people like YOU. If you care about peace, justice and development, become part of the campaign today. Telephone +44 (0)207281 0297 or visit www.caat.org.uk

www.boycottbush.net has been set up to allow individuals to influence the global politics of climate change. Lists top 20 corporate donors to Republican Party and ethical alternatives. **Totnes Genetics Group**, grassroots campaign that focuses on Genetic Engineering and related issues such as Patents on Life, WTO, World Bank/IMF and Climate Change. Write to us at PO Box 77, Totnes, Devon, TQ9 5ZJ, telephone 01803 840098 or email info@togg.org.uk

An international day of action targeting ExxonMobil and putting pressure on the US to return to Kyoto negotiating process. To take part or learn more, contact **Pressurepoint** at info@pressurepoint.org

Simultaneous Policy – breaking the barriers to global change. Endorsed by Noam Chomsky, Helena Norberg-Hodge, Ed May and others. Visit www.simpol.org

World Court Project UK. We know that nuclear weapons are immoral and a threat to our planet. Have you thought that they might be illegal as well? Contact George Farebrother, 67 Summerheath Road, Hailsham, Sussex, UK. Tel/Fax: +44 (0)1323 844 269, email geowcpuk@gn.apc.org or visit our website www.gn.apc.org/wcp

VOLUNTEERS

Small Caribbean NGO needs volunteers. Skilled in grant and proposal writing? Three month opportunity. Sea turtle and coral reef conservation and community development programmes. Ocean Spirits, PO Box 1373, Grand Anse, Grenada, West Indies. Email ocean_spirits@purpleturtle.com

Fed up with all talk and no action? **BTCV South West** volunteer officers run projects from restoration of ancient woodlands to development or urban nature reserves. Get stuck in – telephone 01761 412811.

Project providing **free internet access to threatened peoples** for their voices to be heard without censorship or compromising their cultures. Need fundraisers, telecom expertise, publicity, help to form charity. **Tribal Internet Project**, 23 Vicars Cross Road, Chester, CH3 5NJ, email tip@eco-action.org or visit our website www.eco-action.org/index.html

Five people for minimum nine months to teach English from September 2001 in Vietnam. Accommodation and food provided. Please send your CV to Ed Bentham Edb@serverst.huron.ac.uk

International kindergarten in China starting September 2001 seeking students for placement/training as English teachers. Accommodation and food provided. For more information contact Andy_Chen_2001@yahoo.com or Elena_Jakovleva_2000@yahoo.com or visit our website at: www.savetherefuge.org

Arctic National Wildlife Refuge. We are looking for interested writers/activists with scientific background to help write for our site and ensure its accuracy. Please contact Jason Holmberg holmbergj@yaho.com

Funded volunteer position for six months at **Corporate Watch** in Oxford available. Volunteer must be under 26 and from certain European countries, but not the UK (sorry, funding restriction). Contact pippa@corporatetwatch.org

The British Holistic Medical Association is committed to the self-healing potential of patients and health professionals, to therapeutic relationships and a range of healing interventions. The BHMA seeks committed trustees to develop innovative projects. Please contact Wendy Miller on 01273 725951

Ongoing UNED UK stakeholder groups to input into UK preparations for **Earth Summit 2002**. Focus topics are biodiversity, energy and climate, production and consumption, cities and communities, wider world. Interested participants should contact Ben Dixon, telephone 020 7839 1784.

International Voluntary Service.

We place volunteers on short-term projects in over 30 countries, mainly East/West Europe. For more information, visit our website www.ivsgbn.demon.co.uk or write to us at IVS, Old Hall, East Bergholt, Colchester, CO7 6TQ.

COURSES

MSc in Human Ecology. The Centre for Human Ecology, Edinburgh, Scotland, champions environmental sustainability and social justice, and is accredited by the Open University. Tel: 0131 624 1974, email registrar@che.ac.uk or visit our website www.che.ac.uk

Peace in Oneself, Peace in the World

THICH NHAT HANH, Zen Master and peace activist, offers three evenings of teaching and meditation practice. Westminster Central Hall, London SW1. 29-31 May, 6.45-9.45pm. £18 (£12 concs) per session. Visit our website: www.interbeing.org.uk or telephone 020 8692 1737.

The artform of Kazimba Ngoma has been opened up to the public and is now creating quite a stir! Its effects on both adults and children have been quite astounding as it seeks to reconnect Black communities with their source cultural heritage. Telephone 078 7081 6449 for more information.

16-24 June. A variety of **Organic Farm Activities** as part of Kentweek Festival. Pre-booking is essential as places are limited. For more details visit our website www.commonwork.org

GreenNet, a not-for-profit collective, offers training in the use of email and Internet, web design training and training in the secure use of email. Courses, specifically developed to meet the needs of NGOs and individual campaigners, are run monthly at GreenNet, Islington, London. For further details, visit our website at: www.gn.apc.org/training/index.html

Occidental Arts and Ecology Center

New catalogue introducing environment, gardening, food and art courses for 2001. 15290 Coleman Valley Road, Occidental, CA 95465, USA; Tel: +1 707 874-1557 or email oaec@oaec.org

Renewable Energy Courses in Almeria, Spain. Sunseed are hosting a range of different week-long courses, starting October 2001. Further information from djr28@tutor.open.ac.uk or send sae to Ellesmere, Ty Cam, Penparcau, Aberystwyth, SY23 1RT.

The Institute for Deep Ecology is organising a variety of courses and workshops, e.g. The Military and the Planet: redefining security from global militarism to Earth justice. Visit our website www.deep-ecology.org for details.

10 Sept.-3 Dec. Stafford, UK. New course for those seeking basic understanding of how to change way of life in response to human impact on environment. Visit the website www.renewableway.co.uk for details.

The Temenos Academy is an educational charity that offers lecture and seminar courses in philosophy and the arts in the light of the

sacred traditions of East and West. We publish a journal, the **Temenos Academy Review**, and many of our lectures are available on audio tape. For a copy of our programme please contact: The Temenos Academy, PO Box 203, Ashford, Kent TN25 5ZT; email stephen.avery@ashfordtelecom.net telephone +44 (0)1233 813663

Schumacher College is an international centre for ecologist studies welcoming course participants from all over the world. The college runs short courses on ecological issues and a one-year MSc in Holistic Science.

4-23 November. Farming for Better Food: Solutions to the global crisis in agriculture.

For further information, please contact: The Administrator, Schumacher College, The Old Postern, Dartington, Devon, UK. Tel: +44 (0)1803 865934 Fax: 01803 866899 Email: schumcoll@gn.apc.org. Alternatively, visit our website www.gn.aoc.org/schumachercollege where you can find prospectuses and application forms. Additional material such as student profiles, articles of related interest, scholarship, details and book ordering information is also available.

Orkney College and Heriot-Watt University

are collaborating on a University of the Highlands and Islands Project degree designed for people facing the task of matching environmental protection with the development needs of sustainable communities. For more details, contact jim.chalmers@orkney.uhi.ac.uk

ENVIRONMENTAL RESOURCES

MERCI is a new centre in Manchester for local community groups and anyone interested in finding out more and taking action on the issues of sustainable development. Telephone 0161 273 1736; fax 0161 274 4598; email: merci@gn.apc.org

The Networking Newsletter Project aims to network Manchester activists working for positive change on issues of peace, development, human rights, environment, women, and animal rights. networking.newsletter@dial.pipex.com

Housmans World Peace Database. Definitive information on 3,400 (national and international) environmental, peace, human rights groups in 170 countries. In print, on labels, on floppy discs. For details, telephone +44 (0)20 7278 4474 or email worldpeace@gn.apc.org

ECO-BUYS

www.womenstand.com

Feminist shopping site for postcards, greeting cards, T-shirts, mugs, badges and lots more. Full range of Cath Tate cards, Jacky Fleming and Annie Lawson. For more information, email enquiries@womenstand.com, write to PO Box 30453, London NW6 6FR or tel: 020 8960 8166.

Green Guide Online

Search our database of organic, eco-friendly and ethical businesses and organisations providing a huge range of goods and services. <http://167.216.224.214/greenguide/web/index.cfm>

Simply Soaps handmade natural skincare produce, free from synthetics, colours,

preservatives and petro-chemicals. 'In harmony with you and the environment.'

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www.greenchoices.org

Your one-stop guide to green choices available in Britain – including green homes, offices, holidays, money, electricity, gardening, jobs, gadgets, courses, cars and much else. Voted best Eco website by Ethical Consumer magazine (April 2001).

EVENTS

5 June, Nottinghamshire, UK

Trade Fair and Conference

An opportunity to source 'green' products and services and see how sustainability is to be created at Sherwood Energy Village. Visit our website www.sherwoodenergyvillage.co.uk or telephone 01623 860222.

5-7 June, Birmingham, UK

ET2001 Resource Efficiency

The UK's all encompassing environmental event for business. Visit www.et-expo.co.uk for details.

9-10 June, Manchester, UK

Globalisation: The Good, the Bad and the Alternatives

A WDM Conference with Anita Roddick and speakers from Third World Network, IMF, WTO. Contact lara@wdm.org.uk or telephone +44 (0)20 7737 6215.

12 June, Birmingham, UK

National conference to explore principles, policy and practical local solutions for sustainable food and public health. For more information, contact: **Foundation for Local Food Initiatives**, PO Box 1234, Bristol BS99 2PG, telephone +44 (0)845 458 9525 email mail@localfood.org.uk or visit www.localfood.org.uk

14 June, London, UK

The Schumacher Society and UNED Forum present the London Schumacher Lectures **Governance, Business and Sustainable Development** Speaking: Nitin Desai, UN Under-Secretary General. For more information contact Greg Le Divellec, tel: +44(0)20 7839 1784.

15 June, Manchester, UK

Waterway Regeneration

21st Century Sustainable Development, The Lowry, Manchester. Conference preceded by dinner on 14 June at Old Trafford, home of Manchester United. For more information, contact Kultbinder Suprai, tel: +44 (0)121 745 4892, fax +44 (0)121 733 2268.

19-22 June, Edinburgh, UK

The Role of Disease as a Threat to National Security.

Global Forum for Law Enforcement and National Security (LE&NS). For more information, contact Kathy Bourne telephone +44 (0)1580 241177 email cathy@splashpr.co.uk

24 June, 11am-6pm **Physic Garden Fair.**

Opened by Charlie Dimmock. Rare plants, garden essentials, organic and fine foodstuffs. Chelsea Physic Garden, 66 Royal Hospital Road, London SW3. Tel: 020 7352 5646.

30 June/1 July, London

Re-Energise: Anti Sanctions Conference and Gathering in Solidarity with the People of Iraq.

featuring former Humanitarian Co-ordinator Denis Halliday and fellow Nobel Peace Prize nominee Kathy Kelly from Voices in the Wilderness, US.

For information, telephone 01865 243 232 or email glenn@voices.freeserve.co.uk Website www.viwuk.freeserve.co.uk

12/13 July, Stroud, UK

Renewable Energy Fair

4 half-day seminars. For more information, write to Energy 21, PO Box 154, Stroud, GL5 4YS tel: 01453 752277 or www.energy21.org.uk

14 July, London, UK

Christian Ecology Link Conference

Bloomsbury Central Baptist Church, 234 Shaftesbury Ave., London WC2, 12pm Non-members welcome. Free entrance. Visit our website www.christian-ecology.org.uk

23-25 August, Montreal, Canada

Ecological Sustainability of the Global Market Economy

Keynote speaker Lester R Brown. Visit www.mggill.ca/mse/canseef for details.

3-5 September, Durban, South Africa

Racism and public policy

Visit the website www.unrisd.org/racism/index.htm for information.

4-7 September, Aberdeen, UK

Offshore Europe 2001 Oil & Gas

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Exhibition and conference. For information, visit the website www.offshore-europe.co.uk

16-24 September, Cochabamba, Bolivia
Third International **Conference of Peoples' Global Action**. Visit www.agp.org for details.

13 October, Coventry, UK
Heaven and Earth: Christianity, Food and Land Use – Christian Ecology Link conference at Ryton Organic Gardens, 10.30am. Booking essential. Contact Tim Cooper, 20 Carlton Road, Harrogate, North Yorkshire, HG2 8DD. Tel: +44 (0)1423 871616
email info@christian-ecology.org.uk
website www.christian-ecology.org.uk

8-10 November, Delevan, Wisconsin, USA
Working Landscapes in the Midwest: Creating Sustainable Futures for Agriculture, Forestry and Communities. For details visit our website www.eeeee.net

13-15 December, Japan
International Organic Trade Fair
For more information, visit the website www.nuernbergglobalfairs.com

4-10 June, London, UK
Festival 2001, encompassing World Environment Day. THE West London Festival is being held at **Headstone Manor Ground**, Pinner View, North Harrow, Middlesex. Including many zones and themes based on energy issues, nature conservation, waste and water issues, greener travel. For more information, contact Danae Meacock Mashir, telephone 020 8424 1913 or email danae.mecock.bashir@harrow.gov.uk

21-28 October
One World Week 2001
We're on our way. Join local activists around the world celebrating, acting on and learning about issues of global justice. To find out how to take part, email us at enquiries@oneworldweek.org or telephone +44 (0)118 9394933.

PUBLICATIONS

AWARE, new glossy men's lifestyle magazine published annually in support of Male Cancer Awareness. A mix of features, photographs, celebrity interviews and up-front articles that address the real health issues at stake, **AWARE** is launched mid-June. 100,000 copies will be distributed as a free supplement wrapped with Men's Health. Copies will also be on sale at select retail outlets at a £3.45 cover charge, with £1 from every copy going to male cancer charities.

RABBLE. New interactive magazine capturing the spirit of a new democracy movement, combining the hot energy of activism with the cool eye of journalism.
Visit us at www.rabble.ca. For more information contact Liz Phillips at liz@rabble.ca

Survival's new book **Disinherited: Indians in Brazil** commemorates the struggle and survival of Brazil's tribal peoples through five centuries of genocide. Available for £3.99 from Survival, telephone 020 7242 1441 or visit our website www.survival-international.org

Seeing through the spin. An education pack that lifts the covers off corporate PR. Evaluate PR in the global economy; whether from

companies or their critics.
More details at www.babymilkaction.org, or telephone 01223 464420.

Peace News. The international quarterly magazine by and for non-violent activists. June issue on gender and militarism. Cover price £2.50, annual subscription £10. Free sample on request. Peace News, 5 Caledonian Road, London N1 9DY.
Email peacenews@gp.apc.org or visit our website www.gp.apc.org/peacenews

Friends of the Earth Europe's Biotech Mailout. Published bimonthly and distributed free of charge by mail and email. The publication covers all recent developments concerning GMOs, particularly in Europe but also further afield. To subscribe, please contact mailto:biotech@foeeurope.org

Radioactive Scrap Metals. New report highlighting growing hazard. Single copies free from: Nuclear Free Local Authorities Secretariat, Manchester City Council, PO Box 463, Town Hall, Manchester, M60 3NY, Tel: +44 (0)161 234 3244; Fax: +44 (0)161 234 3379 or visit the website: www.gp.apc.org/nfznc

The Organic Directory. Endorsed by Soil Association. Most comprehensive listing of organic produce and products available in the UK, including retailers, wholesalers, producers, manufacturers & processors, mail order & internet suppliers, restaurants, farm sales, markets, publications etc. Telephone Clive Litchfield, 0121 449 6691 or visit www.theorganicdirectory.co.uk

GeneWatch promotes debate about the ethical, social and ecological implications of human and agricultural biotechnology. 30% off normal subscription rates for *Ecologist* readers.
For information, visit our website www.gene-watch.org or fax: +1 617 491 5344.

ORGANICS

BigBarn.co.uk. The virtual Farmers market - the online solution for both producers and customers. Simply type in your postcode and see a map of your area showing different icons, each representing a local producer and the type of goods they sell. Register with BigBarn for special offers. For more information, contact Anthony Davison, telephone 01234 871005, or email ant@bigbarn.co.uk

With farmers' markets now mainstream, the 'zero to 300 in three years' story is old news. Customers, producers and market managers need to know what's next for farmers' markets. Visit www.LondonFarmersMarkets.com for the latest news.
WE GROW EVERYTHING WE SELL!

VISIT

The Dartmoor National Park area is open for business. Although some foot and mouth restrictions apply, there is still much to see. Contact the visitor information hotline (01822 890414) or the website www.dartmoor-npa.gov.uk to find out more about what's open, where to go, and what restrictions apply.

The Organic Café Group has opened a new restaurant, **The Organic Café Grill & Bar**, 51 Princes Gate, Exhibition Road, London SW7

(nearest underground South Kensington).
Licensed. Serving gourmet English organic food. Open 9 am -11pm.

The Centre for Alternative Technology
CAT is running guided tours and kids' theatre and events in the school holidays. Lots of environmental information, inspiration and solutions. For details visit our website www.cat.org.uk or telephone 01654 705950.

JOIN

The Shark Trust promotes the study, management and conservation of sharks, skates and rays, and is working to stop the wasteful and cruel practice of shark finning. Visit www.sharktrust.org

What do scientists really know about our wild forests? Come with us. We're just finding out!
Global Forest Society, Canada.
Visit www.globalforestscience.org

The Game Conservancy Trust is an independent conservation charity whose 60 scientists research game species, their habitats and associated flora and fauna. It spends £1.9 million on research issues concerning moorland, woodland, river and farmland. For more information visit www.gct.org.uk

Cabo San Francisco Foundation
NGO working for the protection of the remnants of rainforest and mangroves in Esmeraldas, Ecuador. Regeneration of native species and the search for solutions for sustainable development with the local population. Visit our website www.cabosanfrancisco.ch

Canadian Environmental Network
A non-governmental, non-profit network of over 600 Canadian organisations sharing its mandate to protect the Earth and promote ecologically-sound ways of living. Visit www.cen-rce.org

The Mammal Society. Solely dedicated to the study and conservation of British mammals. We produce information and run courses. For more information, write to us at 15 Cloisters House, 8 Battersea Park road, London SW8 4BG, telephone 020 7498 4358 or visit our website www.mammal.org.uk

Care for the Wild International (CFTWI)
Protecting wildlife from suffering. Visit our website www.careforthewild.com for information on our work.

Friends of Conservation gained their reputation for community-based conservation work in East Africa. Today they work in partnerships around the world, particularly where tourism impacts on fragile habitats. Visit www.foc-uk.com

Ashoka: Innovators for the Public. We are looking for dynamic, innovative individuals to join our team. For current postings, visit www.ashoka.org/involved/jobs.cfm

United Plant Savers. Our mission is to preserve, conserve and restore native medicinal plants and their habitats of the US & Canada. Please visit www.plantsavers.org

The Alaska/Arctic Environmental Defense Fund (AEDF) is a non-profit circumpolar umbrella organisation, endeavouring to unite

environmental/social advocacy groups in Alaska, Canada, Greenland, Iceland, Nunavut, Norway, Sweden, Finland, Faroe Islands, and Russia.
For more information, visit <http://socwww.cwru.edu/~axh69/aedf/>
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The Countryside Restoration Trust is an independent charity working to restore the general countryside. It believes that profitable farming, wildlife conservation and landscape creation can, and must, co-exist. The CRT buys land that has been over intensively farmed and restores it. The CRT now owns 355 acres and has been supported by the Heritage Lottery Fund. The CRT began farming practically in 1993 and is the lead charity working in the field of conservation and practical farming. For more info tel. Robin Page +44 (0)1223 870932.

The Noah Project. Jewish Education, Celebration and Action for the Earth. We promote environmental responsibility throughout the Jewish community through education, celebration of Jewish festivals and practical action projects. PO Box 1828, London W10 5RT. Tel: 020 8994 5988 Email: info@noahproject.org.uk

Engolve. A local charity based in Bath that has been helping individuals, communities, schools and businesses to discover the benefits of living and working more sustainably since 1994. We have a public information library and exhibition area, and a Community Resource room available to local groups working on sustainability issues. Visit our website www.engolve.co.uk or telephone us on 01225 787910.

Vaccination Liberation. Join Vaccination Liberation and get the documentation you need to feel confident in your decision to abstain from mass medical experimentation. For more information, email us: vaclib@coldreams.com
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Network for Alternative Technology and Technology Assessment. Provides information on renewable energy issues and developments, and produces a bi-monthly journal, **Renew**. £18 p.a. (£12 unwaged). Visit our website www-tec.open.ac.uk/eeru/hatta/rol.html

World Information Service on Energy (WISE)
Based in Amsterdam, The Netherlands, we are a campaigning grassroots organisation working on nuclear energy, depleted uranium and connected topics. We publish a newsletter 20 times a year. For more details, visit our website www.antenna.nl/wise

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British Wind Energy Association (BWEA)
is the professional body for the UK wind energy industry, representing companies and individuals interested in utilising the country's vast wind resource in the production of electricity. Telephone 020 7402 7102/3 or visit our website www.bwea.com

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The Land Stewardship Centre of Canada is a not-for-profit, charitable organisation that promotes excellence in environmentally sustainable land use. To get inspired to take action in maintaining the ecological health of our landscapes, visit our website at www.landstewardship.org

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www.angliacampus.com

Results of Coastline 2000, survey of UK coastline produced by Geographical Association.

www.ruralfutures.org

Should Britain remain a seriously capable food-producing nation? What do you think? Join the Real Rural Debate.

www.woodland-trust.org.uk

Woodland Trust has web of life. New website helps you find routes to woods and gives rapid access to information.

www.masseyenvirogroup.homestead.com

Massey University Environmental Group. Student group in Palmerston North, New Zealand, concerned with various environmental issues. Would like to share information and experience with similar groups.

www.euractiv.com/dossiers/ld_pvc.htm

Environmental issues of PVC Links Dossier (includes new report by UK Department of the Environment and positions by ECVI, European PVC Industry, Greenpeace and others).

www.heureka.clara.net/gaia/pharmas.htm

Big multinational drug companies have declared war on the Third World poor by denying them access to cheap generic drugs and using them

as guinea pigs in poorly-regulated drug trials.

www.zerowaste.co.nz

Zero Waste New Zealand Trust seeks to encourage and support New Zealand society to implement zero waste practices by 2020.

www.tompaine.com/features/2001/03/14/1.html

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www.earthfirstjournal.org

The mission of EARTH FIRST!, the radical environmental journal, is to inform, educate and inspire citizens to take action in defence of wildness. New address: POB 3023, Tucson, AZ 85702, USA, telephone +1 (520) 620-6900.

dialspace.dial.pipex.com/town/terrace/gdn22/NNP/index.shtml

The Network Newsletter Project aims to network Manchester, UK, activists working for positive change on issues of peace, development, environment, women, human rights and animal rights.

www.nospin.org.uk

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www.cybernaute.com

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www.ciberbizz.com

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www.greenfront.org

Green Front of Iran is collecting environmental messages from all over the world and recording them on its website.

www.corpwatch.org

Background, news and activist resources on the Free Trade Area of the Americas, the most far-reaching trade agreement to date.

www.savetherefuge.org

New site dedicated to protecting the Arctic National Wildlife Refuge from oil exploration and drilling.

www.fluoridealert.org

The website of the Fluoride Action Network (FAN), an international coalition to end water fluoridation and alert people to fluoride's health and environmental risks.

www.CountdownToBonn.org

New campaign to prod Canada to rejoin the world community and commit to fighting the climate crisis.

www.btinternet.com/~clairejr/

Lots of information on the dangers of GM food and crops. Action updates etc.

www.gn.apc.org/haitisupport

All the news from the grassroots, including the latest on the Haitian citrus workers' campaign for union rights.

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references

Page 24 *The Great Outdoors*

1. Robert Harborough Sherard. *The White Slaves of England: being true pictures of certain social conditions in the Kingdom of England in the year 1897*. James Bowden, London 1898.
2. *ibid.*
3. *ibid.*
4. *ibid.*
5. Hazards. Information for safety reps. No. 62. April/June 1998.
6. Patrick Kinnerly *The Hazards of Work. Workers' Handbook No.1*. Pluto Press. London, 1973.
7. Barry Castleman. *Asbestos: Medical and Legal aspects*. Englewood Cliffs, N.J.: Aspen Law, 1995. See also, Barry Castleman. Re: Doll's 1955 Study on Cancer From Asbestos, *American Journal of Industrial Medicine*, 39:237-240 (2001).
8. J. F. Nox et al., Cohort Analysis of Changes in Incidence of Bronchial Carcinoma in a Textile Asbestos Factory, *Annals of the New York Academy of Sciences* 132 (Dec. 1965), 1, 527-35.
9. John Willis, producer, James Cutler and Peter Moore, researchers Alice - *A Fight for Life*. Yorkshire TV, 1982.
10. Geoffrey Tweedale. *Magic Mineral to Killer Dust; Turner & Newall and the asbestos hazard*. Oxford University Press, 2000.
11. National Health and Safety Statistics. *Health and Safety Commission, 1999/2000*.
12. The Occupational & Environmental Disease Association (OEDA). *Asbestos Building Materials In Housing*. Middlesex.
13. *ibid.*
14. *What Doctors Don't Tell You*. July 1999. Vol 10 No. 4.
15. RSI Association.
16. Simon Crompton. *Computers and toxic chemicals*, *The Times*, October 31, 2000.
17. Simon Best, *What Doctors Don't Tell You*, Vol.3 No.7
18. Robert Haas, *Permanent Remission*. Simon and Shuster. New York 1999.
19. The Surgeon General. *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention*. DHEW Publications Nos. 79- 55071 and 79-55071A, Washington DC: DHEW 1979. cited in *Prevent Cancer Now*. M. Cogan. 3rd Revised Edition. Apple Publications San Diego 2001.
20. Doll, R., Effects of exposure to vinyl chloride. An assessment of the evidence. *Scand J Work Environmental Health* 1988 Apr; 14(2):61-78.
21. Ohlson, CG., Hardell, L., Testicular cancer and occupational exposures with a focus on xenoestrogens in polyvinyl plastics. *Chemosphere* 40 (2000) 1277-1282.
22. Campbell, L.H., Avery, M. I., Donald, P., Evans, A. D., Green, R. E., and Wilson J. D. A review of the indirect effects of pesticides on birds. JNCC Report. No. 227. Joint Nature Conservation Committee. Peterborough. 1997.
23. *Farmers Weekly*. 2,500 producers suffered OP dip side effects, 14 December 1990.
24. Enfy Chapman of PEGS (now Pesticide Trust), cited in *Farmers Weekly*, *Ibid*.
25. Pilkington, A. Jamal, G.A. Gilham, R. Hansen, S. Buchanan, D. Kidd, M. Azis, M. A. Julu, P.O. Ai-Rawas, S. Ballantyne, J. P. Hurley, J. F. Soutar, C. A. Epidemiological study of the relationship between exposure to organophosphate pesticides and indices of chronic peripheral neuropathy, and neuropsychological abnormalities in sheep farmers and dippers. Phase 3. Institute of Occupational Medicine, Edinburgh and Institute of Neurological Sciences, Glasgow. 1999.
26. Mr Green a farmer in Bridgnorth, Shropshire. *Farmers Weekly*. 2,500 producers suffered OP dip side effects, 14 December 1990.

27. Unreferenced study cited in, *Pesticides, Chemicals and Health*, British Medical Association, London 1990.
28. Typescript of interview by Andrew Baron with Simon Wolff, May 13 19993.
29. Yves Bois F, Jackson ET, Pekari K, Smith MT, *Population toxicokinetics of benzene*. *Environmental Health Perspect* 1996; 104 (suppl 6): 1405-1411.
30. Simon R O'Conner, Peter B. Farmer and Ian Lauder, *Journal of Pathology* 189: 448-453:1999.
31. Andrew Baxter. *Cabin Fever*, *Daily Telegraph*. January 20. 2001.
32. *ibid.*
33. A.P. Fews, D.L. Henshaw, P. A. Keitch, J.J. Close, R.J. Wilding. Increased exposure to pollutant aerosols under high voltage power lines. *Int. J. Radiat. Biol* 1999, vol 75, no. 12, 1505-1521.
34. Alan Preece. Paper given at Bio-electromagnetic society annual conference June 2000.
35. James Chapman. 3,000 cancer deaths 'may be linked to power lines'. *Daily Mail*, September 22, 2000.
36. Jonathan Leake. *Pylon's are cancer risk - official; top scientists establish link*, *Sunday Times*, March 4. 2001.
37. Alasdair Philips, *Killing Fields; the politics*. *Electronics World + Wireless World*, special issue on EMF. February 1990.
38. RISE; *Publicity information*.
39. RISE; *Position statement, Multiple Chemical Sensitivity*.
40. *ibid.*
41. Helvarg, David. *The War Against the Greens*. Sierra Club Books, San Fransisco. 1994.
42. Harnik, P. *Voodoo Science, twisted consumersim*. Washington DC.: Centre for Science in the Public Interest, 1982.
43. *ibid.*
44. Martin Walker. *Dirty Medicine; Science big business and the assault on natural health care*, Slingshot Publications. London 1993.
45. Dan Fagin, Marianne Lavelle, *Toxic Deception: How the Chemical Industry manipulates science, bends the law and endangers your health*. The Centre for Public Integrity, Carol Publishing, Secaucus, N.J. 1996.
46. Cancer Prevention Coalition. *The first annual dirty dozen list*. September 1952.

Page 48 *Lies, Dam Lies*

1. 'Environmental measures necessary to carry out the Dam Project, Region of Alentejo, Portugal, Final Report', November 1996, ESB International (European Commission Directorate-General [DG XVI] for Regional Policy and Cohesion).
2. *Ilisu Dam Campaign, Company Profile: ABB Asea Brown Boveri Ltd (incorporating Alstom)*.
3. 'Os Enganos de Alqueva', *O Publico*, 18/03/2001.
4. 'Operacao de salvamento de vertebrados terrestres', Carlos Guerra, Presidente do Instituto da Conservacao da Natureza, 24/08/00.
5. Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, 21 May 1992.
6. 'Conservacao do lince-iberico em Portugal, Instituto da Conservacao da Natureza, Relatorio Tecnico de Progresso', 1996, contrato LIFE no. B4-3200/94/767; see also 'Lince-iberico em Portugal - Bases para a sua conservacao, relatorio final', Instituto da Conservacao da Natureza, 1998.
7. 'Action Plan for conservation of the Iberian Lynx in Europe', Group of Experts on Conservation of Large Carnivores, Council of Europe, Oslo, 22-24 June 2000.

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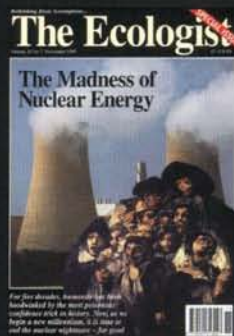
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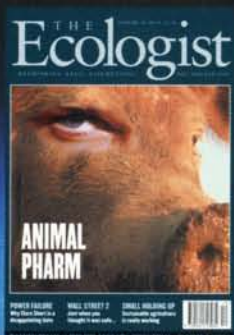
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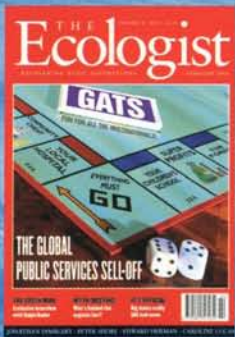
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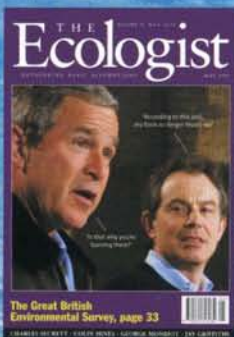
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