

THE Ecologist

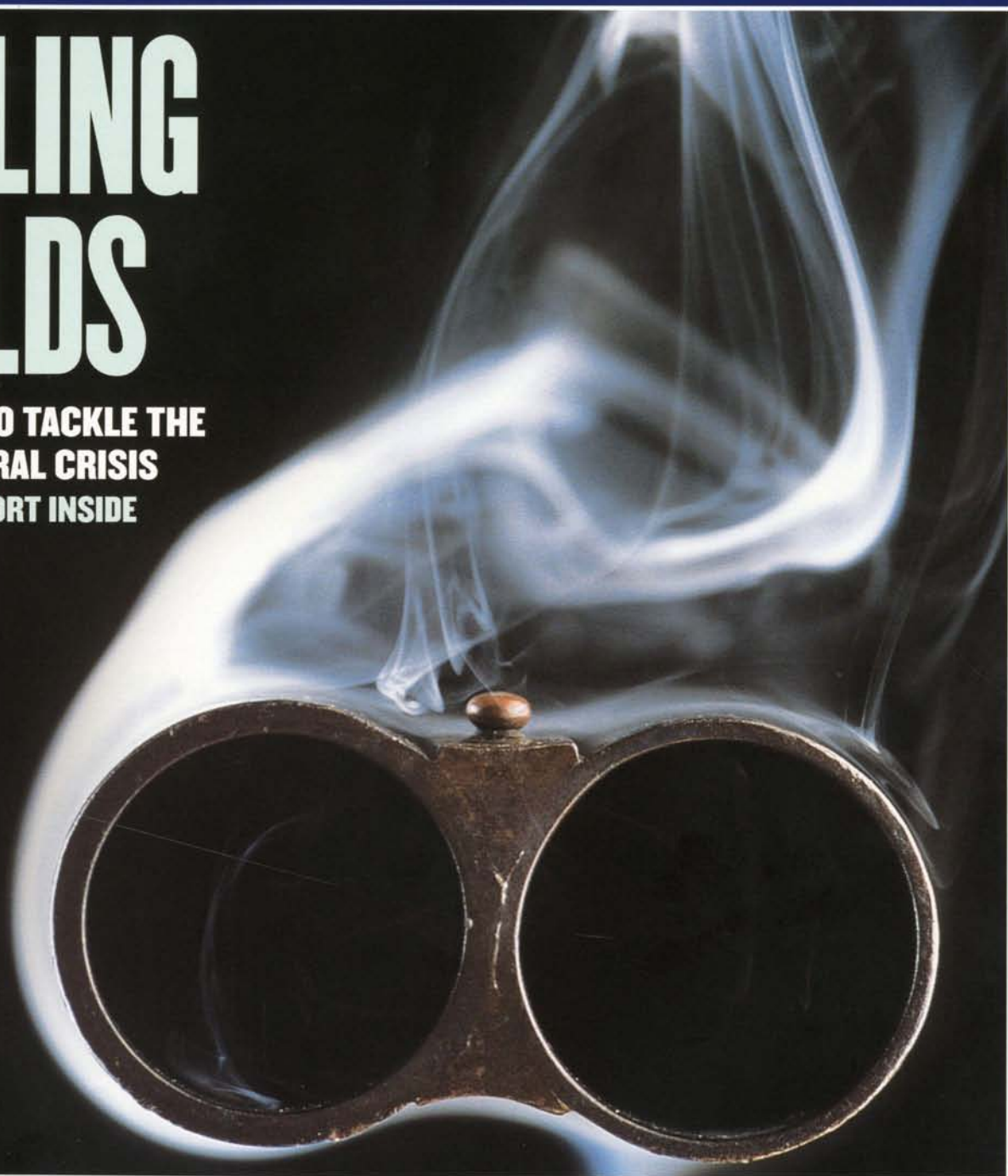
VOLUME 30 NO 4 £3.50

RETHINKING BASIC ASSUMPTIONS

JUNE 2000

KILLING FIELDS

IT'S TIME TO TACKLE THE
AGRICULTURAL CRISIS
SPECIAL REPORT INSIDE




ASPARTAME
Exploring the
poisonous facts

MEDIA-TION
Does the press tell the
environmental truth?

GORILLA TACTICS
Inside a revolutionary
breeding programme





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THE Ecologist

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OWN GOAL

If we are to believe the media, the 'Mayday' protests were dominated by mindless, hairy, angry greens, intent on overthrowing the capitalist system and replacing it with something else. Like the cappuccino drinking bores in Seattle it was a mixture of troublemakers and earnest, if naïve, students with a sprinkling of 'unreconstructed lefties' from the sixties as one paper put it. Their goal was apparently to put the breaks on 'evolution' and to deny the Third World the pleasures of so-called development.

But the truth is more complex. The protests in Seattle and the city of London were two quite distinct events. That the media focused on popular violence in the latter and police violence in the former, blurred the nature of both.

Seattle was a reaction on a truly awesome scale to an organisation whose powers of change will affect every aspect of our lives. The World Trade Organisation was until the end of last year a largely unknown entity – and to those few who were aware of its existence, it was merely a tool for resolving international trade disputes. Its meetings were held in secret, and always behind closed doors, and those present consisted primarily of Western government and big business representatives. Even some Third World members were denied access to the negotiating table. But what those who descended on Seattle knew which the vast majority of people did not, was that the agenda being mapped out in Seattle was monumental in scale and scope – the formation of 'an embryo world government' as *The Economist* put it. In other words, a totalitarian dream was being realised by a handful of unelected bureaucrats, in near-total secrecy.

At the end of the day, the citizens of the world's nations were left no option but to take to the streets. Their mission was to highlight the dangers. Their success was exactly that. They successfully prised open for the world's media the doors of an inherently poisonous process. Those doors will never again be closed, and dependent as it is on not being scrutinised, the WTO will consequently suffer an almighty blow.

The Mayday 'riots' were quite different. Predictable from the start, they ended in violence of a deeply unattractive nature. Like in Seattle those present were of different backgrounds. But unlike at Seattle, there were few common threads, and the purpose of the event was blurred from the start. If the objective was to undermine big business, then they failed miserably. If their objective was to raise ecological awareness they similarly failed. If their purpose was to highlight any issues at all, they failed. Indeed the only winner was the very system that they purported to oppose.

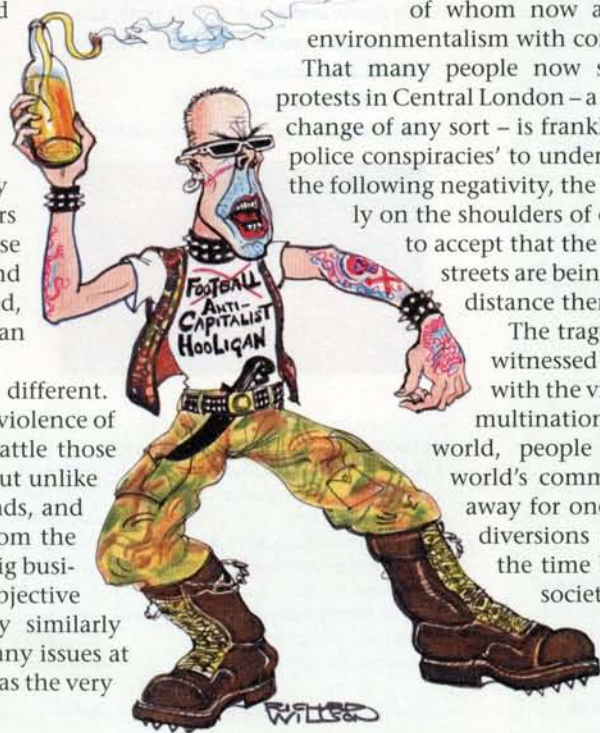
Reading through the statements of some of the organising bodies is wholly unenlightening. 'Morally bankrupt', as George Monbiot described them in *The Guardian*, they are against so-called 'capitalism', but like the corporations they rightly detest, they reject the importance of identity – itself a barrier to the globalisation of their homogenous products. They use the language of Marxists, yet they are against the state, without which the likes of Stalin would never have been able to dominate his millions of victims. More importantly, they are seemingly against community, family, tradition of any sort – the only antidotes to central planning and bureaucratic dominance which they claim to detest, and indeed essential ingredients to a healthy society. They stand opposed to structures of every kind, refusing even to elect leaders or names for their organisations (they are fronted by long lists of 'chairpersons'). They reject non-governmental organisations on the assumption that the funding these groups require will distort their message. It's very hard in fact to determine what, if anything, they are 'for'.

The truth is that despite the presence of a large number of peaceful campaigners, the event was taken over by a mob generally driven by anger and undefined anti 'capitalism'. Attacking corporate rule – let's face it a wholly legitimate target – was little more than a useful peg on which to hang their ambiguous frustrations. But the result was that the environmental movement, and more specifically those intent on opening the globalisation process to popular scrutiny, have been set back in their attempts to reach the public, many of whom now associate anti-globalisation and environmentalism with communist-tinged thuggery.

That many people now support the banning of street protests in Central London – a vital tool for those championing change of any sort – is frankly not surprising. While 'media-police conspiracies' to undermine 'the cause' are blamed for the following negativity, the responsibility in fact lies squarely on the shoulders of confused organisations too holy to accept that the public needs to know why their streets are being taken over, and too arrogant to distance themselves from the aggression.

The tragedy is that the obvious violence witnessed on Mayday does not compare with the violence inflicted every second by multinational corporations on the natural world, people and local economies. If the world's commentators would tear their eyes away for one second from these unpleasant diversions and focus instead on diffusing the time bomb that is modern industrial society, then perhaps the heroes of war, deeply insulted by a handful of fools, will not have fought for nothing.

ZAC GOLDSMITH



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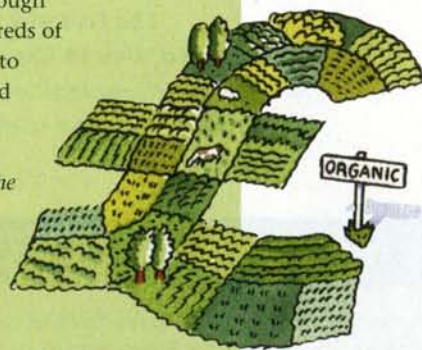
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COVER STORY

All over the world, rural societies are facing ruin as the biggest agricultural crisis since the 1930s sweeps through them, laying waste to thousands of farms and hundreds of thousands of rural people. Farmers are being driven to despair and suicide, the environment is suffering and agriculture, like so many economic sectors, is being corporatised and subjected to the whims of the global market. Our special 16-page report – *Facing The Farm Crisis* – explores the true roots and causes of this global crisis, and presents a vision of how a truly sustainable, ecological agriculture could provide a lasting way forward for rural people, and for the struggling land. **Page 27.**

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- ◆ **30 YEARS – AND STILL FIGHTING.** July 2000 is the thirtieth anniversary of the first ever issue of *The Ecologist*. To celebrate, we will be producing a special extended feature on how the world – and the magazine – has fared over the last three decades; and why humanity is still far from solving the problems we continue to create for ourselves.
- ◆ **Liberal Democrat leader Charles Kennedy debates the ecological powers of parliament.**
- ◆ **Why the world is running out of water – and what can be done about it.**



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Email: letters@theecologist.org – please attach your name and postal address, even when sending by email. The editor reserves the right to shorten or edit correspondence where necessary.

Free trade tirade

In your April issue (Vol 30, No 2), Simon Retallack accuses the World Trade Organisation (WTO) of all manner of evils. He says that 'environmental degradation, threats to public health, unemployment, income inequality, food insecurity, loss of cultural diversity and threats to human rights are all being exacerbated by the WTO and its agreements'. Perhaps he also thinks that the WTO eats children for breakfast. In fact, the WTO is a powerful force for good in the world. In contrast to the protectionist nightmare of the 1930s, world trade has risen 15-fold over the past 50 years, helping to lift world output six-fold. The multilateral trading system has done more to raise living standards and lift people out of poverty than any other man-made device.

Mr Retallack ought to check his facts before launching into his tirade. It is nonsense to say that the WTO has an 'agenda' of eliminating 'any impediments to corporate profit-making, such as laws protecting consumers, workers or the environment' forced through by tribunals that have the ability to impose trade sanctions on offending states. In truth, WTO rules are based broadly on the principle that trade should be open and non-discriminatory. They are agreed by a consensus of its 136 member governments and ratified by national parliaments. Impartial WTO panels merely adjudicate in trade disputes, at member governments' request, using rules to which governments have previously signed up. The WTO cannot impose trade sanctions: it can merely legitimise a government's use of them against a country that has failed to live up to its prior commitments. In most cases, moreover, the WTO's dispute-settlement procedures help governments settle their differences without coming to blows.

It is also incorrect to say that WTO panels always side with the 'corporate parties involved'. Mr Retallack cites Venezuelan and Brazilian oil companies, Asian shrimp companies, and US fruit and beef companies as winners. Almost by definition, however, the parties in a trade dispute are companies, and almost inevitably one company 'wins' and another 'loses'. Mr Retallack could have added that American oil companies, American shrimp companies, and European fruit and beef companies lost those cases, and that consumers gained.

The bigger point is this. Mr Retallack thinks that trade and corporate interests should be 'subservient to human needs'. But freer trade helps people to satisfy their needs. Thanks to trade, people in Britain talk on Finnish mobile phones, use Japanese cameras, drive American cars, drink Colombian coffee and wear clothes made in Asia. Thanks to trade, Indian computer programmers can sell their services to American companies, and earn enough to give their children a good education and provide for their own retirement. Of course, freer trade is not a panacea. Countries also need sound economic policies, good health care, education, infrastructure and much else. But without freer trade, rich countries will be much poorer and poor ones will have no chance of development.

PHILIPPE LEGRAIN

Special Adviser to the Director-General, WTO, Geneva

Editor's reply: We asked Simon Retallack, who wrote the article, to comment on these points. Here is his response. 'If the WTO and its friends eat anything for breakfast, it is the truth', he writes. 'Philippe Legrain should check his own facts before peddling old myths about the poverty-alleviating wonders of global free trade. If he did, he would notice, for example, that by opening Third World markets to corporate agri-trade, the WTO is helping to push hundreds of millions of small farmers into the misery of city slums. In this and other ways, free trade rules have helped cause the incomes of the poorest fifth of the world's population to fall from 30 to 78 times below the incomes of the world's richest fifth between 1960 and 1998.'

Mr Legrain should also note that key environmental and consumer-safety laws have already been ordered to be gutted by WTO panels. To pretend that this is somehow in the public interest or in any other than that of large corporations, or that it is the result of any electoral mandate is simply ludicrous. If it really was as he says, why would WTO decision-making need to take place in secret – a fact I notice Mr Legrain does not deny?

The reality, whether Mr Legrain likes it or not, is that the public the world-over increasingly disagrees with the policies of the WTO – as the events of Seattle and this magazine's recent MORI poll show. Instead of engaging in semantics, he would do better to accept this fact and help transform the WTO before its appalling record ensures it is universally rejected.

LAMARCK REMARKS

At the end of his second letter to Lewis Wolpert, (*Is Science Neutral*, Vol 30 No 3), Edward Goldsmith wrote: 'It was Lamarck who said, 'the word randomness only expresses our ignorance of causes'. In his reply, Prof Wolpert wrote: 'Surely you are not a Lamarckian – or do you have a hidden religious objection to Darwinism?' Edward Goldsmith, sensibly enough, did not take the bait. Prof Wolpert, however, in his next letter – which gave him the last word – wrote: 'You are a Lamarckian who believes that acquired characteristics can be inherited, and ignores the enormous evidence against the idea.'

Clearly Prof Wolpert was determined to make the label stick. It seems that by quoting Lamarck, Edward Goldsmith had *ipso facto* evolved into being a Lamarckian. C'mon, professor, this smacks more of shabby sophistry than scientific discourse!

MYLES CROWE

Co Cork, Ireland

THE SAME OLD 'NEW'

I read with great interest the debate between Vandana Shiva and Bill Emmott in your April edition. While I tend to agree mostly with Mr Emmott's point of view – it strikes me as pretty evident that the countries with the worst human development are those with the most closed-door policies – I would like to raise a point that was central to this discussion, but was not addressed fully.

Everything and everybody is 'new' nowadays: New Democrats, New Labour, the New Economy. The biggest problem in this New Economy, it appears, is the 'New Profits', which surprisingly are never debated.

In the good old days, someone who produced, let us say, chairs at a total cost (fixed and variable) of \$100,000 and then sold them at \$200,000 made a profit of \$100,000 and would probably have been considered a success.

Today, such a business could be declared a basketcase by writers like Mr Emmott, because of its cost structure, its management etc, and would be forced to lay off half its workforce to save its stock value.

'Profit' has lost its classical meaning, and workers find themselves fired in years of record profits for the sake of a positive article in the Wall Street Journal with regards to good management (equals lean and mean), which in turn is vital for stock value. And it is stock value that creates the million-dollar incomes of CEOs, not company profits in the classical sense.

This is why so many today are disenchanted with the New Economy. It is laughable when Ms Shiva argues that she could not find one Bengali who would prefer Western comforts over traditional culture – millions of Indians are voting with their feet. But equally, people do not understand why, where according to statistics 'people benefit hugely' (says Emmott), so many fall more and more behind. (Remember that poverty is a relative issue more than an absolute one!)

The reason is that these 'benefits' Mr Emmott mentions are reinforcing class structures to an unprecedented extent. In the old economy, the capitalist's profit was good for the worker as well, although admittedly less trickled down than stayed up. Now, a highly profitable corporation may not make the CEO half as much money as a less profitable one with a higher stock value. High-tech stocks are living proof. Many New Technology companies have made their owners and stockholders millionaires without ever producing a dollar in profits. The New Economy, including globalisation, caters to this trend.

And this is why the average Indian, Vietnamese, Chinese etc feels left out of the boom. Mr Emmott is right that the average multinational corporation today is owned by pension funds of average people. The problem is, these average people all live in the developed world. The New Economy of globalised capital flows thus creates a new division of capitalists and proletarians – owners and workers.

And just like in the age of the Industrial Revolution, the owners are trying hard to maintain these divisions, to the grief of the vast majority of the world's population.

THOMAS JANDL
Director, Bellona USA

SPIRITUAL MATTERS

The special issue on The Cosmic Covenant (Vol 30 No 1) was a departure for *The Ecologist* but vitally important to me and others whose work on environment and social issues are in direct response to the disastrous assaults on God's creation. Your letter writer who responded so vehemently

to that issue, Philip Bour, is not only oblivious of God's hand in every living thing, but ridicules, and is obviously fearful, of that widely held belief – practised throughout millennia.

Mr Bour's response has prompted me to renew my subscription.

MICHELLE SYVERSON
New York, US

CO₂SEQUENCES

Peter Bunyard's well-titled article, *Fiddling While the Climate Burns*, (Vol 30 No 2) was valuable in keeping people informed about the global warming problem. However, there is one question which is not adequately addressed either in this article or any other paper or book I have come across, namely what is the upper safe limit of CO₂ concentration?

Sir John Houghton, in *Global Warming: The Complete Briefing* (CUP, 1997), tells us that at the height of the last interglacial: 'about 120,000 years ago, the global average temperature was a little warmer than today. Average sea level was about 5 or 6 metres higher than it is today'. The CO₂ concentration at that time was about 300 parts per million. One might draw the conclusion that the present concentration of 365ppm will, in time, cause a sea-level rise of at least 5 or 6 metres. However, it is not good science to draw a conclusion from one example!

The trouble is that the Vostok ice core only takes us back 420,000 years, and during that time the CO₂ concentration was never higher than 300ppm. Thus at 365ppm we are entering unknown territory. But is it really completely unknown? There are other methods, as well as ice cores, to

estimate CO₂ concentration. So, my plea is for more information about the relationship between CO₂ concentration and eventual sea levels. I feel that it would be easier to convince people that 600ppm, say, really is something to avoid at all costs, if one could estimate that it would be connected to, say, a 30m rise in sea level. Without such a guide, I surmise that the Met Office will continue to draw lines on graphs showing CO₂ concentration levelling out at 750ppm, with barely a comment on the likely consequences.

ANDREW FERGUSON
Optimum Population Trust, UK

HUNTING THE TRUTH

Robin Page's article on fox-hunting (Vol 30 No 3) was very well-written, but there are a few points I would like to raise. Film evidence in the cases of both fox and stag-hunting does not bear out the writer's assertion that no cruelty is involved.

In the case of stag-hunting, why don't farmers fence their land to keep them out?

We humans are supposed to be getting more civilised, not less, so why do we need the barbaric old business of hunting in the year 2000?

And finally, how sad that the reason for the camaraderie and care of the countryside is the hunting and killing of animals, and not simply the love of countryside itself.

A BRIMMELL
London, UK

Editor's reply: This is one of many responses to Robin Page's article on hunting in the last issue. Keep your comments coming: we'll be publishing a special section on your thoughts in the July issue.

Just a Quick Word

GM IGNORANCE

The reason why the responsible scientific community is very quiet on GM foods is very likely because they fear for their future financial security should they dare admit to their lack of real knowledge on what is the equivalent of a child attempting to solve computer problems using a hammer.

RICHARD BRUCE,
Isle of Wight, UK

IT ALL COMES BACK TO NATURE

Within a generation biotechnology will claim the power to clinically evaluate intellectual and personal qualities. Each person will have to choose whether to trust the instinctive wisdom of the body or the artificial intelligence of the lab. This choice can only be based on intuition. Mother Nature will impartially judge the result. Ironically, biotechnology may prove to be an evolutionary process selecting for intuitive ability.

TOM FALVEY
SAN DIEGO, US

CLIMATE CHANGE: DOUBLE WHAMMY

A significant new report will recommend radical action on climate, while BP-Amoco may be forced into a 'greener' stance.

The BBC revealed last month that Britain's forthcoming Royal Commission on Environmental Pollution report will recommend cuts in the country's greenhouse gas emissions more radical than envisaged. It will tell the government that the UK's greenhouse gas emissions should be cut by 60 per cent – in line with the recommendations of the Intergovernmental Panel on Climate Change – rather than the tiny 5 per cent agreed by Western nations under the Kyoto Protocol.

If the Commission does recommend such a significant level of cuts it will put

pressure on the British government, and governments around the world, to reconsider their so-far paltry commitments to action on global climate change.

Meanwhile, in a separate but potentially significant development, oil giant BP-Amoco has been forced by its own shareholders, in an unexpected move, to consider a massive expansion of its renewable energy operations. The corporation, which has so far earmarked \$250m for development of renewable fuel technologies, opposed a motion put forward at its recent AGM that it should invest much more in renewables, but the motion was nonetheless upheld by shareholders, embarrassing the company's directors.



ATTACK OF THE KILLER FUNGI

America's drug war is getting out of hand. The USFDA has come up with a drug-munching fungus, that it hopes to unleash across Asia and the Andes.

The *Fusarium oxysporum* and *Pleospora papveraceae* fungi have already been tested on opium and cannabis crops in the US and Asia. Now the US Drug Control Programme is pressuring Colombia to test the fungi, with which it plans to destroy the crops of the nation's 'drug barons'. But environmentalists say that intentional release of the fungi into a nation's environment is tantamount to chemical warfare, and have labelled the US plan 'Agent Green'. For the effects of the fungus on other plant species, and particularly on wild relatives of the targeted crops, are completely unknown. Coca, for example, has five endangered relatives which are food and home to butterflies and insects. A fungi invasion could

spell doom for the rare plants.

Strains of the *fusarium* fungi produce toxins so deadly that they are classified as 'biological agents' and weapons of war under the draft Protocol to the Biological and Toxic Weapons Convention. In countries like Bolivia, where coca is used like chewing gum, the fungi could kill. The most frightening thing of all is that once released, the fungus is totally out of control, and may spread like wildfire across national borders. Fungi targeted at Colombian coke barons, for example, could easily cross the Andes into Peru, a legal coca producer. Likewise, fungus aimed at Burmese opium fields might ravage Thai poppy crops grown to make pharmaceutical opiates. Indigenous peoples would also become victims of the drug war. Many tribes harvest the targeted crops for traditional, non-drug purposes.



NEEM TREE FREE!

In a vital victory against biopiracy, the notorious patent taken out on India's neem tree has been revoked.

On 10 May, the European Patent Office officially revoked patent number 436257 – the notorious neem tree patent granted to the US multinational W R Grace.

The neem tree has been central to the Indian way of life for millennia, providing free 'goods' and 'services' to Indian villagers, who use its leaves and bark to make clothing, food and shelter, use its twigs for toothbrushes, make traditional medicines from its various parts, and believe it has spiritual powers. W R Grace had been granted the patent to develop a fungicide from neem seeds but had been massively opposed by many people, in India and beyond, who regarded the patent as an attempt to commoditise what had always been common property.

A formal objection to the patent was lodged five years ago by the Research Foundation for Science, Technology and Ecology in Delhi, the International Federation of Organic Agriculture Movements and a Belgian MEP. The defeat of the patent as a result is a landmark for campaigners opposing 'patents on life'.

Dr Vandana Shiva, head of the Research Foundation, said 'this is a great day for all who have been fighting to take back control of their resources and knowledge-systems from the patent regimes of the North.'

BLOOD AND WATER IN BOLIVIA

Protesters in Bolivia have won a major battle against globalisation. Last month, the people of Cochabamba succeeded in driving a large US corporation out of the cities' public water system.

Under pressure from the World Bank, Bolivia sold off Cochabamba's water utility to San Francisco-based Bechtel. Just weeks after the corporate flag had been raised, Bechtel hiked up water rates. Suddenly, families earning just \$100 a month were being asked to spend \$20 of that on their water bills.

The city was outraged. In January, four days of public protest strikes brought the city to a standstill. The Bolivian government promised to lower water rates, and peace was restored. But three weeks later, the government went back on its

word. Once again, the people took to the streets. This time, President Hugo Banzer was less lenient. In the ensuing scuffle, riot police engulfed protestors in tear gas, injuring 175 people and blinding two boys.

Still, however, the people didn't back down. On 4 April, citizen protests held the city hostage once again. This time the government wasn't taking any chances. Martial law was declared, protest leaders were rounded up in the middle of the night, and radio stations were shut down. Then, on 8 April, the Bolivian military shot 17-year-old Victor Hugo Daza in the face, killing him. Two days later the government finally conceded and signed an accord that agreed to all of the protestors' demands, the main one of which was a return of water supplies to public control.



BNFL LEARNS TO COUNT

British Nuclear Fuels' new-look accounts will help the government go ahead with its plans to privatise the company by 2002.

Through a careful presentation of its accounts, BNFL has transformed this year's £62 million operating loss into a £228 million pre-tax profit. This magician's feat has been achieved by including the interest earned from up-front payments for future work and a huge cash pile stored up to deal with later decommissioning costs as 'financial income.' 'It's remarkable,' says nuclear economist Gordon MacKerron of Sussex University. 'I don't think it will fool anyone into thinking that the business is viable as an operation. These earnings are simply the product of managing funds received through historical circumstances. The fact remains that the company is operating at a loss.'

BNFL's nest egg includes a £2.6 billion cash payment to cover future decommissioning costs that it was given when it bought Magnox nuclear power sta-

tions in 1998, as well as a £3.7 billion IOU from the Government. MacKerron criticised BNFL for crediting its accounts with £249m of this IOU, despite the fact that the government has not yet paid over the money.

Earlier this month, BNFL's accounting practises were firmly denounced by Martin O'Neill, chairman of the influential Commons Trade and Industry Select committee. He condemned the 'Byzantine complexity' and lack of transparency of the company accounts and promised to pull BNFL up before the government's auditing body, the National Auditing Office, if things don't improve.

Although BNFL may yet pull off its privatisation, as it stands the group 'would not be a good financial investment,' says Greenpeace's nuclear campaigner Bridget Woodman. 'What they should do is move out of reprocessing and into waste management and clean up. That is where their prospects lie.'

NEWS IN BRIEF

DON'T LOOK NOW

UK researchers have found that the simple view is increasingly obscured, with classic vistas like the white cliffs of Dover from Calais, or Wales from the Lake District growing rarer by the day.

A rise in levels of tiny airborne pollutants are to blame, say scientists at the University of East Anglia.

DYING DIALECTS

Over 5,000 languages and dialects have been lost in the 20th century, say linguists. In the Americas alone, over 1,000 languages have disappeared or reached the brink of extinction in the last 30 years.

LOAD OF RUBBISH

A rubbish tip manager thought the rock he found in a skip might have some scrap value, until he discovered that he had been carrying 20lbs of depleted uranium in the back of his van for six months. Nicholas Remblance, 37, only discovered his deadly cargo when his van set off a Geiger counter security alarm system on a bridge.

TREES ON TOP

The roof of Chicago's City Hall is to be planted with grass, ivy and oak trees, as part of a project to show that roof gardens reduce air pollution. In Switzerland, town planners are one step ahead of the game. A new byelaw states that new buildings must relocate the vegetation lost to the construction's 'footprint' to the roof of the house.

BLAIR ON STANDBY

Tony Blair will cut down on the UK's greenhouse emissions... by banning infrared standby lights on TV remote controls! According to officials, standby lights from household appliances like TVs, microwaves and videos consume the electricity output of two average-sized power stations.

FIRE IN THE SKY

Scientists have discovered that millennium firework displays caused serious environmental pollution – filling the skies with carcinogenic sulphur compounds and airborne arsenic.

A POT-POURRI OF COMMENT ON ECOLOGICAL ISSUES
from THE WORLD'S PRESS

THE BATTLE BOX

America's Twisted Media

America is at war, says Elizabeth Liagin in **Impact International**. But this time its weapons aren't bombs, chemicals or even sanctions, but words. For, with the setting up of a secret body called the International Public Information (IPI) group, the US government will defend 'pro-American values' and defeat its foreign enemies. There's nothing new about this, you might say: America has been fighting its battles with paper and pen since the 50s, when Guatemala's leftist leader Jacobo Arbenz was removed from his presidency without so much as a round of gunfire after the CIA paid locals to infiltrate the national radio station and convince their countrymen of a coup in the countryside. But the IPI is different. Because the group won't just be deployed in times of crisis, but will operate all the time, working, according to its own charter, to 'influence the emotions, motives, objective reasoning and ultimately behaviour of foreign governments, groups and individuals.'

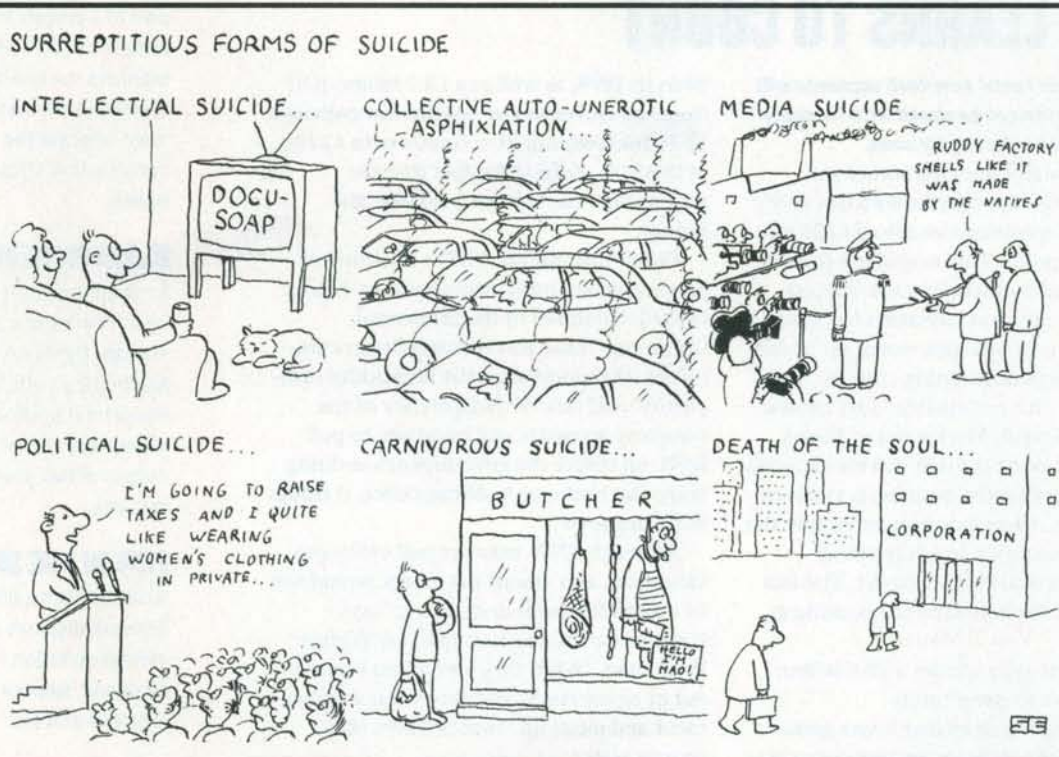
If the US succeeds, and its cultural values seep even further into the global psyche, America's military and economic stranglehold on the world will advance, suffocating cultural diversity and independent thought. If America fails and targeted nations learn of the subterfuge within their own media, a largely democratic voice, trusted by the masses to provide informative accounts of the social and political issues of the day, will be sorely weakened. Another risk is that the IPI's misinformation will

spread back to American news desks, perpetuating a vicious circle of rumours and lies.

What difference would that make, asks Robert McChesney on the **Alternative Radio**? America's media system is already so addled with vested interests that a few false stories are just grist to the mill. In the last forty years, the face of American newspapers has changed. In the 1940s, every major daily newspaper in the States had at least one full-time labour reporter. Today there are just five or six in the whole country. Likewise, as private owners are replaced by media conglomerates, the number of different papers has declined. New York used to have seven major dailies. Now there are just three. Major cities like Houston only have one paper.

Content has changed too, becoming increasingly geared towards the middle and upper class readers that most interest the papers' advertisers. Take Iowa's **Des Moines Register**. Historically one of the country's great papers, the Register used to employ a reporter for every county in the state, so that wherever you lived you could follow state politics. When the paper was bought up by media monopolists Gannett in 1985, however, reporters were sacked and the coverage focused on the wealthy business community in the suburbs. Profits soared but the Iowa people lost out. So America isn't just sabotaging the rest of the world's press freedom.

STAN AT EASE
by Stan Eales



TITLE PROGRAM ART LIBRARY

PULL THE OTHER ONE, GEORGE

Bob Herbert, *New York Times*

George W Bush has gone green. 'As we use nature's gifts, we must do so wisely. Prosperity will mean little if we leave future generations a world of polluted air, toxic lakes and vanished forests,' he gushed in an appearance in Pennsylvania last month. What a joke, says Bob Herbert. Bush is to the environment what oil slicks are to oceans. Bush's Texas is the most polluted state in the Union, consistently ranking first in carcinogenic emissions, pollution of rivers with industrial chemicals, smog levels and the injection of toxic wastes into underground wells. And Bush

has played an instrumental role in aggravating this mess. His first appointment to the state's Environmental Protection Agency, for example, was one Ralph Marquez. Marquez had spent 30 years at Monsanto, and chaired the Texas Chemical Council: talk about putting the 'biggest, hungriest fox we can find right at that gaping entrance to the chicken coop.' In fact, 'every chance that Bush has had, he's stood up for the polluters,' says director of Texas Public Citizen group, Tom Smith. Pull the other one, George – the green garb doesn't fit.

POISONOUS CARGOES

Gar Smith, *Earth Island Journal*

When an El Al flight crashed into suburbs on the outskirts of Amsterdam in 1992, the Dutch government assured the public that the Israeli plane had been carrying nothing but 'perfume and gift articles.' But after residents at the crash site in Bijlmer started to complain that they were suffering from strange diseases, Dutch journalists decided to investigate. Thanks to their efforts, the truth has now – eight years down the line – come to light, says Gar Smith. It turns out that the plane was hauling ten tons of chemicals, including the ingredients used to produce sarin nerve gas, to Israel. The Israeli government has insisted that the nerve agents were required to test out the

military's new-issue gas masks. But later reports reveal that there were enough chemicals on board the flight to wipe out the entire population of a major world city. A Dutch government inquiry into the incident found that such shipments regularly fly between America and Israel, stopping off in Holland for refuelling. And whilst normal cargo planes undergo rigorous customs inspections, the special El Al flights pass through the airport unchecked. The shipping of undisclosed chemicals is a danger to us all. With air cargo traffic expected to increase more than seven per cent a year, it is only a matter of time before another Bijlmer occurs.

THAILAND: MURDERED BY THE MARKET

Sanitsuda Ekachai, *The Bangkok Post*

When will our free market economists ever learn, asks Sanitsuda Ekachai? Year after year, they say that integrating Thailand into the global economy will bring manna to all. But look at where such a policy has got us. Encouraging foreign investors has been ludicrously expensive. In 1991, tax exemptions cost Thailand \$4.5 million. By 1995, the sum had risen to \$340 million. And the cost to our environment has been far higher. In order to make way for the huge crop plantations suitable for export-led agriculture, forests have been cleared and family

farms wiped out. Average farm incomes have plummeted. Such global plantations also require huge amounts of pesticides, and in the last decade the amount of pesticides used in Thailand has increased 122 per cent and our water has become contaminated. A 1994 study found that 81 per cent of the country's reservoirs contain DDT. So a Public Health Ministry report that found a 17-fold increase in pesticide-related disease between 1988-93 comes as little surprise. Thailand's global free-trade policy has literally cost us the Earth.

NOTES & QUOTES

‘By 2000, the machines will be producing so much that everyone in the US will, in effect, be independently wealthy.’
Time magazine, 1966.

‘Global economic losses as a result of ‘natural disasters’ have doubled every decade since the 1960s. Global GDP, meanwhile, doubles every 25 to 30 years –
Global Commons Institute

Michael Meacher MP, Britain's Environment Secretary, has apparently embraced the Gaia hypothesis. 'It is a very stimulating and important hypothesis,' he said in May, '...it puts a new slant on the interconnectedness of different species. I take it very seriously.' It remains to be seen how this will inform the UK's environmental policy.

James Wolfensohn, President of the World Bank, on anti-World Bank protests: 'It's a bit demoralising when you see there is a mobilisation for social justice when you think that's what you're doing every day.'

Historian Arnold Toynbee on civilisation: 'Civilisations in decline are consistently characterised by a tendency towards standardisation and uniformity. Conversely, during the growth of civilisation, the tendency is towards differentiation and diversity.'

Jeffrey Sachs, director of the Harvard Institute for International Development and an advisor to countries around the world told *Inside Capital magazine* that the IMF, 'with the very heavy backing of the U.S. government, really tries to run countries all over the world, and doesn't do a very good job of it.'

Dr Harry Griffin, Assistant Director at Dolly the sheep's birthplace, The Roslin Institute, quoted in *The Guardian* on cloning humans: 'I don't think cloning is going to be popular. Sex is always going to be viewed as cheaper and more enjoyable.'

Ralph Nader on Al Gore: 'He's plastic man. He used to be the man you went to on civil justice and biotech. Now he's just corporate power.' – *Time*

EUROPE FIGHT THE LIFE PATENTERS

Ecoropa have launched an urgent appeal against European Directive 98/44 on the legal protection of biotechnological inventions. The Directive amounts to effectively transforming live genes, including human ones, into an economic commodity. What's more, it violates eight International Instruments.

Nevertheless, EU member states are busy integrating the provisions contained in the Directive within their national legislation to meet the deadline of 30 July.

The Italian and Norwegian governments have asked for an annulment of the Directive, but will not succeed without massive support.

If, as seems likely, an agreement on Intellectual Property is reached within the WTO, and once this Directive is implemented, the patenting of living plants and animals will be virtually unstoppable. This is why Ecoropa is calling upon citizens and organisations to join them in halting this greedy scramble for life once and for all.

What you can do: Sign the petition on www.ecoropa.org/brevets or telephone Ecoropa on +33 143 383817. Forward the petition to as many people and groups as possible.

INDIA ENDANGERED TIGERS IN A HOLE

The World Bank is funding destructive coal mining in important forest corridors in the Thousand Tigers Ecosystem in eastern India. The project envisages over 400 opencast mines in an area collectively estimated to be home to around 1,500 tigers – one quarter of the entire global population. This involves destroying a forest area of a stunning 170,000 square km. As usual, a terrible price will be paid, too, by local tribal communities. In some cases, entire villages have already been expelled from their homes by the police and left with nowhere to go.

These mines will seriously threaten the already beleaguered tigers of India. The World Bank must be told to withdraw its money right away. *The Ecologist* will be running a feature on this issue later this year.

What you can do: Send a letter of protest to Shri Atal Behari Vajpayee, Prime Minister of India, Secretariat, South Block, New Delhi 110 001 and to James Wolfensohn, President, The World Bank, 1818 H Street NW, Washington D.C. 20433 USA.

UK/FRANCE STOP THE NUCLEAR GREENWASH

Conflict over the role of nuclear power in combating global warming is heating up. Greenpeace has issued a warning that France and the UK are again calling for nuclear power plants to be included in the Kyoto Protocol's Clean Development Mechanism (CDM), under which industrialised countries will be able to claim greenhouse gas emission reduction credits if they help developing countries to cut emissions. Greenpeace say the CDM risks becoming 'a new subsidy for the nuclear industry'.

If nuclear power becomes accepted as a

'clean' alternative to fossil fuels, we could be in deep trouble.

What you can do: Lack of political will means that the future of a sustainable energy generation is in your hands. Write to John Prescott, UK Deputy Prime Minister and/or Dominique Voynet, France's Minister for the Environment and tell them why you object. Send a copy of your letter to the European Commission. For further details, call *The Ecologist* on 0208 9480170.



EU/USA

PUSHING CLEAN COMPUTERS

Many of us are unaware of the toxic materials in the products we rely on for word processing, data management, access to the internet etc. Workers involved in chip manufacturing are beginning to report cancer clusters, and new evidence is emerging that computer recyclers have high levels of dangerous chemicals in their blood.

The average computer has a lifespan of less than two years. Experts estimate that in the US alone there will over 315 million obsolete computers by 2004, many of which will be destined for landfills, incinerators or hazardous waste exports. The European Union is developing legislation that would include 'take back' requirements and toxic material phase-outs, whilst encouraging cleaner product design and less waste generation. Unfortunately, and unsurprisingly, the US Trade Representative is lobbying on behalf of the American Electronics Association to attack the EU's draft directive.

What you can do: Send an online fax to Vice-President Al Gore and the EU Commissioners; tell them why you support legislation on waste from electronic and electrical waste equipment via Silicon Valley Toxics Coalition on www.svtc.org, or tel: +1 408 2876707.

World-Wise Web: The five best online campaigns

www.peer.org

An old favourite, with a campaign on the global extinction crisis.

www.capweb.net

Sign their Cell Tower Siting petition against Mobile Phone Towers.

www.amrivers.org/salmonforever.html

Help remove four dams from Washington's Lower Snake River to save this legendary fish before they sell us their GM version

www.corpwatch.org

Send a free fax to R Rubin, Chairman of Citigroup Inc, telling him to stop dealing in World Bank Bonds, which make up 80 per cent of its funds.

www.globalexchange.org

The World Bank plans to provide \$1 billion to create a 'land bank' in Brazil that will subvert genuine land reform. Send them a free protest fax.

INDIA BLOOD FOR OIL

American multinational Unocal, already being severely criticised for its record in Burma, has added India to its list of targets.

Unocal and its Indian partner NATELCO want to build a vast 11-berth port in Umbargaon, on the border between Maharashtra and Gujarat. The port threatens fertile coastal breeding grounds as well as agricultural and horticultural lands, which support thousands of self-sufficient fishing and agricultural families.

Despite stiff local opposition, the Gujarat State government is determined to push the project through. Due to local opposition, survey work was halted until April 7, 2000, when a large contingent of police arrived at

Umbergaon village to announce that the remaining survey work would be carried out. Large numbers of villagers, especially women, came out of their houses in a spontaneous and peaceful protest. The police set off tear gas shells and then went on a rampage, beating up the villagers. There were many arrests, and lawyers who went to meet clients were themselves beaten up.

What you can do: Send a letter of protest to Roger Beach, Unocal's CEO on www.unocal.com/responsibility/99report/crview.htm, or call +1 3107267600. Forward a copy to Rashid Talyarkhan at jjhna@vsnl.com.

USA FARMERS FOR SALE

In April, GrassRoots Environmental Effectiveness Network (GREEN), released an appeal for an investigation into the Farm Bureau leadership on the basis that their widespread commercial activities are antagonistic to the farmers' interests.

GREEN has since been joined by Friends of the Earth, the National Family Farm Coalition, Defenders of Wildlife and 180 more groups. Defenders of Wildlife have

released a report detailing the Farm Bureau's business interests, including companies, agribusiness giants and banks (download on www.defenders.org)

What you can do: contact Scotty Johnson at GREEN, for a copy of a petition to investigate the Farm Bureau. Tel: +1 520 623 9653, email: sjohnson@defenders.org



USA SAVE THE NATIONAL FORESTS

In the US, the amount of 'roadless' areas in national forest land – invaluable for the protection of wildlife – consists of almost 60 million acres. But a current moratorium on road construction in roadless areas does not prohibit logging (with helicopters or cable systems!), mining, oil & gas exploration and ski area expansion or motorised recreation. Certain Forests, like the Tongass National Forest in Alaska, and all the National Forests of the Pacific northwest, are not even included in the moratorium; neither are national forests with recently revised land management plans.

This moratorium expires at the end of

September, and conservationists are hoping that its replacement will prohibit all destructive activities in all national forest roadless areas.

What you can do: Throughout June the Forest Service will hold informational meetings and public hearings on the proposed rule. There will be a 90 days written comment period. If you live in one of the relevant areas attend a public hearing. Write to the Forest Service and send a copy to your Congressman. All information on www.colorado.org or call +1 3035469911.

CAMPAIGN DIARY

7 June 2000 1-2.15 pm. **Global Institutions and Developing Countries** Overseas Development Institute, London, UK.

Speakers: David Batt/DFID; Peter Tulloch/WTO & Ngaire Woods/University College, Oxford.

See www.oneworld.org/odi

9-11 June 2000 **Forest Guardians Conference**

Kingston, NM, USA.

Forest Guardians fearlessly fight to protect and restore the wilderness of the Southwest.

Visit www.fguardians.org and go – great programme.

11-15 June 2000 **Countering the World Petroleum Congress**

Calgary, Alberta, Canada.

Counter action and conference featuring speakers from indigenous groups threatened by the petroleum industry.

Visit: www.nisto.com/activism/project/petrol.html, download the essential flyer and get out there.

17-18 June 2000 **CADU 2000 Conference on Depleted Uranium**

Manchester, UK.

Tel: +GB (0)161 8348301, email: gmdcnd@gn.apc.org

18 June 2000 **Sunday – Celebrate the power of the Sun and renewable energy Europe**

Annual celebration of the International Solar Energy Society.

UK: send an email to ann@create.org.uk;

Europe: visit www.sundayeurope.com

30 June 2000 **Understanding the new EU Livestock Regulations**

Cannington College, Bridgwater, Somerset.

The Soil Association is organising a series of sessions for organic and converting producers on the impact of the European Livestock Regulations.

Admission: free of charge to Members/£10.00 Non-members. Contact Mark Whitaker, Soil Association on 01179142418.

GUATEMALA DRILLING THE FORESTS

The Maya Biosphere Reserve, in northern Guatemala, was created in 1989 to safeguard as much rainforest as possible from oil development which had taken off in the mid-eighties. Together with adjacent forests in Mexico and Belize, the area constitutes the largest continuous tropical moist forest in Central America.

But illegal government concessions for oil activity in almost 90% of the reserve are threatening the forests. After local communities and organisations vigorously protested against nine concessions for oil exploration and drilling, Guatemala's Attorney General for Human Rights declared last spring that the right to a clean environment is an

inalienable human right.

Despite this significant step, the Court's ruling may be undone by political maneuvering. Local groups fear that the ruling will only apply to one concession, thus paving the way for unrestrained oil development in the rest of the reserve.

What you can do:

Write, expressing your concerns, to Alfonso Portillo, Presidente de la Republica de Guatemala, Palacio Nacional, 6 Calle entre 6 y 7 Avenida, 10001 Guatemala. Send a copy of your letter to Tropico Verde, 14 Calle 5-08 Zona 10, 01010 Guatemala.



ENVIRONMENTAL IMAGES

SIBERIA SAVE THE SNOW LEOPARD

An interregional organisation called Siberian Accord plans to construct a road and gas pipeline to China. This association, which has vast political powers, exists to create favorable conditions for investing in Siberia.

The proposed route for the road/pipeline project runs through the Ukok plateau in the Altay Mountains of Siberian Russia, precious because of its rich biodiversity and ancient archeological sites. It is also the home of the few remaining Snow Leopards in Siberia. For these reasons, the Ukok plateau was named a UNESCO World Heritage Site in 1998. The road/pipeline project would irreparably destroy this unique and delicate ecosystem,

as well as invading land sacred to the indigenous Altay people.

What you can do:

contact Vladimir Ivankov, Director General of Siberian Accord on root@sibsogl.nsk.su or fax:+8 (3832) 237738, and tell him why this project must be stopped. Contact UNESCO to complain about this project – all contacts can be found on www.unesco.org – or phone +33 145681000. Copy a letter to the Fund for 21st Century Altay (katun@ab.ru), a local NGO working against the project – tel: +7(3852)220908.

Conscious Consumer

WHAT TO BUY AND WHAT TO BOYCOTT

◆ **Not so sweet:** Baby foods bought in high street shops contain high levels of sugar and carry misleading labels, says a Consumers' Association report. A survey of 420 commercial baby foods found that nearly 40 per cent contained added sugar, whilst 60 per cent of breakfast cereals have extra sweeteners.

◆ If you don't have a garden, an organisation called **Willing Workers on Organic Farms (WWOOF)** could be just the thing for you. The group arranges working holidays on organic farms. Lodging and food are free in exchange for your much-needed help with the farming. Send an SAE to: WWOOF, PO Box 2675, Lewes, East Sussex, BN7 1RB.

◆ **Paint Pollution:** Avoiding hazardous chemical substances is a full-time occupation, especially when it coats the walls of homes. Most commercial paints contain hazardous toxins known as volatile organic compounds (VOCs). But a growing range of natural paints – made from the kind of ingredients more commonly found in a fridge – are painting the way to more healthy homes. Casein paint is one example; made from milk protein, it comes in a powder that you mix yourself. Other paints use sustainably-harvested tree resin as a binder. Although natural paints can be up to five times more expensive than their chemical counterparts, the results are healthier and longer lasting too. Before you sling out your old paint pots however, spare a thought for the toxins leaching into your local landfill. To deal with this problem, Leeds-based recycling company SWAP co-ordinates community paint recycling schemes where half-finished paint pots are distributed to local voluntary groups and community organisations. Natural Paint Suppliers: Auro Organic Paints, tel: 01799 584 888. Livos Natural Paints, tel: 01952 883288, Liz Induni Traditional Paints, tel: 01929 423776. Nutshell Natural Paints, tel: 01364 642892. SWAP, tel: 0113 243 8777.

World-Wise Web: The five best bookmarks

www.protest.net

Upcoming global protests and rallies. Also try www.znet.protest.net

www.whybiotech.com

Biotech's 'big brothers' have formed a council...

www.turnpoint.org

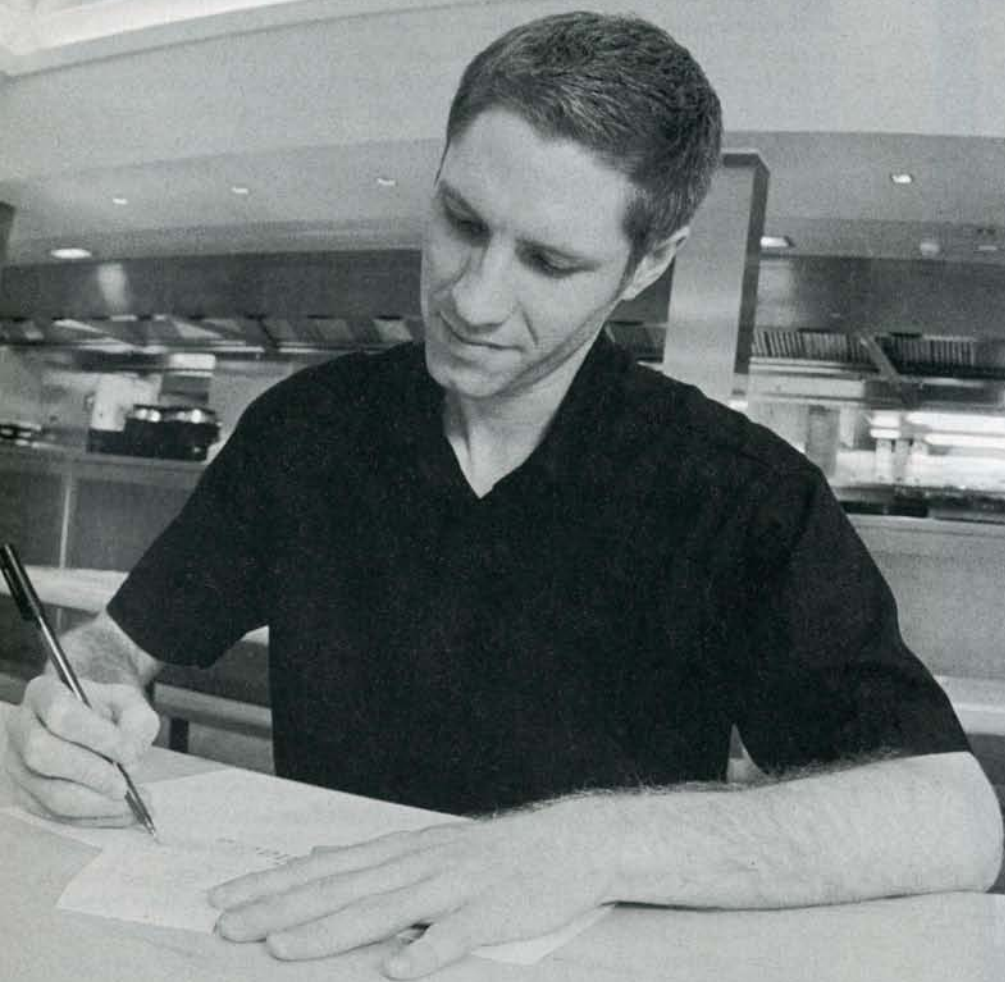
More ammunition to help you challenge basic assumptions

www.essential.org

It's an absolute essential

www.TomPaine.com

Ideas, opinions & analysis overlooked in the press



HE'S ACTIVELY CAMPAIGNING AGAINST GM FOODS

The Greenpeace Visa Card means you can now support the campaign against genetically modified foods over lunch. No one knows the long-term effects of GM crops. GM technology is unpredictable and once released into the environment, GM contamination cannot be recalled. Greenpeace believes that this constitutes a potentially huge risk to biodiversity. That's why Greenpeace is leading the campaign to ban them and encourage organic alternatives. Now, for every account opened, The Co-operative Bank will donate £5 to Greenpeace, (£10 if you open it on-line). Then 25p for every £100 spent on your card. We guarantee no annual fee - for life. And we'll transfer your balance at only 14% APR, saving you up to £360.* What's more, by using the world's first almost PVC free credit card† you'll cause less damage to the environment - and your pocket. So call the freephone number or register on-line today.

0800 33 99 22

www.co-operative.bank.co.uk/greenpeace.html Please quote Ref. 53013

The COOPERATIVE BANK

SWEET TALKING



In a recent survey of 166 studies on the effects of the sweetener aspartame on human health, 74 had industry-related funding and 92 were independently funded. Of the industry-sponsored articles, 100 per cent attested to aspartame's safety. Of the non-industry-sponsored articles, 92 per cent demonstrated some type of adverse reaction. Ed Metcalfe investigates whether the industry's assurances about aspartame are any more than sweeteners themselves.

Aspartame is a sugar substitute added to literally thousands of products, most notably diet soft drinks, and known best to the world of diet-conscious consumers as NutraSweet. While NutraSweet maintains that its product is entirely safe, independent researchers continue to present evidence of the chemical's neurotoxicity, linking its ingestion with the onset of numerous adverse symptoms including – in particular – headaches, seizures (convulsions) and mood disorders. In fact, aspartame had been the focus of controversy long before it was approved for public consumption in 1981. Several key tests conducted in the early 1970s to establish the safety of the product were heavily criticised by US Food and Drug Administration (FDA) scientists; while a Public Board of Inquiry set up by the FDA to address the question of aspartame's safety actually recommended that aspartame should not be approved until further tests had been done to discount a possible link between aspartame and brain cancer. In spite of these objections, the FDA Commissioner approved aspartame. It is only now, 18 years later, that those further tests on brain tumours are being conducted, not by NutraSweet (not surprisingly), but by independent researchers at King's College London.

APPROVAL WITHHELD

Aspartame was discovered by accident in 1965 by James Schlatter, a chemist working for US pharmaceutical company G D Searle. Following Schlatter's discovery, Searle conducted tests on the safety of aspartame, and in 1973 petitioned the FDA for permission to market the chemical as a sweetening agent. In July 1974 the FDA gave its approval, only to withdraw it again in December that year.

The retraction was caused by controversy within the FDA as to the safety of aspartame and the validity of Searle's tests. In August 1974, before aspartame had made it onto the market, consumer interest attorney James Turner and neuroscientist Dr John Olney of Washington University filed a formal objection to the FDA's approval, stating they believed aspartame could cause brain damage. They cited research carried out by Olney which found that aspartate (one of the constituents of aspartame) destroyed nerve cells in the brains of mice. Furthermore, FDA toxicologist Dr Adrian Gross had come upon some irregularities in the submitted tests of another Searle product, Flagyl. Searle's unsatisfactory responses to queries concerning Flagyl raised suspicions over the validity of Searle's tests in general.

With approval now withheld, Gross and others were appointed to a taskforce to investigate Searle's studies on a number of products including aspartame. The taskforce, which reported in March 1976, noted that 'Searle has not submitted all the facts of experiments to the FDA, retaining unto itself the unpermitted option of filtering, interpreting, and not submitting information which we would consider material to the safety of the product'. It concluded:

'At the heart of the FDA's regulatory process is its ability to rely upon the integrity of the basic safety data submitted by sponsors of regulated products. Our investigation clearly demonstrates that, [in the case of] the GD Searle Company, we have no basis for such reliance now.'

In the light of these findings the FDA singled out three key studies submitted by Searle on the safety of aspartame. It set up a new taskforce, headed by Jerome Bressler, to investigate these studies and determine whether or not they had been properly conducted. In August 1977 the Bressler Report (as it became known) was released. Investigators found significant deviations from acceptable procedures for conducting non-clinical laboratory studies. They discovered, for instance, that a significant proportion of animal tissues from one of the studies had been allowed to decompose before post-mortem examinations could be performed. Original animal pathology sheets and the pathology sheets submitted to the FDA showed marked differences. Animals were recorded as dead and then subsequent records would indicate that the same animal was still alive – almost certain evidence of a mix-up – which tallied with evidence that animals had not been correctly tagged. In one of the studies examining the possible carcinogenicity in rats of a breakdown product of aspartame called dike-topiperazine (DKP), investigators could not ascertain what dosage of DKP had been fed to the rats. There was also evidence that the feed in the DKP test had

been improperly mixed, allowing the animals to avoid the DKP while eating.

In 1987 Dr Jacqueline Verrett, a toxicologist and member of the Bressler Task Force, testified before a US Senate hearing. She described the discrepancies found in the Searle tests of aspartame as, 'serious departures from acceptable toxicological protocols'.

'It is unthinkable', she said, 'that any reputable toxicologist giving a complete objective evaluation of this data resulting from such a study could conclude anything other than that the study was uninterpretable and worthless and should be repeated'.

On the crucial question itself: 'It would appear that the safety of aspartame and its breakdown products has still not been satisfactorily determined, since many of the flaws cited in these three studies were also present in all of the other studies submitted by Searle'.

SWITCHING SIDES

Even before the Bressler Report had been released the FDA's Chief Counsel, Richard Merrill, considered there to be enough evidence to bring fraud indictments against Searle. In January 1977, Merrill wrote to US Federal Attorney Samuel Skinner requesting that he 'convene a Grand Jury investigation into Searle and three of its officers, for their wilful and knowing failure to make reports to the FDA and for concealing material facts and making false statements in reports of animal studies conducted to establish the safety of the food additive aspartame'.

Since the studies in question were conducted in the early 1970s, it was important that Skinner act quickly to avoid the five-year deadline imposed on criminal prosecutions by the US Statute of Limitations. In what can only be described as an interesting twist, Skinner was approached by Searle's lawyers, Sidley and Austin, and invited to join their firm. Skinner accepted, leaving the decision on a Grand Jury investigation to await the appointment of his successor.

By December 1977, despite repeated warnings from Richard Merrill at the FDA, the Statute of Limitations had expired on the aspartame case.

TUMOUR RUMOURS

In 1978, while examining FDA files on aspartame animal studies, Dr John Olney found two studies that revealed an unexpectedly high incidence of malignant brain tumours in aspartame-fed rats. In response to Dr Olney's concerns, the FDA decided to set up a Public Board of Inquiry (PBOI) to evaluate this brain tumour evidence and reach a final conclusion on the safety of aspartame, an issue that had now been dragging on since 1974.

The study causing most concern was called E33/34. This was a two-year study in which 320 rats were fed aspartame and 119 rats were fed a normal diet and used as controls. At the end of the study 12 of the aspartame-fed rats had developed brain tumours while none of the control rats had. This represented a 3.75 per cent incidence of brain tumours in the rats fed aspartame. In order to determine whether or not these were simply naturally occurring brain tumours the PBOI had to ascertain the spontaneous brain tumour rate in laboratory rats. After examining the literature they concluded that the spontaneous brain tumour rate was considerably less – approximately 0.7 per cent. It was clear, therefore, that E33/34 exhibited a worryingly high tumour incidence that could not be discounted.

Accordingly, in October 1980, the PBOI unanimously recommended that aspartame should not be approved until additional studies were performed to establish whether or not a relationship existed between the ingestion of aspartame and brain tumours. For FDA toxicologist Dr Adrian Gross, E33/34 was unambiguous in its significance. In 1985, in his testimony before the US Senate, he stated: 'at least one of those studies [E33/34] has established beyond any reasonable doubt that aspartame is capable of inducing brain tumours in experimental animals.' Arthur Hull Hayes, however, the new FDA



Negative effect: what kind of harm might the aspartame found in some boiled sweets and soft drinks be doing?

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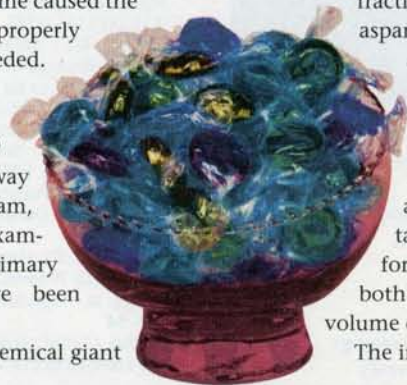
Commissioner on whom the final approval decision rested, did not share this view. He overruled the PBOI and without any further tests being conducted approved aspartame for use in dry foods in 1981 and in beverages in 1983.

While Hayes left the FDA shortly afterwards to become a paid consultant with Searle's public relations firm Burson-Marsteller, Professor Olney has kept the spotlight on the brain tumour issue, reiterating the PBOI's call for further testing. In 1996 a study conducted by Olney and his colleagues from Washington University alleged a link between the widespread use of aspartame and a 10 per cent increase in the incidence of brain tumours in the early 1980s in the US.² The language used in the paper is cautious however. The researchers stress the importance of reminding consumers that the evidence presently available is not sufficient to prove that aspartame caused the brain tumour increases. Therefore new studies properly designed to answer this question are urgently needed.

SPONSORING SAFETY

A new three-year study, begun in October 1999 at King's College London, should go some way towards resolving this issue. The research team, headed by neurochemist Dr Peter Nunn, will examine whether aspartame could be linked to primary brain tumours as Olney and others have been suggesting.

In 1985 Searle was bought by US food and chemical giant



Monsanto and the NutraSweet Company was made into a separate subsidiary. In response to news of the King's College study, NutraSweet stated: 'There is already an overwhelming amount of scientific evidence which confirms the safety of aspartame'. The brain tumour issue they attribute to 'scare-mongers'. This is typical of the industry's stance since the 1970s and mirrors the FDA's frequently repeated description of aspartame as 'the most thoroughly tested additive in history'. Since its approval, however, reports of toxic reactions to aspartame have steadily mounted prompting, in November 1987, a US Senate Hearing at which Senator Howard Metzenbaum testified that the FDA had already received close to 4,000 complaints ranging from seizures and headaches to mood alterations. Today, US campaigners on aspartame claim that that figure represents barely a fraction of those who have suffered from the effects of aspartame toxicity. At present the Internet is awash with accounts of individuals who claim the onset of problems when aspartame is ingested, and their improvement upon the avoidance of aspartame. In the face of this growing pressure both Monsanto and the FDA remain defiant in their defence of aspartame. They dismiss the accusations as anecdotal, not scientifically proven, and fuelled by misinformation posted on the Internet. The response of both NutraSweet and the FDA is to point to an extensive volume of literature attesting to aspartame's safety. The integrity of this literature, however, is not above

CHEMICAL REACTIONS

In seeking to get at the truth of aspartame's safety the interested consumer's best approach is to listen to the views of independent scientists and researchers. Aspartame is made up of three chemicals: phenylalanine, aspartic acid, and methanol. Independent researchers have found all three chemicals to have toxic potential linked to adverse clinical events.

PHENYLALANINE

Phenylalanine is an amino acid normally found in the brain. Ingesting aspartame can significantly increase brain phenylalanine and tyrosine levels, and can suppress the usual increase in tryptophan that follows a carbohydrate-rich meal.⁴ Such neurochemical changes have been postulated as the cause of numerous adverse neurologic and behavioural symptoms including seizures (convulsions), mood disorders and headaches.

Reports of aspartame's role in seizure induction are anecdotal though highly persuasive. Walton published an anecdotal case of particular interest in 1986. The case involved a 54-year-old woman with no known medical difficulties other than a history of depression. Without warning she experienced a grand mal seizure followed by a profound behavioural change categorised as symptomatic of mania. It was discovered that it was her custom to drink up to a gallon per day of iced tea. In the past she had sweetened the tea with sugar, but during the weeks prior to her seizure she had used aspartame instead. She was taken off all medication and aspartame was eliminated from her diet. Within four days all evidence of manic activity had subsided. She continued to ingest large amounts of iced tea, sweetened with sugar, and experienced no relapse. Walton concludes: This patient's clinical course suggests that high intake of aspartame may have triggered a seizure and subsequent manic episode.⁵

In 1988 Walton published a further eight cases of seizures linked to aspartame.⁶

ASPARTIC ACID (ASPARTATE)

As early as 1970 Olney presented evidence of aspartate's neurotoxicity; it was on these grounds that he objected to aspartame's approval in 1974.

Aspartate, like glutamate (MSG), is an amino acid that acts as a neurotransmitter in the brain. It is primarily Olney who is responsible for demonstrating that neurons (brain cells) exposed to excessive amounts of aspartate and glutamate become overstimulated and die.⁷

In a series of experiments since the 1970s Olney has conclusively demonstrated that glutamate and aspartate administered orally to mice cause cell death in certain areas of the brain. The circumventricular organs, which lack the protection of the blood brain barrier, show the worst evidence of neuronal destruction, even at low doses of glutamate and aspartate.

The resulting disruption of the hormone flow meant the infant mice displayed sexual dysfunction, obesity and stunted growth.

METHANOL

Aspartame also contains methanol, which upon ingestion is broken down to formaldehyde and then formic acid. Formaldehyde is a highly toxic known carcinogen that causes retinal damage and acts to alter DNA.⁸

NutraSweet and the FDA seek to allay the fears of consumers by arguing that there are other foodstuffs that supply as much or even more methanol, such as citrus fruits and juices. The argument is virtually an insult to the independent scientists and campaigners who are concerned about aspartame. As the FDA and NutraSweet know full well, ripe fruits always contain the natural antidote, ethanol, which protects from methanol poisoning by preventing the conversion to formaldehyde and formate. An important recent study confirms that far from being carried out of the body, the formaldehyde from aspartame accumulates in body tissues.⁹

■ suspicion. Professor Ralph Walton of Northeastern Ohio University's College of Medicine recently conducted a survey of aspartame studies in peer-reviewed medical literature. Of 166 studies felt to have relevance for questions of human safety, 74 had NutraSweet industry-related funding and 92 were independently funded. Of the industry-sponsored articles, 74/74 (100 per cent) attested to aspartame's safety; of the non-industry-sponsored articles, 84/92 (92 per cent) demonstrated some type of adverse reaction. As Walton says, 'the clear split in the literature, with outcome correlated so closely to funding source, is deeply troubling [raising questions] about aspartame's safety and the appropriateness of industry sponsorship of medical research'.³

Perhaps the new research currently being conducted will shed further light on the ingredient. One thing seems certain: we do not know everything yet that there is to know about aspartame. ♦

For further information on aspartame, and international campaigns against it, see www.dorway.com and www.holisticmed.com/aspartame. Freelance journalist Ed Metcalfe thanks the websites' coordinators Betty Martini and Mark Gold for their invaluable contributions to this article.

Further Reading

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INSIDE INFORMATION

Some of the products which may contain aspartame: check the label first.

Chewing gums	Tea beverages
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CAN WE TRUST THE MEDIA ON THE ENVIRONMENT?

ARE WE GETTING THE FACTS ABOUT THE WORLD FROM A FREE PRESS, OR BEING LED ASTRAY BY A CORPORATE MEDIA UNINTERESTED IN THE REAL ISSUES? WRITER AND THINKER DAVID EDWARDS ARGUES IT OUT WITH ENVIRONMENTAL JOURNALIST CASPAR HENDERSON

Dear Caspar Henderson,

The mass media is made up of profit-seeking corporations owned by wealthy individuals and a handful of transnational parent companies. These media corporations are all tied into the stock market and are all highly dependent on advertising revenue. The media's primary products are audiences, preferably wealthy ones, which are sold to advertisers.

Naturally enough, advertisers are extremely sensitive to media content. Proctor & Gamble, the world's biggest advertiser, has explicitly prohibited programmes 'which could in any way further the concept of business as cold, ruthless, and lacking all sentiment or spiritual motivation'. No mention was made of programmes accurately depicting the corporate devastation of the environment. *The Economist* reports that media 'projects unsuitable for corporate sponsorship tend to die on the vine,' adding that 'stations have learned to be sympathetic to the most delicate sympathies of corporations'.

In the US, NBC and CBS are owned by arms manufacturers General Electric and Westinghouse, respectively. Oil companies such as Exxon, Texaco, and Mobil have representatives on the boards of these media giants, as has Lockheed Martin, which builds the F-22 fighter. A survey by the American Society of Newspaper Editors revealed that a third of editors 'would not feel free to run a news story that was damaging to their parent firm'. In Britain, Donald Treford came close to being sacked as *Observer* editor by proprietor Tiny Rowland after he damaged Rowland's interests by exposing atrocities in Zimbabwe. Rowland openly declared that his company would not support an editor who 'showed no concern for [its] commercial interests'.

The situation, then, is one in which profit-seeking media corporations, tied into the stock market status quo, are surrounded by giant profit-seeking trans-national corporations, by which they are owned, on which they are dependent, and by which they are subject to levels of influence capable of humbling national governments. As a result, as Noam Chomsky has written, the basic operating principle of the US and British media, rarely violated, is that 'what conflicts with the requirements of power and privilege does not exist'.

Because the corporate media system is in no way separable from the wider corporate system, the question should properly be reformulated as 'Can the corporate system be trusted to police and reform itself?' The answer, quite obviously, is, 'no'. Political scientist Thomas Ferguson observes that the major media, 'controlled by large profit-maximising investors, do not encourage the dissemination of news and analyses that are likely to lead to popular indignation and, perhaps, government action hostile to the interests of all large investors, themselves included'.

No issue is more hostile to the interests of investors, media included, than the corporate destruction of the environment for profit.

The Channel 4 series, *Against Nature*, claimed that environmentalism is 'based on a fear of change', and has roots in 'xenophobic right wing movements', such as 'the German Nazis'. In response to my complaint about this programme, Michael Jackson, Chief Executive of Channel 4, wrote, 'The small but significant group of people who hold views opposed to the environmental lobby have rarely been seen on British television.'

Endless adverts, business dailies, and programmes pushing cars, travel and fashion, do not qualify, apparently. Occasional references to environmental issues feels like balance to media executives like Jackson, because even a little of this self-harming coverage seems a lot. Unfortunately, many environmentalists – raised on a diet of media exclusion – have also lost sight of what constitutes appropriate coverage, as the sheer weight of scientific evidence and public concern have forced the environment onto the agenda to a limited extent.

Global warming, for example, is reported, but the level of coverage – even now, with thousands dying in giant storms 'clearly tainted by human actions', according to scientists – is dwarfed by the seriousness of the threat. Likewise, the pitiful response that is the Kyoto Protocol – proposing a 5.2 per cent cut in greenhouse gas emissions as against the 60 per cent required to stabilise the climate – and the true depth of business opposition to even these cuts, are accorded a tiny fraction of the coverage they merit.

Compare the mass hysteria generated by the media in response to the merely hypothetical (and



David Edwards is a freelance writer, and author of *Free to be Human* (published as *Burning All Illusions* in the United States) and *The Compassionate Revolution*, both published by Green Books.

NO

in fact largely invented) 'threat' of Soviet invasion during the Cold War, with floods of Hollywood films, front-page stories and documentaries. What is the difference? The 'red menace', granted official approval by business-dominated Western governments, powerfully boosted corporate interests, generating massive arms budgets for high-tech industry. It also provided a pretext for military interventions securing Third World resources for Western corporations against the real threat of independent nationalism in countries like Guatemala, Nicaragua, Vietnam and Indonesia. Global warming, downplayed by the same governments, does not promote but threatens giant oil, automobile and construction interests; facts similarly reflected in the media where, as journalist Ross Gelbspan has noted, news on global warming evokes an 'eerie silence.'

David Edwards

Dear David Edwards,

Can we learn the truth about the environment from the media? Yes, one can glean a lot if one is prepared to make an effort. The war is not lost.

The abuses you point to are indeed matters of enormous concern. But your analysis does not tell the whole story. Firstly, not all mass media are driven solely by the logic of profit maximisation – yet. Secondly, one should not overestimate the power of the mass media or oversimplify a situation in which competing commercial interests do not always share common goals. Thirdly, one should not underestimate power of smaller media, such as specialist publications, and new media, such as the internet, to communicate truth about the environment in ways that can help to bring about change for the better.

In the UK and some other countries we still have public sector broadcasters which, on the whole, are not subject to the constraints you outline. I certainly don't contend that public corporations like the BBC are anything near perfect; but they do provide relatively unbiased and informative accounts of many issues, including environmental ones, to a large public. Occasionally, they do a very good job of it.

As for the commercial mass media, ownership is excessively concentrated amongst a handful of mega-corporations in Europe, North America and other regions, and the existence of such cartels is almost always inimical to the greater public good.

Of course, commercial media organisations are highly dependent on advertising revenue – but not all of them are solely so. Newspapers, for example, can also benefit from increased sales directly to readers. This means that, where they think it will sell copies, some papers will run with a story that is unsympathetic to commercial interests.

Take a recent example in the UK. Some mass market papers saw a chance to increase sales with stories hostile to genetically modified foods. While some of this coverage was sensational, did not reflect the full complexity of the issues and frequently missed cen-

tral points, it did help to stymie the plans of at least one extremely powerful corporation for a while.

Or look even at Hollywood. An industry which is motivated by profit and was until quite recently the United States' biggest export earner, is producing blockbusters about major wrongdoing by corporations like *The Insider* and *Erin Brockovich*. While these films are unusual, they did reach a big public.

But sporadic and inconsistent exposure is certainly not enough, especially when it comes to really big issues like the one to which you make particular reference, global warming. Even here, however, things are not as bad as they could be. And, as you appear to concede, we are not in a situation where, in the words of a man seldom characterised by understatement, 'what conflicts with the requirements of power and privilege does not exist'.

This brings me to another key point – the importance of smaller and specialist media. Taking global warming, consider some relatively small but influential publications (the instances I mention are from the UK, the country I know best). Some of the best coverage of climate change issues in English that I'm aware of has been in the *New Scientist*. This magazine, owned by Reed Business Information and run for profit, has a circulation of well over 100,000. Its readers are highly educated, and, while I wouldn't suggest that such self-selecting élites are as important as some of their members might wish, you would surely agree they are not without influence.

Or take *The Guardian*, a newspaper in a highly competitive market which carries as much advertising as other broadsheets, but still manages to include good coverage of climate change, among other issues. It regularly sells around 400,000 copies – not a mass market, but not peanuts either.

I share your concern that present coverage is insufficient given the scale of the problem – perhaps even hopelessly insufficient. But I do not believe that this is all the fault of 'capitalism'. There is an understandable human tendency to be concerned about the issues with the most immediate impact on one's own life and the lives of those close to us. In most places climate change is not in that category.

You write that the question introducing our debate should properly be reformulated as 'can the corporate system be trusted to police and reform itself?' My answer is: obviously not. One of the really big questions, I think, is how do we create a system in which abuse of media power at the expense of public goods like protection of the environment is ended, without curtailing a free media?

Among the first steps, I'd argue, is to ensure that all corporations making substantial profits pay meaningful amounts of tax. It's a small step but still an important one. Another point to consider is how new media such as the internet can help spread more progressive views. I hope we may discuss this in future letters.

Caspar Henderson ■



Caspar Henderson is an environmental journalist, who writes for the *Financial Times*, *New Scientist*, *Green Futures* and others. Last year he won the 1999 Reuters-IUCN Award for Best Environmental Reporting in Central and Western Europe.

YES

‘Newspapers benefit from increased sales. Best of all, then, are harmless stories which intrigue readers but do not upset owners, advertisers, parent companies or governments: David Beckham’s haircut, perhaps’
David Edwards

✦ **Dear Caspar,**

You say of media performance on global warming that ‘things are not as bad as they could be’. Caspar, people are dying in their thousands, a century of ‘super-disasters’ is predicted, massive cuts in emissions are required now, significant cuts are not even on the agenda, while even the tiny cuts proposed are being vigorously opposed by business. Where are the front-page stories, the media campaigns, the TV series, merited by a situation in which the planet is quite possibly on the brink of an environmental holocaust? Frank Mankiewicz, a senior PR executive, has said: ‘The companies are too strong, they’re the establishment. The environmentalists are going to have to be like the mob in the square in Romania before they prevail.’ That’s the attitude, the truth, and it applies equally to the corporate media.

It’s unfortunate that you choose the BBC as an example of a ‘relatively unbiased’ broadcaster. The BBC World Service, originally called the Empire Service, is still funded by the Foreign Office. Its original role was to ‘preserve and strengthen the Commonwealth and Empire’ and ‘increase our trade and investments abroad’. The BBC’s founder, Lord Reith, once described the relationship of the BBC with the establishment in his diary: ‘They know they can trust us not to be really impartial.’

In December 1997, the BBC2 series, *Scare Stories*, said of global warming, ‘they [environmentalists] have cried wolf once too often... It’s been a campaign driven by passionate belief rather than verifiable fact’. This, two months after 1,500 of the world’s key scientists signed a declaration urging world leaders to act immediately to prevent ‘potentially devastating consequences of human-induced global warming’.

Newspapers are not wholly dependent on advertising revenue (although the *New York Times*, for example, is made up 60 per cent of adverts); this is only one of a range of important constraints. As you say, newspapers benefit from increased sales to readers. Best of all, then, are harmless stories which intrigue readers but do not upset owners, advertisers, parent companies or governments: David Beckham’s haircut, perhaps, but not the hideous truth of what corporations are doing to our world.

The GM debate in the media has certainly hurt big business. But how did it get there? Sue Mayer of GeneWatch worked with Greenpeace on the GM issue in the early nineties. Mayer says that ‘trying to get coverage and to get the media to take it seriously in those days was next to impossible. There was a real unwillingness’.

Newspapers only overcame their natural reluctance to confront big business when members of the public, outraged by the BSE disaster, refused to tolerate the fact that they were being force-fed GM soya in food, without even labelling: ‘Public interest groups forced it onto the agenda’, Mayer says. ‘People say this has been whipped up by the papers. That just simply isn’t the case. They are rather belatedly reflect-

ing popular concerns.’ Popular pressure succeeded despite the media – the opposite of your contention.

The Guardian does occasionally report stories with merit, but journalist Andrew Rowell, who helped break the GM story in *The Guardian*, does not share your optimism: ‘It is becoming increasingly difficult to get hard-hitting current affairs stories that have an in-depth understanding of environmental, development or human rights issues into the media, especially the broadcast media.’

Business-unfriendly facts and ideas are reported; it’s not monolithic, but it doesn’t have to be. Occasional crumbs of truth serve to keep us passive and trusting, unaware of the barely believable scale of the havoc being wreaked by corporations in the environment and the Third World.

David Edwards

Dear David,

James Lovelock, one of the most significant contributors to the science of climate change, told me in a recent interview that he thought the most stringent targets – such as a 20 per cent cut in emissions of greenhouse gases by some industrial nations – were a joke.

He continued: ‘It’s almost a waste of time trying to do anything about significantly reducing emissions until the first disaster hits us and people’s minds are suddenly concentrated... I wish I could be more optimistic; but consider: it’s taken nearly a century to build mechanisms for peace in Europe, and we have nothing like that where the environment’s concerned. Yet severe [climate] destabilisation is coming on us faster than ever’.

I fervently hope Lovelock is wrong, but do not discount the possibility he may be right. It may be true that people are dying in thousands because of climate change, but it’s important to understand a central, uncomfortable point: this is happening ‘elsewhere’, so far as the majority of the public here is concerned.

JK Galbraith characterised nations like ours as ‘affluent societies’, where a preponderance of people enjoy pretty good living standards. But a large minority still live in appalling conditions. A recent BBC report showed social workers from Nepal, one of the most materially poor countries on Earth, commenting after working in Britain that the poverty they experienced at home was not nearly as bad as the poverty of spirit and the social isolation found in places like Glasgow sink estates.

The point is that even terrible things happening close to home don’t necessarily lead to revolutionary improvements when a majority is apathetic. So the prospect of people coming out on the streets in this or other industrial countries in numbers big enough to topple an administration over a complex climatic phenomenon that is having no apparent adverse effect on their everyday lives is slim indeed. For this reason, Mankiewicz’s analogy with pre-1989 Romania is misleading. We do not live in a society

with no free media, where people are forcibly translocated in huge numbers, and where the best-funded and most effective organisation is a paramilitary secret police.

Thanks for the history lesson on the BBC. I'd guess Lord Reith was writing fifty years ago or more. More recently, the Corporation has, on occasions, been far too close to government for comfort, and, as someone who has worked there, I can attest it has its share of toadies and dunderheads. But the fact remains that the BBC continues to broadcast challenging environmental coverage on TV, radio and the internet.

I agree with you that many newspapers often do a lousy job. To my earlier comments that they are sensational, simplistic and frequently miss the main point we should add 'often very slow to react'.

On the issue of GM foods, what I actually wrote was that newspaper coverage 'helped to stymie the plans of at least one extremely powerful corporation'. Sue Mayer is right when she says pressure groups forced the issue onto the media agenda. The papers reacted to and capitalised on this. Their mass market appeal was an important factor, but not the only one.

Paul Brown, environment correspondent of *The Guardian*, confirms Andrew Rowell's experience. Even at supposedly enlightened papers, he reports, there is an entrenched attitude of 'we've had enough of that ecobollocks'.

The point is to keep fighting. This is necessary and possible. Look, for example, at John Pilger's recent TV programme about Iraqi sanctions: an hour of prime time on the most watched national network in the UK (a commercial one too), demonstrating that US and UK government behaviour can, at best, be termed criminally stupid. Let us hope that programmes like this help move us to a 'tipping point', where big changes happen suddenly.

What are your thoughts on the question posed in my first letter about how to create a better media worthy of an open society? And what about the role of alternative and new media?

Caspar Henderson

Dear Caspar,

I cannot accept your view of the 'apathetic' majority, with its 'understandable human tendency to be concerned about the issues with the most immediate impact on one's own life'. Following John Pilger's documentary, *Death of a Nation*, on a far-distant place called East Timor, British Telecom registered 4,000 calls a minute to the 'helpline' number displayed at the end of the programme. After a unique televised debate between Andrew Marr and Noam Chomsky on media control, the producer was 'inundated' with a flood of letters the like of which he had never seen. Your comments bring to mind John Milton's words: 'They who have put out the people's eyes, reproach them of their blindness.'

Mankiewicz, I think, did not intend his comments literally. He was suggesting what has been obvious for

a long time: in societies run by elites profiting massively from injustice, exploitation and cruelty, there never have been and never will be 'gifts from above'. As with GM food, as with East Timor, as with Seattle and globalisation, the best 'journalists' are ordinary people whose compassion and rationality, combined and focused, are able to overcome the irrationality and brutality that are the hallmarks of concentrated power to force issues onto the agenda.

Alongside our ozone, global warming and anti-globalisation campaigns, green and human rights groups desperately need to campaign on the issue above all issues: the right not merely to listen but to speak. Only when the public demands that the channels of mass communication be liberated from the corporate stranglehold, will there be a chance of understanding, much less solving, the problems facing us. As Eduardo Galeano has said, beneath the TV smiles and the multi-layered makeovers: 'Never have so many been held incommunicado by so few'.

David Edwards

Dear David,

I've never been called an eye-gouger before ('alas, poor Gloucester; lost he his other eye?'). But seriously, it's great that thousands of people in this country feel sufficiently concerned after seeing issues like the massacres in East Timor presented on mainstream media to telephone for more information or to write a letter. I hope a significant proportion follow up that small step with more substantial political activity.

The more that 'ordinary' people do their own analysis and provide their own accounts the better. And Mark Twain's description of hacks as 'ignorant, self-complacent simpletons who failed at ditching and shoe making and fetched up in journalism on the way to the poorhouse' is as true as ever. Nevertheless, for the foreseeable future, society can benefit from having appropriately trained specialists in journalism as much as in fruit growing or health care.

Calling for people to 'liberate mass communication from the corporate stranglehold' may give you a buzz, but it's not a plan; it's a post-Marx version of summoning spirits from the vast deep. Recall another Twainism: 'we all do no end of feeling and we mistake it for thinking'.

In addition to saying what we feel, let's use our heads. What is the strategy? What are the tactics? Will there be a role for existing commercial or public media?

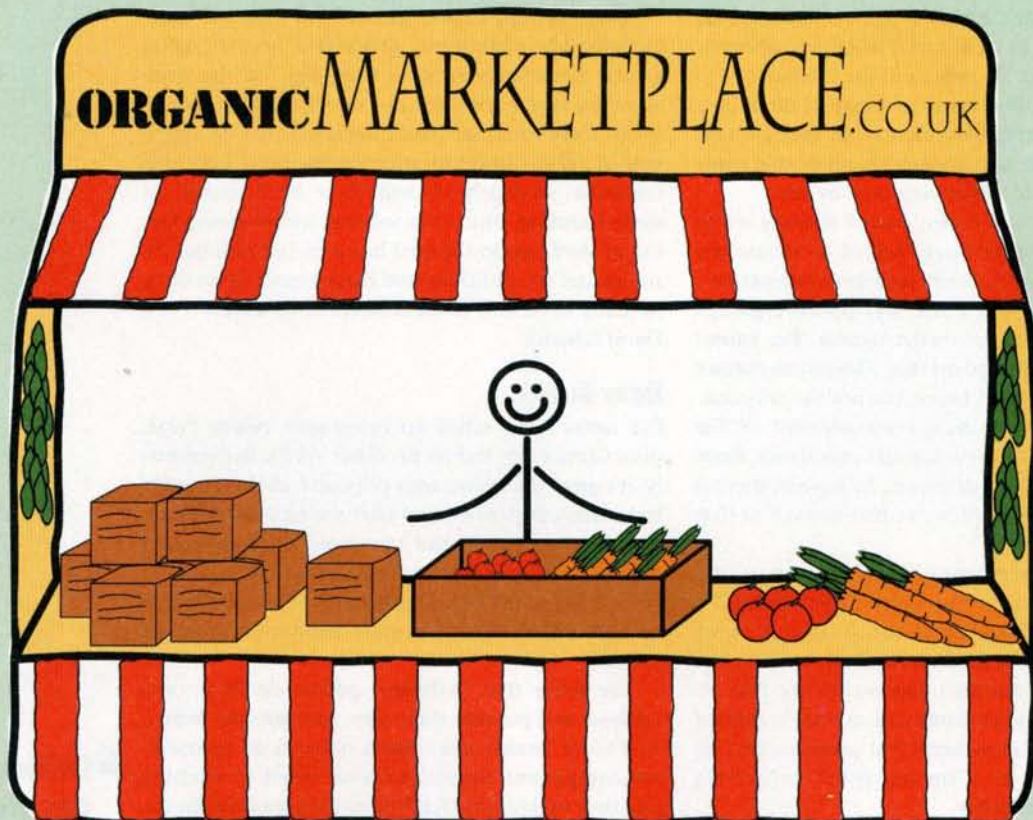
In the four days of our exchange, Channel 4 and BBC2 have broadcast hour long programmes at prime time on the serious threats of global warming (*Deluge: the Drowning Earth*, and *Nature Special: A Warning From the Wild*), and the Chairman of the Royal Commission on Environmental Pollution has told Radio 4's top show why 60 per cent cuts in greenhouse gas emissions are essential.

Caspar Henderson

Calling for people to "liberate mass communication from the corporate stranglehold" may give you a buzz, but it's not a plan

Caspar Henderson

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THE Ecologist

SPECIAL SUPPLEMENT

FACING THE FARM CRISIS

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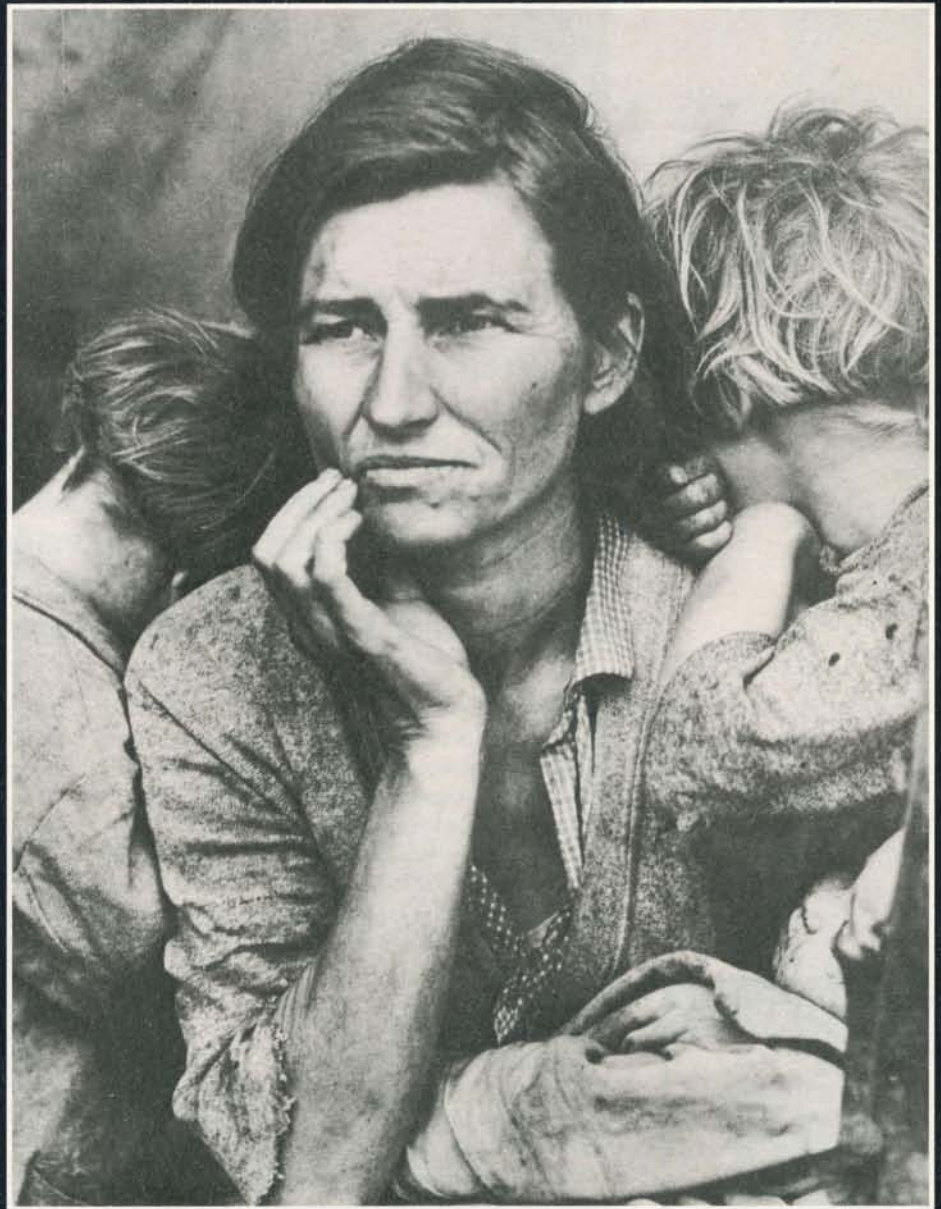
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Creative ways in which local food producers can survive



To many, this classic image of migrant farm worker Florence Thompson, a homeless American mother with three of her children during the 1930s, represents the nadir of modern agricultural crises. Yet the world's current farming plight could lead to even greater human and environmental tragedy.

Throughout the world, rural societies are facing ruin as the biggest agricultural crisis since the 1930s sweeps through them. Farmers are being driven to despair and suicide, the environment is suffering and agriculture, like so many economic sectors, is being corporatised and subject to the whims of the global market. This special 16-page supplement explores the true roots and causes of the crisis, and presents a vision of a sustainable, ecological future for agriculture and for rural communities.



FACING THE FARM CRISIS



ENVIRONMENTAL IMAGES

Big may look impressive, but life can be hell for the individual in agriculture today. The problems are vast and complex, and do not lend themselves to easy answers. So what is the agricultural crisis all about, and what can be done to tackle it? This special supplement attempts to answer those questions. First, Steven Gorelick seeks out the true root causes of the crisis.

Glamorous excess is a staple of the mainstream media, even in its economic reporting. Stories about soaring corporate profits, exorbitant CEO salaries, improbably high stock prices, and the billions made by obscure dot-com start-ups so dominate the news that one could easily believe the global economy is making everyone (else) rich. But high-flying winners are the exception in today's economic casino, and no one is losing out more than small farmers.

Department of Agriculture (USDA) estimates that this year's price for major commodities like cotton and soybeans will be the lowest in more than 25 years. This economic disaster is translating directly into human suffering: suicide is now the leading cause of death among American farmers, occurring at a rate three times higher than in the general population.

The farm crisis has wider implications. Since farmers and farm workers are the economic linchpins of their communities, entire rural economies are in decline. In the UK, for instance, 90 per cent of rural businesses were forced to lay off staff last year. Rural economies in the US also depend heavily on farmers: when 235,000 farms failed during the US's mid-1980s farm crisis, 60,000 other rural businesses went down with them.

Statistics like these represent an acceleration of trends that have been under way for generations. In the West, where rural populations have been declining since the end of World War II, villages and small towns are being sapped of vitality, and many of their social and economic institutions are simply disappearing. Today, four out of 10 parishes in rural England have no shop or post office, six out of 10 no primary school, and three-quarters no bus service or health clinic. In the US, where only 1.5 per cent of the population still lives on farms or ranches, it is not unusual to find places like McPherson County in Nebraska, which has lost two-thirds of its population

CRISIS – WHAT CRISIS?

In country after country, farmers are said to be in 'crisis', a word that only hints at the devastation besetting rural communities. In Europe, 200,000 farmers and 600,000 beef producers gave up agriculture in 1999. UK farm income, according to the *Farmer's Guardian*, has dropped by as much as 75 per cent over the past two years, driving more than 20,000 farmers from the land. British farm-gate prices for virtually every commodity – including beef, lamb, milk, pork, chicken, eggs, oilseed rape, fruit and vegetables – are so low that farmers are getting less for them than they cost to produce.

American farmers are doing no better. Farm income in the US declined by nearly half between 1996 and 1999, with farm-gate prices so low at the end of 1998 that pork was selling for barely one-quarter of the farmer's break-even price. The US

Farm facts



In Britain, a sheep can now be bought for as little as 25p – only slightly more than the price of a single cigarette.

STAN EYLES

– as well as 19 post offices, 58 school districts, and three entire towns – since 1920.

If rural communities in the industrialised world are under siege, their counterparts elsewhere are even worse off. In China, for example, the modernisation of agriculture has already led to the uprooting of more than half the rural population in the last two decades. Pastoralists in West Africa have been displaced by cheap meat imports from Europe, while Indian farmers – who grow traditional oilseeds like sesame, linseed, and mustard – are being driven under by soya imported from the US. Mexican beef producers are losing ground to US producers, whose inroads into Mexico's markets have tripled since NAFTA was ratified.

EXPORT-LED DESTRUCTION

It is not surprising that farmers, connected as they are to an immobile landscape, suffer in a globalised economy that subsidises mobility and rewards those with no allegiance to place. Today's economic 'winners' include investors who scour the planet for the highest return, moving capital from country to country at electronic speeds. Farmers, however, can't simply pull up stakes and move their farm. Once they are hooked into the global economy, they are easily victimised by an economic and technological juggernaut that destroys the smallest and most localised enterprises. Nonetheless, the precise aim of agricultural policy almost everywhere is to pull farmers into an export-led global economy that is likely to be their undoing.

Meanwhile, most policymakers are so wedded to their economic assumptions that they are unable to acknowledge how disastrous the globalisation of food has been for rural communities. Even when the negative impact of the global economy is acknowledged, governments usually prescribe more of the same as a remedy: they call for expanded export markets, lower trade barriers (particularly in other countries), improved 'productivity' through higher technology and – in rare moments of honesty – fewer farmers.

What the framers of farm policy must be aware of, however, is that the very structure of today's global economy is fatal for the small farmer. Not so long ago, each region offered numerous economic niches for small, diversified farms, which provided the wide range of products nearby consumers needed.

The globalisation of food, on the other hand, impels every region to specialise in whichever commodity its farmers can produce most cheaply, and to offer those products on global markets. All foods consumed locally, meanwhile, must be brought in from elsewhere.

The highly specialised farms this system favours are most 'efficient' when they are large, monocultural, and employ heavy machinery. Attaining the scale needed and the equipment required can drain the capital reserves of all but the biggest farmers, saddling the rest with a debt burden few can escape. Eventually, small farms are driven under, and their lands are consolidated into those of the largest and wealthiest farmers.

THE TECHNOLOGICAL TREADMILL

The continual need to purchase the latest equipment, the most potent chemical inputs, and the highest-yielding seeds places farmers firmly on the 'technological treadmill'. Advances in technology may raise single-crop yields, but they also often lower the farmer's net income: capital expenses, debt service and production costs eat up a higher proportion of the farmer's proceeds, while overall increases in output merely cause the price of global commodities to drop. In the US, for example, factory farming techniques – including carefully controlled heating and lighting, specially formulated feed and heavy doses of antibiotics – enable the average poultry producer to raise 240,000 birds each year. But after expenses this prodigious (and inhumane) production earns the farmer only \$12,000, or five cents per bird. Such technological 'advances' typically do nothing to help farmers, while providing a boon to the manufacturers and marketers of the technologies.

Meanwhile, the global economy's emphasis on free trade often forces farmers into competition with producers in countries where costs are lower due to more favourable climate and geography, lower labour costs, or less stringent environmental standards. Farmers are pressured to become still more 'efficient' by increasing the size of their farms, becoming more narrowly specialised and adopting newer technologies. The treadmill speeds up, and farmers inevitably fall further behind.

Dependence on international export markets also leaves farmers vulnerable to losses from exchange-rate fluctuations and economic slowdowns in distant parts of the world. The immediate causes of Britain's current farm crisis, for example, include the strong pound, which allows imports to flood the country at prices below the British farmer's cost of production, while diminishing the foreign demand for British agricultural products. And in the US, nearly one billion bushels of grain – half the nation's harvest – found no market in 1999, largely because the Asian economic slowdown reduced the demand for US farm exports.

Farmers in the South face similar problems. Those still embedded in a local economy can feed their families with their diversified production, selling the remainder in local markets. But those who have been drawn into the global food system must specialise their production for export, using the income to buy food. A farmer in South America or Africa can easily be destroyed by a recession in Europe or a bigger-than-expected harvest in Asia. Meanwhile an increasing proportion of the newly 'modernised' farmer's proceeds must be used to pay for equipment and inputs, placing them, as well, on the technological treadmill. The smallest farmers cannot afford those inputs, and are eventually pushed out of agriculture altogether.

CORPORATISING AGRICULTURE

Another detrimental effect of the globalisation of food is the immense power global corporations have

Farm facts



Modern agriculture is justified on the grounds that it produces more on less land. But this fails to take into account the diverse nature of traditional agriculture. The average small farmer in Chiapas, Mexico, for example, produces maize, squash, pumpkins, sweet potatoes, tomatoes, numerous vegetables, fruits and medicinal plants. The corn stalks are used as supports for the beans, and much of what would be considered 'waste' on large plantations is used to support cattle and chickens. José Lutzenberger, former Brazilian Minister for the Environment estimates that 'backward Indians' produce at least fifteen tons of food per acre – without fertilisers, pesticides, bank loans or governmental assistance.

Farm facts



While a small portion of two chicken breasts costs up to £3 in some UK supermarkets, farmers can expect to be paid little more than £1 for an entire chicken.

accumulated. The marketing of food to consumers, for example, has increasingly shifted from independent shopkeepers to huge supermarket chains whose virtually identical outlets colonise rural economies. In the UK, each out-of-town retail development built by 1992 corresponded with the closing of roughly 10 independent shops in villages and high streets. During the 1990s, some 1,000 locally owned food shops – grocers, bakers, butchers and fishmongers – closed each year. In Italy, the story has been the same: the arrival of superstores known as *ipermercati* has resulted in the demise of 370,000 small, family-run businesses – including half of the country's corner groceries – since 1991.

Overall, food corporations are taking an ever-increasing share of the price people pay for food, while the farmers' share keeps shrinking. In the UK, for instance, the food and catering retail price index has risen 50 per cent since 1987, while the price that farmers receive has actually dropped by 3 per cent. In the US, only 21 cents of every dollar spent on domestically produced food goes to farmers, while the remaining 79 cents goes to corporate middlemen and marketers.

Vertically integrated corporations now monopolise almost every aspect of farm production and distribution – from seeds, fertilisers, and equipment, to processing, transporting, and marketing. Through

its ownership of grain elevators, rail links, terminals and the barges and ships needed to move grain around the world, one company, Cargill, controls 80 per cent of global grain distribution. Four other companies control 87 per cent of American beef, and another four control 84 per cent of American cereal. Five agribusinesses (AstraZeneca, DuPont, Monsanto, Novartis and Aventis) account for nearly two-thirds of the global pesticide market, almost one-quarter of the global seed market and virtually 100 per cent of the transgenic seed market. Control over food has become so concentrated that in the US, 10 cents out of every food dollar now goes to Philip Morris; 6 cents goes to Cargill.

BLAME IT ON THE BOGEYMAN

With corporations firmly in control, farmers hooked to the global economy have been reduced to little more than serfs in a corporate feudal system. This metaphor is nowhere more appropriate than in the US hog and poultry industries, where ConAgra and Tyson effectively dictate the prices farmers will receive. According to Joel Dyer, author of *Harvest of Rage*, farmers find it impossible to raise hogs or poultry without agreeing to 'terms that are the equivalent of the farmer becoming a hired hand on his own land'.

Many dispossessed rural people are coming to

THE TRUE COSTS OF FOOD

As with other aspects of the global economy, the global 'free' trade in food, which is causing much of the current farm crisis, is neither a 'natural' phenomenon nor inevitable, but follows directly from the policies enacted by governments:

- Global 'free trade' agreements treat efforts to protect small, local producers as 'barriers to trade' which must be eliminated. These treaties benefit mainly transnational corporations.
- Massive taxpayer-funded subsidies for transport infrastructures – including multi-lane motorways, bridges and tunnels, high-speed rail lines, harbours, shipping facilities, and airports – make long-distance trade in food seem artificially 'cheap'. Other infrastructure requirements for industrial production and global trade in food – like instantaneous global communications facilities and centralised energy infrastructures – are similarly subsidised. One estimate of the benefits received by US corporations alone from subsidies and externalised costs is \$2.4 trillion annually.
- Government-sponsored agricultural research and development rarely addresses the needs of small farmers for local markets, but instead focuses on technologies that benefit the largest farmers and corporate agribusinesses. A mechanical tomato picker developed at public expense by researchers at the University of California, for instance, greatly reduced labour costs for the large farms that could afford the machine's initial cost. This one technology helped to consolidate California's 4,000 tomato farms into just 600 in about a decade.
- Ignored environmental and health costs – from the air pollution and greenhouse gases that accompany fossil fuel burning for transport, to the cancers and birth defects from pesticide use on industrial farms – similarly deflate the price of food from the global system.
- Subsidies to farmers generally support the largest farms far more than small family farms. Roughly 80 per cent of the farm subsidies given by the UK Government goes to the biggest 20 per cent of its farmers, a ratio that describes EU and US farm subsidies as well.
- Regulatory regimes – particularly those that aim at protecting public health – are needed largely because of the hazards of industrially produced foods and long-distance transport, but place a disproportionately heavy burden on small producers for local markets. One small abattoir operator in Britain, for example, recently had six health inspectors on hand while attempting to slaughter 40 sheep. Six inspectors may be necessary to oversee the huge industrial meat-packing plants which are the source of most bacterially-contaminated meat, but they can make it virtually impossible for a small processor to operate.
- Governments routinely give industrial practices with potentially dangerous health implications the green light. In the US, numerous pesticides known to be carcinogenic are used on food crops, and genetically engineered foods were allowed to permeate the US food supply even though serious and very important questions about their health impacts still remain unanswered.
- The monopolistic control of food – though illegal – is largely ignored by regulators, often in the belief that large scale is a necessary prerequisite to global 'competitiveness'. For example, the US Justice Department's anti-trust review of the pending purchase of Continental Grain's commodity merchandising division by Cargill, the world's largest grain trader, has elicited loud objections from individual farmers and a wide range of public-interest groups concerned about Cargill's monopoly power. These comments were summarily dismissed by the Government, and the sale is being moved forward.

understand the broad systemic forces that are undermining economies and cultures the world over. But the mix of hopelessness and anger, particularly in America's economically broken heartland, has made others susceptible to right-wing conspiracy theories that blame rural woes on racial minorities, Catholics, immigrants, a 'Jewish banking conspiracy', or a world government run by the UN and policed by swarms of black helicopters. Like the high rate of suicide among farmers, tragic incidents of violence in Waco,

Oklahoma City and elsewhere should be counted among the costs of agricultural 'progress'.

The message, surely, must be a clear one: we need a new way of farming. We need new approaches to agriculture on behalf of government, policymakers and even farmers themselves. This is not some pipe dream: it can be done, and in the rest of this special supplement, we hope to show you just some of the ways in which these problems can be tackled – at both policy level, and on the ground, in the farmyard itself. ♦

THE OTHER CIDER THE FARM GATE

Ross Hume Hall explains how bureaucracy and regulations are crushing small farmers in the USA.

Does the following notice printed on jugs of unpasteurized cider make you want to buy the product? 'This product has not been pasteurized and therefore may contain harmful bacteria, which can cause serious illness in children, the elderly and persons with weakened immune systems.'

'I hated putting that warning on my cider,' says Nick Meyer, proprietor of Chapin Orchard, Vermont, USA. 'It equates cider with cigarettes.'

The US Food and Drug Administration (FDA), however, believes that drinking unpasteurized cider and smoking cigarettes are equal threats to your health. In fact, the FDA was so alarmed by the threat of – would you believe it – 'cider poisoning', that in 1998 it ruled all cider must be pasteurized. Following protests, it exempted family-size operations like that of Nick Meyer, but is now reconsidering the exemption. The result could devastate small cider makers.

Charles Brown, of Castleton, Vermont, runs a farm and apple orchard. He makes 10 to 15,000 gallons of unpasteurized cider a season, most of which he sells at his farm stand. Cider, Brown says, keeps his farm in busi-

ness. And the risk is negligible. Cider, according to Steve Justis of the Vermont Department of Agriculture, Food and Markets, 'is not an inherently dangerous product'. Its acidity suppresses most pathogenic bacteria. One pathogen, *E.coli* O157:H7, does survive in cider, but the likelihood of contamination from it is exceedingly rare.

The FDA themselves admit this. They tested unpasteurized cider from some 350 different makers in four states; not one sample contained *E.coli* O157:H7.¹ However, in 1996, one batch of unpasteurized cider made by a large, commercial juice company, Odwalla Inc, was apparently contaminated with *E.coli* O157:H7. Some 60 people who drank the juice became ill. One, a 16-month-old girl, died. The company, shaken by the adverse publicity voluntarily tightened its manufacturing practices.

The large food conglomerates and, particularly, the mass producers of fruit juices, believed this negative publicity over unpasteurized cider rubbed off on all commercial foods. They pressured the FDA into pursuing an unrelenting war against unpasteurized cider, under the slogan 'make America's food supply safe'.

So, in 1998, the FDA issued its ruling to pasteurize all ciders (with the exemption of apple orchards making less than 40,000 gallons a year). But the exemption may be short-lived. Steve Justis says the big juice producers just want the unpasteurized cider issue 'to go away'. A survey by Kate Demong, a research student at Brown, shows that eight out of 10 Vermont family cider makers say they would go out of business if the FDA revokes the exemption.² It also suggests that the FDA doesn't care. The agency, says Demong, doesn't regulate in response to sound scientific evidence but rather 'to social and political motivations'.

The lack of any real link between regulation and scientific evidence – or common sense for that matter – is a constant source of problems for all small farmers. Jack and Anne Lazor operate Butterworks Farm, in Westfield, Vermont. They process the milk from their three dozen Jersey cows into a quality yogurt far superior to any mass-produced yogurt. As part of the farm's fertilizer programme, Jack uses a mineral dust from a cement kiln. The government inspector says he cannot do that because cement kilns burn toxic waste. Some cement kilns do, says Jack, but the Quebec kiln, from which he buys the dust, does not burn toxic waste. Tough, says the inspector.

This is the problem. Regulations are designed largely for the benefit of large producers. If small producers can't fit in – well, they go out of business. And that, for the big producers, is very convenient indeed.

1. Report of 1997 Inspections of Fresh, Unpasteurized Apple Cider Manufacturers, U.S. Food and Drug Administration, January, 1999.
2. Demong, K. Thesis, Brown University, Department of Environmental Studies, 1997-98.



In cider story: can local cider producers survive the corporate onslaught?

ness. It draws customers to his farm stand. They come in for a jug of cider and also buy apples, apple pies, jellies, and vegetables. But if the FDA requires pasteurization, he may well go bust. The pasteurizing equipment required by the FDA would alone cost him \$15,000, plus about \$1,500 a year for maintenance.

This is just one example of how unnecessary, bureaucratic regulation, designed for the benefit of supermarkets, factory farms and exporters, is killing the small producer. Cider in the US is defined as unfermented, unfiltered apple juice. It has a rich taste, which varies among individual cider producers. Pasteurization heats cider to 160°F (71°C) which ruins the taste of the product, in response to negligible risk.

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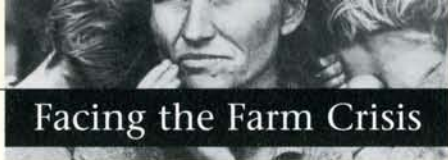
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'I FEEL LIKE A CHEAT AND A FAILURE'

FARMER MICHAEL HART EXPLAINS THE HUMAN COST OF THE AGRICULTURAL CRISIS.

This year, as I watched the arrival of the first swallows as they came up through the valley from the sea, I wondered if my family and I will be here when they return next spring. Why? Because I am a family farmer of a 100-acre tenanted farm in Cornwall, and I am being forced out of business by the farming crisis.

Being a farmer is all I ever wanted to do. For most farmers, the desire to farm is a desire that cannot be properly explained. The best explanation I can come up with is that it is an incurable addiction, and that is why many farmers and their families are putting up with such hardship at the moment.

It is often hard for those outside the farming community to see just how much farmers and their families are currently suffering. I have been campaigning on behalf of farming for the last four years, especially on behalf of small family farms. This work has taken me on a travelling roadshow, designed to increase public awareness of agriculture. As part of this work, I have met and talked to a lot of farmers about their current situations. I hear some depressing tales.

Tales of families who can't afford the food they produce, and who don't know where the money for next week's groceries is coming from. Tales of ever-longer hours worked by farmers as they shed labour and increase production in a desperate attempt to keep their heads above water. Tales of farming families who cannot afford to go to the dentist or who cannot afford prescriptions for ill health. Tales of constant, sometimes unbearable stress and financial worry; of the strain on family relationships, marriages and partnerships.

I know only too well how my farming colleagues feel. In my own family, the countryside crisis has hit us hard. My wife has gone from working with me on the farm to being employed elsewhere, and I have gone from being able to provide a living for my family to being unable to support them in even the basic things. My 11-year-old daughter worries constantly about whether we be able to stay in our homes, and what will happen to her cow if we are forced out. My 20-year-old son has done an agricultural course, but has now left farming as he can see no future in it.

All this has turned our lives upside down, and it has made me feel I am letting my family down. I cannot even afford to buy my wife a Christmas present, or the occasional token of my love. I feel like a cheat and a failure, and this feeling is somehow made worse by the fact that we are not homeless or jobless. Our farm is still here, and we still produce the same amount of food from it as we ever did. Yet I am claim-

ing family credit, and facing ruin. You feel that you must be doing something wrong or not working hard enough, to have brought such a situation about.

Unsurprisingly, given all this, the level of depression among farmers is at very high levels at present. I myself get very depressed at times, and I am a natural optimist. But as common as depression is anger.

This anger is directed towards consumers, government and the big retailers for the way they have treated farmers. We are angry with government for its insistence on providing cheap food for consumers while putting in place ever higher food safety standards and red tape, placing restrictions and costs on British farming while allowing imports without those restrictions and costs. We are angry with the major retailers, who have helped the government in that cheap food policy while increasing their profits at our expense, because they are so few in number that all the market power is in their hands.

But most of all, we are angry at the public and the pressure groups of one sort or another, who have demanded ever higher food safety, animal welfare and environmental standards while still expecting ever cheaper food. Intensive factory farming has happened because of this demand for cheap food. In the case of pig-meat production, for example, the UK has banned sow stalls and tethers six years ahead of the rest of the EU – when the rest of the world is not even thinking of doing so – as a result of campaigning by animal welfare pressure groups. Yet the consumer is quite happy to go and buy imported pig-meat produced using stalls and tethers, because it is cheaper.

Ultimately, the consumers of Britain must decide if they want food from UK farmers produced to high standards in a well-managed countryside. And if they do, they need to understand that we need a fair return for our work. This doesn't mean more subsidies – we don't want or need them. There is plenty of money in food production, but it is not going to the people at the sharp end – the farmers – who do the work.

If I am honest with myself, I know that we will not even be here when the swallows fly away this autumn, let alone when they return next spring. And will anyone really care or notice? As long as there is food in the supermarket, will anyone ever really care where it comes from? ♦



Michael Hart is Director of the Small and Family Farm Association.

Farm facts



In the last year alone, 2,000 UK pig farmers have gone out of business, many are bankrupt, 25 have committed suicide and thousands of jobs have gone.



STILL PICTURES

SOLUTIONS FOR A FARMING FUTURE

STEVEN GORELICK LAYS OUT JUST A FEW OF THE POLICY CHANGES, PRIORITY SHIFTS AND NEW APPROACHES THAT COULD HELP SAVE RURAL LIFE, AND LEAD TO MORE SUSTAINABLE FARMING

Firstly, and most obviously, rather than specialise their production for export, farmers should be encouraged to diversify their production for local and regional markets. More localised food production and marketing systems would be far more diverse than today's homogenised global system, and would more closely reflect the geographical, climatic, and cultural diversity of the places where food is produced and consumed.

If a greater proportion of the food people eat were to be locally produced, ecological niches for food production would be matched by the economic niches farmers need to survive. A mix of local, regional, national, and international production would still be available – the goal would not be to put an end to the international trade in food, but to avoid transporting food thousands of miles when it could instead be produced next door.

Such a shift would help revitalise rural economies decimated by the global economy. Less money would be skimmed off the price of food by corporate middlemen, and far more would remain in the hands of farmers. This would especially be the case with the direct marketing of food via farmers' markets and farm stands, box schemes and other forms of community supported agriculture.

If farmers were not impelled to specialise their production in a few global commodities, the trend towards ever larger and more highly mechanised farms would abate. Since small farms use a proportionally higher amount of human labour than mechanised inputs – UK farms under 40 hectares, for example, provide five times more per-hectare

employment than those over 200 hectares – a return to smaller farms would help bring back some of the 700,000 farm jobs the UK has lost during the last half-century of agricultural 'progress'.

Localised food systems would also be far better for the environment, in large measure because the ecological toll of needless food transport would be eliminated. Within the global food system, 'food miles' are immense: today, the food on the typical American family's dinner table has traveled some 1,500 miles on average, and is thus 'embedded' with significant amounts of transport energy, pollution, and greenhouse gases. Not all this transport can be explained away by the greater availability of 'exotic' foods, since countries are often both importers and exporters of the same product. In 1996, for instance, Britain imported 47 million kilogrammes of butter, while exporting 49 million kilogrammes.

GOING ORGANIC

Perhaps the most obvious immediate alternative to the conventional farming treadmill is for farmers to convert their production to organic methods. Over the last few years, the consumer interest in organic agriculture has shot up dramatically, and demand is currently way ahead of supply. In the UK, for example, up to 70 per cent of organic food sold is currently being imported because British farmers just cannot supply demand. The number of organic farms in EU countries jumped from 33,000 to 80,000 in just the three years between 1994 and 1997.

With no sign of this demand slowing, converting to organic is one way for farmers to shift to new pro-

Farm facts



Producing a single battery egg uses a staggering 180 litres of water – enough to supply 18 people in India, where the poor often survive on only 10 litres of water a day.

duction methods, which are also of huge benefit to the environment. Unfortunately, the conversion process from chemical to organic agriculture is a lengthy and expensive process. What is really needed now is a huge increase in government support for farmers to convert to organic production, which could benefit both the environment and the rural economy.

THE PROXIMITY PRINCIPLE

But the real key to rejuvenating rural economies will always be narrowing the distance between producer and consumer. British organic farmer Julian Rose has proposed what he calls an 'integrated sustainable development plan' for the British countryside, based on what he has dubbed 'the Proximity Principle'. This refers to the need for all action in and for the rural economy to be closely integrated and localised. So, for example, redundant farm buildings could be utilised for small local businesses of all sorts, perhaps supported by rural tax breaks, incentives or grants from national or local government. Action on renewable energy could involve thinking about local forestry patterns and woodland regeneration rather than buying in coal or using the national grid. Local timber and stone could be used, as it once was, for local construction. In addition, of course, farmers' markets, roadside stalls and farm-gate shops could be set up to bring local food straight to consumers, cutting out the middle men and bringing all the proceeds of food production straight back into the local economy.

Most importantly, says Rose, local land should be set aside specifically for supplying the needs of local people, cutting out much of the reliance on imports of foods that can easily be grown locally, to the benefit of the rural economy.

POLICY CHANGES

But even if all of these things were to happen, farmers would still be battling against skewed regulatory frameworks, laws and rules drawn up for the benefit of large-scale producers, and a general presumption against small-scale rural production by most modern governments. What is needed, then, is a series of policy changes at top level designed to favour the small farmer.

These might include different levels of regulation for different sizes of farm, massive reduction in and redirection of subsidies – linking them, among other things, with production and with environmental protection – tariff protection for local foods, genuine land reforms, tax reforms and the reversal of biases in policies for technology, education, research, infrastructure and credit, which unfairly advance large farms at the expense of smaller ones.

This will be a complex and long-term process, but it is imperative it starts now, at both national and international level. And the first step must be a recognition by governments that farming is not only in crisis, but needs local, sustainable solutions focused on farmers rather than corporations. ♦



STILL PICTURES



STILL PICTURES



STILL PICTURES

There CAN be a better way: (A) Traditional harvesting practices still hold sway in parts of France, while (B) Islington Green and (C) Newcombe House, Notting Hill in London are two of a number of farmers' markets operating in the UK. Organic food can come in many varieties, too, as this bread stall in a UK market (D) demonstrates.

SMALL-SCALE FARMING:

PETER ROSSET ARGUES FOR SMALL FARMS IN THE NORTH...

In 1998, the US Department of Agriculture's National Commission on Small Farms published a landmark report on the importance of small-farm agriculture, and the necessity of both preserving small farms and promoting them for the future. Coming from one of the world's most pro-globalised farming governments, the report, *A Time To Act*, was extremely significant. Among the many benefits of small-farm agriculture, it listed:

- Diversity: small farms embody a diversity of ownership, of cropping systems, of landscapes, of biological organisation, of culture and traditions.
- Environmental benefits: responsible management of the natural resources of soil, water and wildlife on the 60 per cent of US farms below 180 acres in size produces significant environmental benefits.
- Community empowerment: decentralised land ownership tends to produce more, and more equitable, opportunities for rural people. Landowners who rely on local people, business and services are likely to be more responsible.
- Personal connection to food: farmers' markets, community-supported agriculture and other such schemes bring home to consumers where their food comes from, and what effect its production has on landscape and environment.
- Economic foundations: in many areas of the US, small farms are vital to the economy.

What is true for the US is true for much of the world. The fact is that, despite the generalised assumption that large, capital- and chemical-intensive farms are more productive and efficient than small farms, this is often not the case. One reason for this is that, because conventional methods of measuring 'productivity' and 'efficiency' are flawed, we are receiving the wrong answers to our questions.

Farm productivity is generally measured in terms of 'yield' – the production per unit area of a certain type of crop. Often, the highest yield of a single crop is obtained by planting it in a monoculture in a large field – hence, in these terms, large farms are often deemed more 'productive'. But while such a monoculture produces high yields of certain crops, it provides nothing else of use to either the farmer or the environment. When the total output of farms – the sum total of everything they produce – is used as a measurement, rather than yield, small farms often come out on top.

Even leading economists at the World Bank have now come round to the view that the redistribution of land from large to small farmers would lead to an increase in total productivity. Reasons for this include:

- Multiple cropping: small farmers are more likely to intercrop various crops on the same field and integrate crops and livestock, making more effective use of space and time than large mono cultures.
- Output composition: large farms tend to be land-extensive, while small farms tend to emphasise more labour- and resource-intensive use of land.
- Input use: large farms tend to use purchased inputs like agrochemicals, while small farms are more likely to use non-purchased inputs, like manure and compost produced on the farm.

Productivity, of course, is not the only issue in farming. More bushels of grain should not be the only goal of agriculture. And when considered in other areas, small farms are seen to be often more desirable than large farms.

All over the world, in rural communities dominated by large corporate farms, towns, small businesses and local amenities tend to die off. Often this is because the income earned by agriculture drains off into cities where the farm corporations are based, rather than circulating in the local economy. Where family farms predominate in the US, for example, there tends to be higher employment, more civic



STILL PICTURES

amenities, better services and more public participation in local life.

All this is not even to begin to mention other obvious benefits of small-farm agriculture, such as better environmental stewardship, more biodiversity, a more patchwork landscape, often less intensive chemical use, etc, or benefits that can accrue to general social welfare through land reform in favour of many owners of smaller properties.

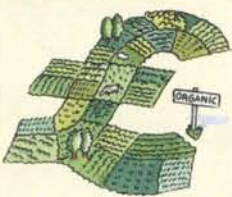
When taken in the round, then, it is clear that the case for small farms is a strong one, and must be made loudly and persistently if the rural economy is to change for the better.

Dr Peter Rosset is Executive Director of Food First, based in the USA.



When the total output of farms – the sum total of everything they produce – is used as a measurement, small farms often come out on top.

Farm facts



UK Government support for organic agriculture is just £16m out of a £3bn agriculture budget.

A GLOBAL PERSPECTIVE

...AND VANDANA SHIVA CHAMPIONS THOSE IN THE SOUTH.

We are often told that when farmers, NGOs or campaigners in the North oppose the current system of global trade in agriculture they are being 'protectionist'. This is used as a derogatory term, implying backwardness, selfishness and a desire to cling to privilege. The supporters of open trade in agricultural produce can often be heard saying that the poor of the South 'need' – indeed, are desperate for – access to the markets of the West. To deny them this 'market access' is to deny them the chance to 'develop' as the West has done. And what, after all, could be worse than that?

In fact, the term 'market access' like the term 'development' is actually a weapon used by the rich against the poor. It has become a catch-all phrase that facilitates the process of robbing the poor of the South of their last resources and their meagre means of survival for the benefit of northern market hegemony. 'Market access' has become the new code word for giving priority to exports above local needs, and putting the resources of the South in the service of luxuries of the North and the profits of the big corporations.

In fact, what would be best for farmers everywhere – in Europe, Africa, Asia and in my country, India – is



STILL PICTURES

a focus on localising production and consumption, and on meeting the needs of everyone, rather than corporations, rich consumers and amorphous 'global markets'.

Currently, crops grown in Thailand, Brazil and India provide cattle feed for Europe's intensive livestock industry. Scarce land in Colombia and India is diverted to produce flowers for Europe. African countries produce green beans for American markets while African children are denied access to basic food and nutrition.

This, at root, is what the market is about.

Each kilogram of food travelling across the world, from poor producer to rich consumer, produces 10 kilograms of CO₂, the leading contributor to global warming. And it is the poor of the South who bear

the costs of this, too. The current drought in Gujarat and Rajasthan, the worst in living memory, is leaving millions without food and water. These are the costs of globalisation and export-driven economies. Who do they benefit?

Not us.

The alternative is relocalisation – and it is a realistic alternative. It does not imply 'going backwards', it implies living within the limits set by nature and ourselves. Relocalisation in the North would mean that the poor in the South, who depend on scarce land, water and biodiversity, have access to livelihoods and resources for meeting their own needs and, importantly, have the possibility of conserving their resources for themselves.

They would not be forced to grow export crops for the rich, from which they see little benefit.

The language of 'market access' through globalisation and free trade is often used linked to 'special and differential' treatment for the South. But the banana dispute before the WTO, for example, robbed Caribbean banana growers of their markets in Europe. The 'market access' rules of the WTO work for the Chiquita banana corporation, not the smallholder. They work for Cargill, not the Punjab farmer. Special and differential treatment is excluded by the rules of 'free trade', and market access is embedded in such rules. It is market access based on relocalisation, not market access based on globalisation which will provide fair, just and sustainable markets to the Third World poor. Relocalisation combined with fair trade would recover the banana markets for the Caribbean peasant.

Relocalisation implies, very simply, that what can be grown and produced locally should be used locally, so that resources and livelihoods can be protected. Since the West will never be able to grow tea, coffee and bananas, the South will have its markets for these unique tropical products. There will be trade, but it will be fair, and on the South's terms.

Relocalisation everywhere – in the South and in the North – would conserve resources, generate meaningful work, fulfil basic needs and strengthen economic and political democracy. I hope that people of the North will bring about movements for self-rule and localisation, so that the environmental and economic burden is lifted from the South, and we can all shape our economies, political systems and resource-use patterns to provide for our own needs, together.

Vandana Shiva is Director of the Research Foundation for Science, Technology and Ecology, in New Delhi, India. She is also a writer, lecturer and prominent environmental activist.



‘Market access’ has become the new codeword for giving priority to exports above local needs, and putting the resources of the South in the service of luxuries of the North. 9



AGENCE FRANCE PRESSE

HAVE-A-GO HERO

JOSÉ BOVÉ SHOT TO FAME LAST AUGUST WHEN HE LED HIS PEASANT FARMERS' UNION IN AN ASSAULT ON A MCDONALD'S RESTAURANT. SINCE THEN, HE HAS BECOME A FRENCH NATIONAL ICON. HE TALKS TO PAUL KINGSNORTH ABOUT TRADE, DEMOCRACY AND ROQUEFORT CHEESE.

The date 12 August 1999 was to be a crucial one for José Bové, and a significant day for France. It may well turn out to have a resonance for the wider world, too.

That day, in the town of Millau, in the heart of the Languedoc region in the south of the country, a swarm of peasant farmers descended onto a building site in the centre of the town and began to systematically destroy the McDonald's outlet being constructed there – the first of the American burger chain's forays into the region. According to a primly outraged spokesman for the fast-food behemoth, \$120,000 worth of damage was done that day by Bové and his fellow members of the Confédération Paysanne, or Union of Peasant Farmers, before they were stopped by the police. Four people, including Bové himself, were arrested.

That was when things began to get interesting.

Bové, 47, who has farmed sheep in the Larzac region of Languedoc for 25 years, and is co-founder of the Confédération Paysanne (CP) which repre-

sents small farmers and their struggle against industrial agriculture, was convicted in court five days later of criminal damage. The judge sent him to prison. The severity of his sentencing surprised many people, including Bové himself, and created, overnight, a martyr and media celebrity.

Every newspaper and TV station in France flocked to Bové like cows to a salt lick, and this wiry, amiable farmer, with his Asterix moustache and defiant smile, became a national hero. He compounded his martyr status some days later when he refused to be released from jail on principle, despite the fact that the money to bail him out had been raised by supportive organisations and public donations. Newspapers hailed him as a hero. Prime Minister Lionel Jospin called him 'a strong, vigorous personality'. The popular media represented him as the last man in France willing to go to jail for the founding ideals of the Republic.

In fact, José Bové went to jail for the right to make cheese.

Farm facts



The chickens are coming home to roost in Brazil, where new 'hygiene' regulations require egg producers, regardless of their size or style, to pay a licence fee of \$7,000, which smaller operators cannot afford. They must also employ the full-time services of a vet, re-tile the walls in their packing rooms and replace the tables on which the eggs are stored with stainless steel. To add insult to injury, it has become illegal to recycle the cartons in which the eggs are sold. These new regulations will not adversely affect large producers – but will remove many of their smaller competitors.

ALL IN THE HORMONES

It may seem strange that a vandal should be so lionised – compare Bové's treatment to the hostile British reaction to the violent trashing of a McDonald's on Mayday. But consider the wider context. For Bové's stand against Ronald McDonald and friends was, as he tells it, a stand for the small farmers of France, for traditional methods of food production, for the right to be free from corporate hegemony, and for that most French of all causes – gastronomy.

'We did this because of American tariffs and because of the WTO,' he says now. 'McDonald's was a good symbol. All over the world it highlights the conflict between two ways of farming and eating – real food and real farmers set against industrial agriculture and corporate control. That's what our action was about.'

To understand all this, take yourself back a year to the time when the European Union and the USA were slugging it out across the Atlantic on the subject of beef. The EU was worried about the growth hormones which American farmers were injecting their cattle with – several studies indicated possible health risks to those who ate the beef, including an increased chance of some cancers. As a precaution, the EU banned imports of hormone-injected beef from the States. Outraged, the American Government took its grievance to the office of the global headmaster, the World Trade Organisation. The WTO ordered the EU to lift the ban. Europe remained resolute. So the US, in retaliation and with the WTO's blessing, imposed a series of 100 per cent import tariffs on \$116m worth of European products.

The effect of this was that the prices of various products from several European countries doubled overnight. The tariffs hit products as diverse as tomatoes, glue, onions, truffles, chocolate, mustard and animal offal. They also hit Roquefort cheese.

The French, as any fool knows, are fiercely proud of their food. And José Bové is fiercely proud of his Roquefort. More than that, it is his living. On his farm, at the edge of the Massif Central in Larzac, he breeds sheep, which he milks in the traditional way, using the milk to make the Roquefort cheese in which the region specialises. When the WTO and the US Government began their tariff war against the EU, Bové was one of the first casualties.

So this, then, is just the story of a disgruntled farmer? An unhappy French peasant, angry that his subsidised lifestyle was under threat, launching a last-ditch defence of his vested interests by kicking in the windows of the first American restaurant he came across? Not quite.

TRADE WARS

'This situation amazed us,' he says, of the WTO's tariff decision. 'How can the WTO, or any other government, tell us that we must eat hormone-treated beef? And how can they threaten us and ruin our food production if we do not?' It is, he says, a failure of democracy.

'When we heard of this, our union, the CP, went

to talk to the French Government. They said there was nothing they could do. So we talked to Brussels. They said there was nothing they could do. They all told us that they were powerless – our own governments, telling us they were powerless to do anything about what happens to our produce. So we decided to take a stand.'

As Bové tells it, then, his attack on McDonald's, as well as being a hugely effective publicity stunt for his union and for his cause, was not a twinge of privileged protectionist fury (as his enemies, particularly in the PR departments of food multinationals, like to make out), but a stand against corporate domination of food, and against the global trading regime. 'There have been three totalitarian forces in our lifetime,' he told a reporter last year. 'The totalitarianism of fascism, of communism, and now of capitalism.'

MAKING A STAND

José Bové is no stranger to making a stand. When he raised his fist in defiance for the cameras on the courthouse steps last year, it was far from being the first time that he had pitched himself against much larger forces for the sake of principle.

Bové first came to Larzac in the early 1970s. When he arrived, the region was in turmoil. 'There was a big fight going on,' he recalls. 'The army and the government wanted to build a huge military base in the region. It would have militarised a lot of land.

They wanted to take over 100 farms. I got involved as a conscientious objector, someone who was part of the peace movement. It took us 10 years, but we won. They never built the base.'

His introduction to farming in the region came almost by chance. 'One of the farms we were fighting for was empty,' he says, 'and the other farmers in the region offered it to me. I squatted it in 1975, and I have never left. Now it is mine, and I farm my sheep here. Now it is my living.'

The objector in Bové was not subdued by the rural life, however. In the 1980s, Bové, along with other peasant farmers from the region, began to speak out and campaign against the EU's Common Agricultural Policy, and the increasing domination of agriculture by corporations and industrial-scale factory farms. They were joined in their concerns by farmers from all over France, and in 1987 they founded the Confédération Paysanne, to represent the interests of the small traditional farmers who, he says, were not represented by the Government or by the existing agricultural unions. Bové was one of the CP's first national secretaries. ■

‘Our own governments were telling us they were powerless to do anything about what happens to our produce. So we decided to take a stand.’



Sit-down protestor: José Bové at home on his farm in Larzac, France

‘Bové has put peasant agriculture firmly back on the political map in France, and it shows no signs of going away.’



Cuff justice: José Bové outside the courtroom after his arrest last August

✚ In 1987, the CP had about 10,000 members. Now, partly thanks, no doubt, to Bové's national fame, they have 40,000, and numbers are growing fast. The CP is becoming a force to be reckoned with on the national stage. But they will need a lot of luck, support and hard work if they are to achieve what Bové says are the CP's objectives.

'We want a serious change in agricultural policy,' he says, simply. 'Yes, we want to protect small farms, but we also want to rejuvenate agriculture, and attract new people into farming. We also want to ensure that agriculture and environment work in harmony. Finally, we want Europe to concentrate on small farming, peasant farming, feeding its people, rather than on destructive, industrial agriculture. We want to modify the Common Agricultural Policy and the WTO to achieve these aims.'

PROTECTION FOR WHOM?

Bové, then, is not short of ambition. And he has been called a hopeless idealist by more than one commentator. More seriously, he has been accused, usually by those who believe that 'global free trade' will make the world's people better off, of seeking to protect his interests, and those of his fellow farmers, at the expense of the poor. The 'Third World', runs the argument, needs both European markets and European exports.

Does M Bové seek to deny them the wealth that Europeans already enjoy?

'That is no argument,' he says. 'At present we have food subsidies unconnected to food production, we have food mountains and destructive industrial agriculture. And we see rich nations dumping their products on the Third World, destroying the livelihoods of small farmers there just as here in France. Global trade in agriculture is not a free market, and it does not benefit farmers or the poor.'

Moreover, he says, the charge that the CP is a protectionist lobby group is dealt a blow by the fact that it is working in alliance with other small farmers' unions from all over the world – including many from the Third World. The CP is part of an international umbrella organisation of over 80 unions from the Americas, Africa, Europe and Asia. 'All of us are promoting the same thing,' says Bové. 'We are all small farmers against globalisation and the corporate destruction of farming. We all believe that our countries should be able to feed their own people in their own way. This does not mean no trade, but it means countries should be able to protect their own ways of farming and eating. That is a global principle.'

BOVÉMANIA

The rise of José Bové to national fame in France, his general lionisation by the media and the public, and his actions and successes since he was first arrested last August would make a great Hollywood script. Whether it would have a happy ending remains to be seen, but the scale of his achievements since last summer testify to the power of public opinion, and the effectiveness of Bové and the CP's campaigning.

For Bové has put peasant agriculture firmly back on the political map in France, and it shows no signs of going away. More than that, though, the CP's fight has gone global. Bové was at Seattle last November – one eyewitness described the media scrum around him on the plane and in the streets as 'Bovémania'. He attended the meeting of the World Economic Forum in Davos, Switzerland, later in the year, and was in the front line of protesters when the police attacked with rubber bullets and pepper spray – fast becoming the weapons of choice for the defenders of the world economic order.

Back in France, politicians wanted a slice of Bovémania for themselves. President Jacques Chirac made a point of shaking Bové's hand at a rally in February. And in March this year, Lionel Jospin, the French Prime Minister, invited Bové and other representatives of the Confédération Paysanne to a private meeting to discuss their views on agriculture, food, trade and the WTO. 'He wanted to know what we thought,' says Bové. 'He made no promises, but he listened. We will see.'

For now, José Bové is waiting. He is waiting for 1 July, when France takes over the Presidency of the EU. 'Then we will see what Jospin can do for peasant farmers,' he says. He is waiting, too, for September, when Europe's farm ministers will meet at the Agriculture Summit in Biarritz. Expect Bové to be there, making his case as firmly as ever. Expect some more stunts, too.


Above all, José Bové is waiting for things to change. He is waiting for people to wake up to what is happening to their farms and their food, and to how world trade is run, and who the beneficiaries are. He is confident, though, that this will happen – and that things will change.

'Look,' he says, 'cooking is culture. All over the world. Every nation, every region, has its own food cultures. Food and farming define people. We cannot let it all go, to be replaced with hamburgers. People will not let it happen.'

Incidentally, Bové insists that he actually likes hamburgers – though not the McDonald's variety. Made on a grill, though, with sliced tomatoes and mushrooms from his garden, he enjoys them. His argument is not with American food, or the American people, he says. It is with the corporations and economic structures that are destroying what he calls 'real food and real farming'.

And McDonald's? Their reaction to being the focus of the wrath of France's modern-day peasant hero? In a word: pragmatic. Responding to the wave of media and public support for Bové and the peasant farmers, the Agen branch of the fast-food chain, in southwestern France, served up a placatory spread of 'McDuck' and 'Roquefort-burgers', made with local produce, to customers last September. 'We decided it would be nicer to do that than have them (Bové and friends) dump three tonnes of manure in the restaurant,' said the manager, simply.

Hardly a sea change, but perhaps José Bové would agree that it is at least a drop in the ocean. ♦



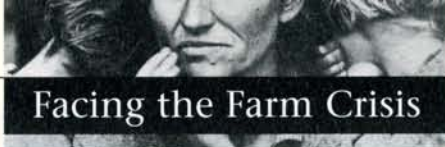
I remember when
all this was just fields.

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SAUSAGES, SAUERKRAUT AND CHEESE

SALLY FALLON SUGGESTS WAYS THAT LOCAL FOOD CULTURE COULD BE REJUVENATED.

‘I look forward to the day when America, like France, becomes a nation that makes 365 types of cheese.’

How can the small, conscientious farmer survive in today’s ruthless, modern marketplace? How, in a system designed for giants, can the midget hope to prosper?

One way this can be done is for small farmers to specialise in local food and drink, and to produce individual products based on local environments and traditions, which large producers cannot hope to match. Individuality and diversity should be the watchwords of the small producer.

Here in the US, I believe that this is quite possible. Take cheese. I look forward to the day when America, like France, becomes a nation that makes 365 types of cheese. Charles de Gaulle once said ‘it is impossible to govern a nation that makes 365 types of cheese’. He understood that when food processing is distributed among hundreds or thousands of artisans, it is more difficult to concentrate power. Hundreds of independent cheesemakers supplying the shops and supermarkets would add up to a lot of political clout, as well as better and more varied food.

The much-maligned butter, meanwhile, is actually turning out to be the health food that some of us

For those of us who eat meat, meanwhile, a local revolution in its production could lead to better food, better farming and better economics. At present, overzealous health inspectors put huge barriers between meat producers and their local markets. A potential solution could be more use of movable abattoirs, bringing the butcher, with all the necessary sanitation and cold storage, right to the farmer, rather than to the corporate middleman. Such abattoirs could be run by local co-operatives, who could each use them in their own way, to make their own individual varieties of local meat.

What could be a genuinely revolutionary technique for small producers is the process known as lacto-fermentation – a simple method for preserving fruits and vegetables. The most familiar example of a lacto-fermented food is probably sauerkraut, and almost any fruit or vegetable can be preserved in this way. Farmers can make and sell such products at farmers’ markets and roadside stores, without the need to send all their products to the canning factory or see them rot for lack of buyers.

Lacto-fermentation can also be used to make a wide range of delicious drinks, which can reflect different localities, produce and traditions. Lacto-fermented drinks are found all over the world – though they are being rapidly pushed out by coca colonisation – and are generally very healthy, containing important minerals and enzymes. Old-fashioned ginger ale and root beer were lacto-fermented, as is the Russian drink kvass, and kombucha.

In addition to producing 365 different types of cheese, then, America should be producing hundreds of different types of lacto-fermented drinks. The day when every town or hamlet in America produces its own distinctive brew, made from the products of local woods and fields, will be the day we see the dawning of a new age of health, prosperity and economic vitality.

Imagine how much fun it would be to travel through America and find a different, unique drink in every town. Different drinks could be brewed for different occasions and festivals – there could be fairs and guide books to the brews. Local cafes could serve these local drinks, along with locally produced cheese, bread, sausages – the list could be endless.

The picture I am painting is a picture of a nation with culture – real culture, not the plastic version served up by the corporations and the ad-men. It could happen. But only if we make it happen.

Adapted from a speech given to the Atlantic Region Biodynamic Conference, USA, 1998



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We are what we eat:
Man and his food merge in this summer tableau from the school of Giuseppe Arcimboldo.

always said it was. One nutrient in butter, CLA (conjugated linoleic acid) has been established, at least in lab experiments, as a protector against breast cancer and other malignancies. Corporate scientists are currently working out ways of mass-producing CLA as a food additive, so that the benefits can go to big food corporations. I have a better idea – why not go out and buy organic butter from the farm gate of a small producer?

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STILL PICTURES

RUNNING WITH GORILLAS

If trends continue the world's great apes are doomed to extinction.

**But one unique rehabilitation project in Africa is challenging this
bleak picture. Beatrice Newbery reports**

The gorillas of West Africa are on the edge. For them the E-word looms from which there is no return: extinction. And the world knows it. Conservationists and scientists are scrabbling to protect whatever they can of their habitats and to put remnant scraps into zoos and gene banks, in preparation for the day when they are finally no more in the wild. All seem to agree that the future looks bleak.

Yet in rural Kent, and in Gabon, can be found some cause for hope. For in these two places, worlds apart in almost every way, a unique conservation project is doing what no other has ever done – breeding gorillas in captivity, and releasing them back into their natural habitat. In the worldwide battle for the great apes, then, there is at least one light shining in the growing darkness.

TO KENT

Marco would like to be the leader but when he struts around, looking hopefully behind him, nobody follows. Instead, Choupette is in favour at the moment. She's the oldest. She even has a minder, Tonga, who keeps an eye out for her. Occasionally Tonga leaves Choupette to hang out with the girls, Sophie and Lekette, leaving Marco to bully the less-confident newcomer, Kwam, left isolated recently after the death of his close friend Kwa Kwa.

Such politics are commonplace whenever individuals find themselves thrown together into new groups. In this case, the individuals in question are gorillas, and their turf is Gabon. Choupette is the oldest, at five, and all of them are new to each other – brought together by a project which aims to return orphaned gorillas to their native forest.

TO GABON

The 'new-boy', Kwam, made history last November by becoming the world's first gorilla to be transferred from captivity in the West back to his native habitat. Born and brought up at Howletts Zoo in Kent, Kwam was moved at the age of three and a half to join the Gabon Gorilla Orphanage, a jungle reserve on the banks of Gabon's Mpassa River. His younger half-brother, Kwa Kwa, who was also brought from Kent, died of appendicitis last month. 'The group has got over Kwa Kwa's death pretty fast,' says Colin Angus, from Howletts. 'But it's difficult for Kwam. Not only was he very close to Kwa Kwa, but he is the oldest male, and by rights the leader.'

Apart from Kwam and Kwa Kwa, the rest of the gorillas are Gabonese. Most have been abandoned by hunters who have poached their mothers for the bushmeat which is a popular delicacy in the region. Others have languished in the government's under-funded gorilla reserves, left by amateur dealers who hoped to sell them but didn't know how to get around the global ban. Sophie, a hairy prima donna who doesn't enjoy get-

ting her feet wet, was rescued and handed over by the Spanish ambassador to Gabon. He named her after the Spanish Queen.

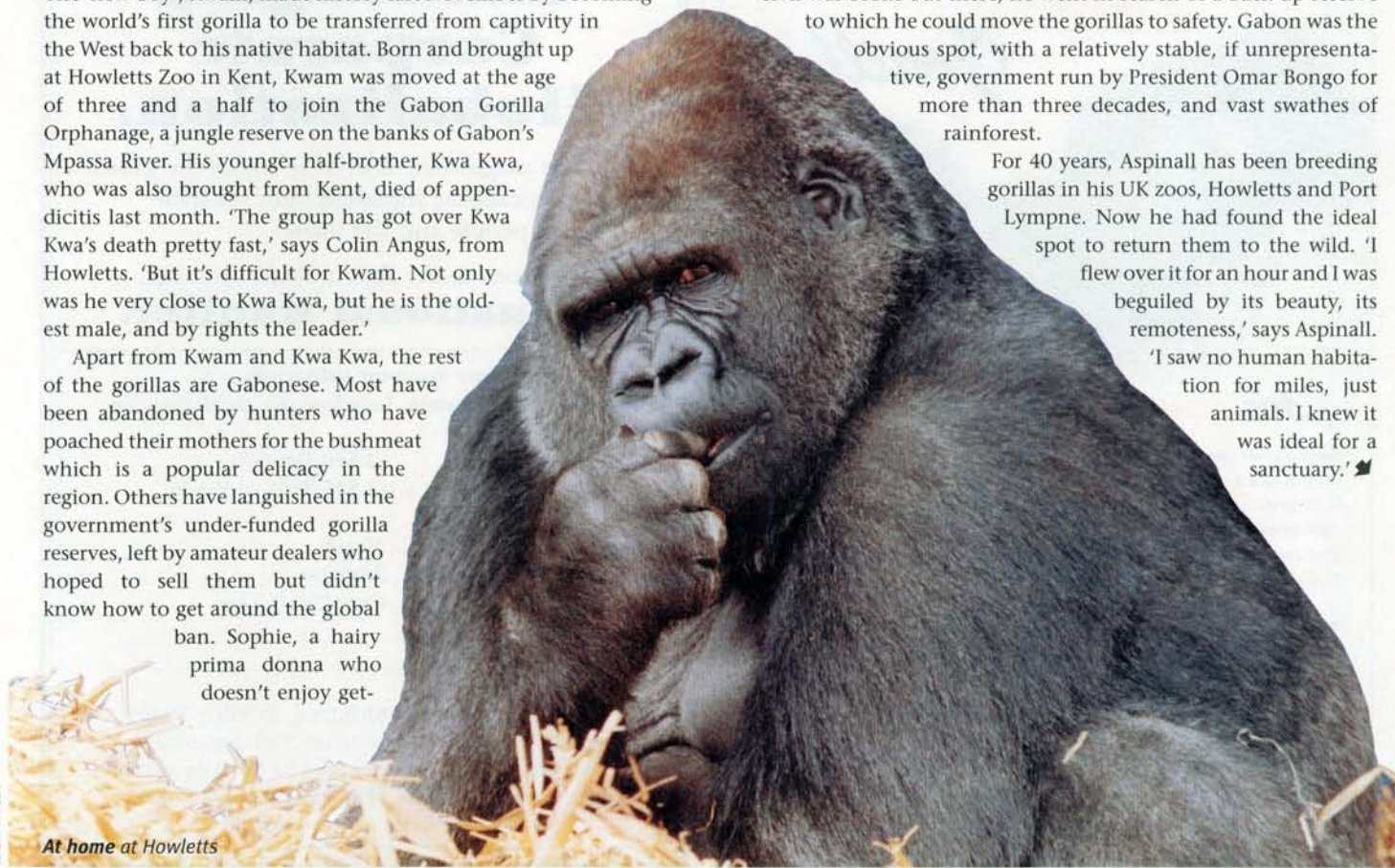
The idea is to encourage the gorillas to form a group, and eventually enable them to live on their own in the wild. But it won't be easy. Like in human groups, different cultures emerge and evolve in gorilla communities. For these orphans, the beginning is a clean slate. 'These gorillas would usually spend up to eight years with their mothers, watching and learning from them, relying on them for care and attention,' explains Angus. 'But there are no mothers, so it is the equivalent of taking a bunch of children and teaching them how to live in the forest. This is their natural habitat, so they are helped by instinct, but some have been traumatised by being orphaned. Others have been malnourished or beaten. They are disturbed. Sometimes we have to step in when fights break out.'

These are western lowland gorillas, and they would naturally inhabit the hills of Uganda, Rwanda and the former Zaire. While there are about 300,000 lowland gorillas in central Africa, considerably more than the 600 remaining mountain gorillas, they are nonetheless a protected species. Thanks to the continuing popularity of bushmeat and the expanding network of roads, which carry hunters and industrial loggers – mostly European logging companies – further and further into the Gabonese jungle, their numbers are dwindling. Gabonese officials face a huge challenge in enforcing these poaching laws, particularly as bushmeat is so lucrative, and Gabon so poor.

THE DREAM

The reserve is the dream of John Aspinall, the well-known British gambling tycoon, zoo owner and Zuluphile, even though it was set up by default. For 12 years, Aspinall has been underwriting a similar gorilla orphanage in the neighbouring Republic of Congo, but when civil war broke out there, he went in search of a back-up reserve to which he could move the gorillas to safety. Gabon was the obvious spot, with a relatively stable, if unrepresentative, government run by President Omar Bongo for more than three decades, and vast swathes of rainforest.

For 40 years, Aspinall has been breeding gorillas in his UK zoos, Howletts and Port Lympne. Now he had found the ideal spot to return them to the wild. 'I flew over it for an hour and I was beguiled by its beauty, its remoteness,' says Aspinall. 'I saw no human habitation for miles, just animals. I knew it was ideal for a sanctuary.' 🦍



At home at Howletts

➤ The habitat is indeed perfect. It has no indigenous primates that could be infected by imported diseases, so there is minimal risk of spreading foreign viruses. Meanwhile, the reserve stretches over 17,000 hectares, without going near a road or village. The regional capital, Franceville, is five hours away, and the nearest village is three days' walk, across the border in the Republic of Congo. Once the gorillas have been left to fend for themselves, the hope is that there is minimal risk to their safety. As Aspinall explains: 'It would be absurd for me to say that there won't be a risk when we let them go. Who is safe in Africa today? But luckily there are very few poachers there because the Mpassa River is completely unnavigable until the stretch near the reserve – there are rapids everywhere. They gave up trying to get there long ago.'

For Aspinall, the aim is to release greater and greater numbers of British-born gorillas into the reserve. At 73, fighting cancer of the jaw, this project represents the climax of his long, gorilla-breeding career. 'I have always wanted to release the gorillas back into the wild, for their own sake. That is the country of their birth. It is where they should be, where nature and evolution intended them to be.'

Aspinall has never been short of critics for his hands-on approach to conservation. They say that the money would be better spent pro-

tecting the gorillas' habitat from in-roads, poachers and logging companies, instead of providing expensive and impractical long-term care for the orphans. Just months ago, a keeper at Port Lympne was crushed by an elephant, adding grist to their mill. But Aspinall and his staff stand by their methods. 'I don't take much notice of criticism, as events have proved that criticism unfounded. We have bred more gorillas than anyone else in the world.'

'I don't take much notice of criticism, as events have proved that criticism unfounded. We have bred more gorillas than anyone else in the world.'

And he's right. Howletts alone has bred more than 86 gorillas in its 40-year history, 63 of whom still remain at the zoo. With such a history, Aspinall has every right to be confident of his Gabon and Congo reserves. And, if the gorillas' progress is anything to go by, it will not be long before they achieve full independence.

Already they are making nests for themselves, and each time they are taken wandering, Kwam, Konda, Marco, Choupette,

Sophie and Lekette venture further and further afield. One day soon they may rely on each other for survival, with a clear leader among them, dedicated followers, a strong social structure and even children of their own.

That will be the first important step for what could perhaps turn out to be a new and realistically optimistic hope for the great apes of Africa. ♦

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LIFE WITH THE 'GREAT WHITE APE'

Ian Player, the renowned conservationist, gives his impressions of John Aspinall, the extraordinary and controversial champion of gorilla survival

John Aspinall has been responsible for some of the most revolutionary and important animal conservation projects in Africa – and throughout the world. He has also been responsible for enlightening, enraging, inspiring thousands of people around the world. Everyone who has ever known him has a tale to tell, and strong opinion on the man. But one thing is certain – the conservation world would be immeasurably poorer without him.

He is capable of being both poetic and devastatingly blunt, almost in the same sentence. He makes no effort to be diplomatic when relating his convictions or life story. As a result, he is disliked by numerous people, who are often bitterly offended by some of his more outrageous reflections on the plight of humanity and the natural world.

Yet it has always been clear to me that beneath his rough exterior, lies a man of immense compassion. And while on many serious issues we differ in opinion, his views on friendship, the natural world and humanity's destruction of it, I share wholeheartedly.

The first I heard of Aspinall was in the 1960s from Dr Charles Schroeder, the world-famous director of the San Diego Zoological Society. He talked of 'an eccentric Englishman' he had met, who 'meets animals on the same level as himself'. Later an Englishman who was visiting me, Fred Jackson, also spoke of a man who had 'befriended' gorillas. 'He can think like a gorilla,' he enthused to me, 'and speak their language – and be accepted on equal terms in their groups.' To Jackson, this man – John Aspinall – was a hero. After such praise from two such equally distinguished people I was determined to meet him, which I finally did in the late 1980s. It was to be a turning point for me.

In the course of my work, I have visited many zoos around the world. But when I first visited Howletts and Port Lympne, the two wild animal parks for which Aspinall has earned international respect, I was astounded at their quality. Howletts had an atmosphere totally different from any other zoo I had visited. Unheard of elsewhere, here keepers would enter the cages of predators like the tiger – an astonishing spectacle. The sheer diversity and wealth of food presented to each of the animals would be the envy of any human living today – the gorillas, for instance, are fed anything up to 350 varieties of fruit, nuts and vegetables. Unsurprisingly, the health of the animals is excellent. And their response to Aspinall when we approached them was deeply moving.

While respecting the natural barriers that exist between species, Aspinall and his colleagues at Howletts place great emphasis on developing a deep relationship with their charges. As Aspinall enters the gorilla enclosures and begins to interact with the animals, the fascinating love of man for animal and vice versa takes on a new meaning. Aspinall has remarked that it is only such moments that enable him to tolerate the misdeeds of human government. Observing his way with the animals left me in no doubt as to why he, more than anyone else, has succeeded in breeding more gorillas than all the zoos of the world combined.

Aspinall's achievements must be left to history to judge, and I believe that history will judge them well. For this is a man who has fought long and hard to salvage what he can from the wreckage modern humanity has made of much of the world.

I remember one evening, sitting with him around a fire in a camp on the banks of the Mfolozi River, as we drank South African red wine and listened to noises of the wild African night. Baboons barked in the fig trees, a leopard gave its long sawing cough from a nearby cliff and the fiery-necked nightjar sang its sad little song. 'Once, all of Zululand was like this' ventured Aspinall, 'from the rivers of Pondoland to the Shangaan people in Mozambique. There was a balance between humanity and the natural world. In 120 years it has all been destroyed.' Maybe, some day, at least part of it could be rebuilt, with the help of the work Aspinall has done.

Aspinall with his gorillas

On one occasion, I walked with John Aspinall around Howletts zoo. I began by saying good morning to each visitor we passed. Eventually he turned to me with a slight smile and dryly said, 'If you carry on like this you'll be exhausted in ten minutes'.

He entered the gorilla cage and began his games with his friends. Nothing hurried, nothing forced, but an exchange on two levels, physical and telepathic. The love of man for animal and vice versa was a fascinating sight. When John Aspinall emerged after his long communion with the gorilla family he remarked that it was the only time that he was able to spend with the gorilla that enabled him to tolerate the mass of humanity and the misdeeds of government. The moments with the gorilla enabled him to be more human.



FINDING EXTRA LATITUDE ON THE TOPIC OF CANCER

DESPITE MODERN MAN'S FAILURE TO DEFEAT CANCER, THE ESTABLISHED MEDICAL APPROACH CONTINUES TO DISMISS ALTERNATIVE THERAPIES. TINA COOKE KNOWS WHY.

I AM 45 years old and have four children between 5 and 21 years of age. In January 1998 I was diagnosed with aggressive breast cancer.

In everyday parlance, cancer equates with death, but a death we dismiss as a minimal risk in life – something that happens to other people.

After attempting to overcome the initial horror, I found myself falling on to the path well travelled by the multitude suffering from this disease, the path that leads straight to the GP's door.

My doctor was pleasant enough, but quickly referred me to a cancer 'specialist' who was anything but. From here on in the 'recommended' path seemed to be leading towards rather than away from death.

I sometimes wonder why I found it so hard to accept this path, or if it's the same for all, but others force themselves to accept it as the inevitable final act in a cruel world. Perhaps it was simply fate – had I found it easier to accept, and had the doctors, oncologists and surgeons been just that little bit more kind and convincing, I suppose I would not be writing this article today.

The first opinion was horrendous, the second no better, and as the words of the most respected specialists Harley Street had to offer tolled painfully in my head, I felt myself becoming more and more desperate – to believe they could help, to believe they could make me survive.

For a time, their advice was my gospel, it proffered an answer to my prayers. But looking back, I feel my vulnerability was taken advantage of.

They advised radical surgery, proposed oncologists who could administer chemotherapy and suggested radiation therapy and stem cell transplants, which had yet to pass any trials, but were nevertheless the 'best decision'. The whole time they reinforced their advice with the constant assurance that if they were my father, brother or indeed any family member, they would strongly recommend this course of action. And so they led me, like a lamb, to the slaughter.

Operations came and went. I stifled my pain and tried to shut it out. I ignored my body's descent from attractive femininity to a mutilated piece of meat – consoling myself with their promises that they 'think they got it all this time'.



I FELT AS IF LIFE WAS
SLIPPING AWAY IN A
CASINO WHERE LADY
LUCK WAS CERTAINLY
NOT ON MY SIDE

But I was in perpetual agony, and every hope was violently dashed.

Why, if they got it all, was I having more surgery – 'Whoops, sorry: seven out of 10 lymph nodes were infected. Not such good news after all – you may actually only have a 30 per cent chance of survival.'

I felt as if life was slipping away in a casino where Lady Luck was certainly not on my side.

But then fate threw a series of coincidences into my life within the space of just a couple of weeks. Friends from different parts of the world genuinely interested in my well-being suggested I look into alternative medicine.

At first I was the typical Western sceptic. And when I mentioned it to my doctors it was met with such scorn, derision and lack of regard for my opinion that I was actually scared to bring it up again in their presence. But a mixture of curiosity and dampened hope drove me to do some reading and researching of my own.

I did not want to die.

I did not want to have a tube in my chest. I did not want to have chemicals poured into my body which were so powerful that even the nurses could not touch them because of the risk they'd get burnt – I wanted to find a new way.

If I was going to die, I wanted to feel I had tried everything – besides, vitamin

supplements and massage could not do me any more harm than the treatments I had endured thus far.

Mexico was the destination, the new hope. I arrived looking absolutely disgusting – half the woman I used to be. I underwent a course of natural therapy, using fruit-based remedies – I understand that *The Ecologist* will be featuring some of these alternative cancer treatments in an issue later this year.

I was sceptical, but I had nothing to lose by trying.

Amazingly, just a few weeks later, I felt re-energised and alive once more, something I hadn't felt in a long time. As my hair grew back I felt myself returning to my old self, a woman with hope.

But it didn't end there. It upset me that I had had to go all the way to Mexico to get my treatments. Why weren't they more accessible and popularised? I started asking questions and the answers were frighteningly stranger than fiction.

The doctors who treated cancer patients with these methods

were put in prison, discredited, invariably harassed, swamped with tax problems and had even had their wives and families taken from their homes – horror upon horror. But why? What could this all be about?

Money, money, money.

The pieces began to fall into place. Pharmaceutical companies: healers of the sick, or first and foremost blue chip corporations with an eye on their profits? You decide. But bear in mind the sort of money we are talking about here – billions upon billions upon billions. Not to mention the sort of political influence their money could potentially buy.

Am I right to be so cynical about their goals? Science has proven that there are probably only three cancers that benefit from the full onslaught of orthodox medicine. And yet they keep giving it to us as the panacea for all cancers.

You'd have thought they'd have got the message by now wouldn't you? That maybe they should try and consider integrating some other approaches to the problem – after all, isn't that what a good scientist is supposed to do – consider all the alternatives?

But then, we too are to blame – why don't we question it? We all have minds of our own, yet we have all been irresistibly attracted to their siren song. They give you their treatment then invariably proclaim there is nothing more they can do.

Come on!

They can send rockets round the world and even fly to bloody Mars, and yet they can't get a bunch of scientists together to crack cancer – sorry, I don't buy it. Why do so many of us from King Hussein to Linda McCartney accept their 'truth'? Why don't more of us follow the alternative route?

What convinces even the wealthiest and most famous amongst us to spend all their money on orthodox medicine? Maybe it's the letters after their names and certificates they hang on their walls – the 'I've been to medical school, I know what I am talking about' countenance.

And if you, the patient, ask them about alternative treatments they look at you as if you are raving mad. And whilst you are at your most vulnerable, this intimidation works.

But we're forgetting that all these doctors are just people. And though they are undoubtedly intelligent people, they are not infallible. Moreover they are only practising what they have been taught, so if their lecturers at medical school thought alternative medicine was a load of rubbish, you can bet that rubbed off on them too.

But attitudes can, and historically do, change – look at how far 21st century medicine has come since the Middle Ages. Just because something is believed to be correct now, does not mean it is, was or will always be so. We used to drill holes in the heads of those who complained of headaches to let the 'evil spirits out'. Undoubtedly those who questioned such practices at the time were silenced and derided. Have we really come that far?

Yet maybe we can do something. Look at *The Insider*, a recent docu-movie about the tobacco industry, read the veritable and almost constant outpouring of recent scandals regarding the safety of the Sellafield nuclear plant... the truth is steadily coming out about industries around the world, so can an exposé of cancer treatments be that far behind?

Why after these repeated betrayals of the populace by corporate

interests do we ignore the possibility that the same could be true about cancer?

We questioned GM foods, and look at how the British Government has had to take note. We can elicit a similar response over cancer.

I'm not irresponsible and I know that there are many people who do wish to pursue the orthodox treatments – and I do not propose the total abandonment of such methods. I just want you to think about it and about the choices you actually have.

Why are they so restricted? You can get insurance for thousands of pounds to treat your cancer via orthodox means, but try and get insurance to have some natural treatments, such as intravenous vitamins, and it's totally unavailable.

Not only that, but many of the vitamins we desperately need to build our immune systems up are not even available on the market.

The establishment, the government and the medical profession are desperate to classify them as medicines, and issue press releases on the tabloids' front pages saying that if you take too many of the vitamins that are available, you could damage your kidneys, heart, etc.

But I suppose exposing us to radiation and toxic chemicals does wonders for your body!

They tell us there aren't any trials on natural medicine in the control of cancer – omitting that it's because they are either prevented from going ahead in the first place or because they are discredited amidst a flurry of pathetic excuses and scepticism.

Do you think all the various chemotherapy treatments currently employed have all passed clinical trials? And as for those that have, I'd like to know what kind of a clinical trial passes treatments with such huge side effects. Do you believe that vitamins are the treatments we should beware of here?

Things have got to change soon because we're losing the war on cancer, and we're being deprived of the alternative weapons that could help turn the tide.

Tina Cooke has set up the Cancer Alternative Information Bureau (CAIB) to help and advise those who are interested in discovering more about alternative choices available to cancer sufferers.

More information is available on the CAIB website at, www.caib.co.uk.

In October, her book Control your Cancer and Live your Life will be published by Piatkus Books.

CAIB has organised a conference on 5 and 6 June 2000 at the Commonwealth Institute, London, at which doctors from around the globe will discuss research on the use of alternative and integrated medicine in the prevention and control of cancer. For further information call CAIB on 020 7266 1505, or fax 020 8332 0306.

Cancer is one of the world's biggest, and fastest growing killers, and The Ecologist has long been interested in investigating its true causes and possible preventions and cures. We would be extremely interested to hear of readers' experiences in, and opinions of, this area, and your responses to Tina Cooke's article. We will publish your comments in a future issue.

A BETTER KIND OF JUSTICE

NANDOR TANCZOS THINKS OUR LEGAL SYSTEM CAN LEARN FROM TRADITIONAL IDEAS OF JUSTICE, SUCH AS THOSE OF MAORI PEOPLE.

JUSTICE IS A very simple and natural idea. It is something anyone can recognise. Victims of crime recognise justice when it is done. Ordinary people recognise justice when it is done. And most of the time, an offender will recognise it too.

Yet our modern criminal justice system, even when it works, very rarely leads to real justice.

The reason is that our modern, Westminster-style legal system is based not on justice, but on laws. If I stab someone, the problem, according to the justice system, is not that I hurt them, but that I broke the law. 'The Crown' is the complainant, the victim is just another witness, and if I can prove that I didn't, technically, break the law, then I will go unpunished.

This is not real justice.

It is not real justice because modern court cases are aimed at proving guilt or innocence according to a written set of laws, rather than finding the truth of the matter. It is a system that is unsatisfying for victims and that does not even prevent criminals reoffending. It is a system without life.

There are clear alternatives to such a system. Some years ago, a lawyer here in New Zealand, Moana Jackson, wrote a report entitled *Maori and the Criminal Justice System* calling for a parallel Maori justice system. It was widely condemned by the Government and the media. Ministers were quick to scoff, in mock outrage, that there could not possibly be one law for the Maoris and one for the Pakeha (who are New Zealanders of European descent).

Of course, the Government had reason to be worried. Community control is a subversive idea. It undermines the legal fiction that the Crown is the sole sovereign power. When Moana Jackson wrote his report, sovereignty was exactly what he was talking about. But it was Maori sovereignty – the right of the Maori people to choose their own path.

And the Maori path, when it comes to the issue of justice, is one which modern New Zealand should learn from. It challenges the monolithic, monocultural power of the Crown, which says 'one size fits all'.

The current justice system doesn't work – perhaps a Maori version should be given a chance.

Maori justice is essentially restorative justice, and restorative justice can lead us forward. It is victim centred; it involves the community; and it is about offenders taking responsibility for what they have done.

The modern justice system is offender-focused. It is preoccupied with proving guilt and punishing the culprit. Questions such as victims' rights are extraneous. Restorative justice is victim-centred.



OFFENDERS ARE MORE
INCLINED TO FEEL
REMORSE IF FACED BY
PEOPLE THEY KNOW
RATHER THAN BY A JUDGE

It recognises that when a crime has been committed, the main problem is that someone has been hurt. The priority is to heal the harm that has been caused, by putting the victim at the centre of the process, allowing them their voice in the process and involving them in the decisions made.

Restorative justice, on the other hand, involves, or can involve, the entire community.

An offender is more likely to feel remorse if confronted by people he knows and respects rather than by a judge. Communities are able to find more appropriate and creative solutions for injustice. All this, and more, the traditional Maori justice system can teach us.

Finally, restorative justice does not ask 'how do we punish?', but instead asks 'how do we get the person to take responsibility for what they have done?' Paying a fine, doing periodic detention or even going to prison are easy options for many people. They are all ways that offenders can avoid taking responsibility, because in this way they never have to face the human reality of what they have done.

Prisons have been called a university for criminals. Young people go in for unpaid fines, often for victimless crimes

such as cannabis possession, and they come out with a degree in burglary or worse.

We should be happy to build new prisons, but where are the new polytechnics, universities and youth centres that between them could tackle the root causes of these crimes?

I am not saying that the answer is to tear down all prisons. Far from it. There are people who are dangerous to society, who the community will want to keep locked up. Prison can also be part of a sentencing package under restorative justice. But the vast majority of people in prison are not violent, and do not need to be there.

What they do need is to be brought face to face with the human reality of the harm they have caused, and they must be given an opportunity to rectify things.

This would go a long way to help restore the various balances that are lacking: the balances within the victim, between the victim and the offender and within the offender. Traditional justice systems, like that of the Maori people, and indeed others, tend to recognise this far more than the western world's modern legal process.

It is to such systems that we must now turn for answers.

Nandor Tanczos is a Member of Parliament for the Green Party of Aotearoa/New Zealand.

STEVE CARROLL

WHY GREENS SHOULD BE POLITICALLY INCORRECT

AIDAN RANKIN ARGUES THAT MODERN LIBERAL VALUES CAN BE MORE OF A THREAT THAN A LIBERATION.

A DISTURBING NEW trend is beginning to emerge in 'First World' cities and indigenous communities alike. It is a trend that challenges education's true meaning. For, around the world, books are disappearing from school shelves.

This is not due to financial cutbacks, but outbreaks of 'political correctness'. Teachers remove from library shelves books about military heroes, explorers, hunters and conquerors, on grounds of 'imperialist', 'racist' or 'sexist' attitudes, thus contributing to the alienation and delinquency of their male pupils, and a wider alienation of their school from the community it serves. By imposing this form of censorship, 'progressive' educators weaken local cultures, rather than supporting them by adding new layers of knowledge. Their work becomes counter-educational. It undermines confident traditions, but puts nothing in their place except a void filled by cynicism, nihilism and a sense of grievance.

One example is a school in Labrador, Canada, where hunting is condemned by modern, Western-educated teachers, despite the fact that the children are Innu, a sub-Arctic people who have long thrived on sustainable hunting, and revere the animals they hunt.

The Innu do not present their society as an ideal one, but it has evolved legitimately. They have developed over centuries of life as nomadic herdsmen their own social system, their own law and their own view of man's place in the universe, which worked very successfully until a larger, more arrogant culture started to impose its will. In the past, the main threat to Innu identity came from missionaries, then from administrators who assumed that it was always better for people to 'settle down' and live in houses, or shop in supermarkets instead of hunting in 'remote' areas better designated for mining or military bases. Now, it comes from 'progressive' western educators, campaigners and, ironically, spokesmen for the values of 'freedom' and 'rights'.

In the supposedly developed world, the desire by liberal, western elites to impose a uniform pattern on society has created new social divisions. It has produced fragmented communities whose troubles are akin to those of conquered 'natives'. Within Innu settlements, alcoholism, family breakdown and domestic violence are now endemic, and suicide rates the highest in the world. Further north, the Inuit, who have recaptured a measure of self-government, have been reduced to welfare dependency by 'environmentalist' attacks on hunting and trapping.

The thinking behind the original forcible settlement of the Innu was inspired by the false belief that history is a straight line of 'progress', moving inevitably forward, riding roughshod over local peculiarities and distinctive cultures, leading us towards ever-larger units of government and an ever more global culture. It is this



THE TRUE
ECOLOGIST NEED NOT
BE A POLITICAL ANIMAL
AT ALL

vision of historical inevitability which ecological politics, to have any meaning, should challenge. Too often, however, ecologists ally themselves with the progressive supremacists. They claim to oppose the globalisation of the economy, yet champion the globalisation of culture.

Green politics should be culturally conservative. This does not mean it should be 'right-wing' in the conventional sense. It means that it should include a critique of the idea of progress, a wish to restore natural equilibrium to economics, social organisation and humanity's relationship with the planet. High Tories and utopian socialists once found common ground in opposing the excesses of the Industrial Revolution. Similarly today, a bond can be forged between small-c conservatives who value tradition over change, small business over large corporations, and socialists who value local communities over centralised governments, co-operation over centralised planning.

The true ecologist need not be a political animal at all, for his views should reflect the practical wisdom of ordinary people. He should believe, with Aristotle, that political institutions

evolve organically and that there should be limits to the size of states. With Edmund Burke, the French Revolution's critic, he should believe that 'rights' have little meaning without cultural roots, and that the only real social contract is 'a partnership not only between those who are living, but between those who are dead and those who are yet to be born'.

The mistake made by many modern Greens is to ally themselves less with those who wish to conserve traditional ways of life, and more with those who wish to impose a 'politically correct' fundamentalism that gives economic globalisation its cultural underpinning. PC fundamentalists deny that human communities evolve naturally in different ways. Whether leftists or neo-liberals, they place abstract rights before accumulated wisdom.

Like previous totalitarian movements, modern political correctness thrives on ritual denunciation. Those who reject the idea that male and female roles are interchangeable are 'sexist', those who believe in a strong defence policy are 'militaristic', those who oppose the free movement of labour and capital are 'xenophobic'.

Ecologists who accept today's politically correct definitions of 'progress' are acting against the underlying logic of Green politics. For the whole point of being Green is to conserve cultures, to recognise that human diversity is part of 'biodiversity'. Green politics should be proud to be politically incorrect, and to challenge the tyranny of universal progress.

Aidan Rankin is a Research Fellow in Government at LSE.

STEVE CARROLL

AGAIN, THE SAVAGE INDIAN

KIRKPATRICK SALE IS SHOCKED BY A NEW AND DISTURBING VIEW OF THE ECOLOGICAL ROLE OF THE AMERICAN INDIAN.

IT'S HARD TO believe, but there seems to be an attempt to try to discredit the now-familiar image of the American Indian as an ecological model, thus eliminating in a single blow one of the fundamental inspirations for the modern environmental movement and a festering source of recurring guilt that is lodged deep in the American psyche.

The conspiracy, if that's not too grand a word for it, is largely the project of academics, a nit-picking fraternity that manages to break forth only when it is called upon to serve the masters at whose tables they are allowed to nibble the crumbs. But the real forces behind it are the powers whose onward course of exploitation and despoliation is being challenged by environmental regulations rooted in a regard for nature that was assumed to be the principal legacy of the natives of this continent.

Their theory being that if you can discredit the history of those native peoples, and make them out to be just as ruthless and disrespectful of the natural world as you are, you can effectively disarm the environmental critics: see, we all do it, have always done it, it's human nature, it's progress don't you know, and there's no stopping it.

At the forefront of this new conspiracy is one Shepard Krech III, who teaches anthropology at Brown University and has just published a book called *The Ecological Indian: Myth and History* (Never trust a 'III'). Its purpose, never mind the impartial-sounding subtitle, is to prove that there was no ecological Indian and indeed that Indians were instrumental in animal extinctions and habitat destruction all along.

His case rests on accounts of Indian behaviour by contemporaneous European eyewitnesses, who of course have pervasive cultural biases of the crudest kinds, buttressed by archeological evidence over which there is, as even he has to admit, great dispute. And, as in an earlier book in the same vein, he scores most of his points by making ecologists and pro-Indians into a gigantic straw man at about the level of the Kevin Costner film *Dances With Wolves*.

Worst of all, Krech bases his argument, implicitly and explicitly, on the hunting practices of 19th century Indians in North America. An easy and familiar target, and often used these days, but it is fundamentally flawed, on two counts.

First, the societies of North America that the Europeans encountered, at the original contact in the 16th century and later as they moved west, were vastly different from the traditional societies that had lived in ecological harmony for many thousands of years before. The basic reason is that European diseases, from 1492 onwards in at least seventeen successive epidemics, wiped out as much as 95 per cent of the original population, leaving ragged rem-



ONE THING THAT
ENDURED IN INDIAN
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BASED SPIRITUALITY AND
ECOLOGICAL WISDOM

nant communities that had to try to carry on in a world that no longer made sense, with the elders and their wisdom gone, by merging and marrying with whatever other remnants, often of different customs, could be found.

The so-called Powhatan tribe, for example, whom the English found in Virginia in 1607, were not really a tribe at all, more a melange of leftovers, from what must have been a catastrophic die-off in the 16th century.

'I have seen the death of all my people thrice,' the Powhatan chief told John Smith, showing him the few villages and perhaps 5,000 people that remained from the 50,000 or 60,000 of the original society. What survived was at best a loose and not very coherent alliance of disparate, and separate, family and clan remnants, nothing like the thriving society that once must have been.

Second, the Indian tribes that lasted after European contact generally did so by adapting many of the ways, and not merely the technologies, of the conquerors. They did not typically abandon their ecological teachings, necessarily – indeed, how else would we know about them? – but as time went on they suc-

ceeded, where they did succeed, by becoming a part of the market economy of the whites, providing agricultural and animal products for the surrounding society.

And when they began to hunt buffalo in great numbers in the 19th century, it was because to survive they had to supply what a white economy demanded or be extirpated, not because they suddenly no longer remembered the ancient teachings about the sacred earth.

The Krech argument eventually comes down to saying that the Indians do not have any moral standing as ecologists because European conquerors destroyed their cultures and forced them into the capitalist system.

That is something like saying that a man who has been clapped into the stocks has no right to say anything about how to stand up straight.

For all their catastrophic and turbulent history, the one thing that did endure in so many of the various Indian cultures was their earth-based spirituality and the ecological wisdom it spawned. The attempt to destroy that is a shoddy and soulless business indeed, the worst among many egregious examples of the American professoriate serving the systems that are so efficiently destroying the earth.

There is no doubt a special, and very hot, place for them in the hell that they are determined to reduce this world to.

Kirkpatrick Sale is a leading ecological thinker and writer.

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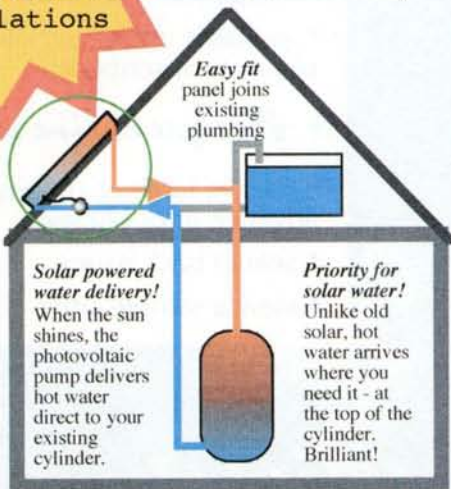
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Robin doesn't get it

Talking about an ethical foreign policy is one thing, actually delivering is another.

Robin Cook doesn't appear to know that continuing to grant export licences for the sale of Hawk jets to Indonesia, refusing to condemn Russia's flattening of Grozny and rolling out the red carpet for oppressive regimes is not the ethical foreign policy people voted for. Don't be like Robin – get the NI.

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Doctor's Handwriting

A monthly column that helps you decipher the medical truth.

BY LYNNE McTAGGART

VITAMINS: WHAT'S THE REAL STORY?

For the last several months, newspapers in Britain have been overflowing with reports that vitamins are bad for our health. The most recent and most damaging of these concerns the supposed discovery, given worldwide publicity, that vitamin C can clog the arteries. The anti-vitamin supplement brigade, which appears mainly to consist of doctors and scientists schooled in the standard variety of drugs-and-surgery medicine, seems to believe that this, and other reports, has vindicated their steadfast view – that we can get all our nutritional requirements from food, and that vitamin pills are useless and possibly dangerous.

The problem is that the actual science behind these pronouncements isn't nearly sturdy enough to merit this wholesale demolition job. For instance, the vitamin C story represents a serious departure from standard scientific practice and also betrays a certain amount of ignorance about the role of vitamin C in human health.

The much-trumpeted *Vitamin C Study*, conducted by a team at the University of Southern California, examined 573 supposedly healthy middle-aged men and women who work for a utility company, about a third of whom took various vitamins. Those taking vitamin C pills had accelerated thickening of the walls of the big arteries in their necks. The more they took, the faster the thickening. The study concluded that those taking 500mg of vitamin C daily for at least a year had a two and a half times greater rate of thickening than did those who avoided supplements. The greatest effect was among smokers, whose rate of thickening was five times greater than those who didn't take supplements. Nevertheless, there was no evidence of any actual harm from the vitamin.

The paper was under peer review at the time the story was leaked to the media, and had not yet been accepted for publication. It had only been presented to a meeting of the American Heart Association. Under the usual rules of scientific publishing, papers under review are not supposed to be circulated or publicised, lest the review team rubbish the paper and recommend against publishing.

Furthermore, the USC team used a particular imaging technique which is experimental, and is still in the midst of its own clinical trials by the National Institutes of Health in the US, to determine whether it is accurate enough to be of any use in examining the state of arteries. The team also used only one of the imaging technique's indicators of arterial health – the one demonstrating thickness. The other two indicators, which were not used, examine plaque index and velocity ratio, both of which would have been better able to demonstrate possible blockage.

In fact, as the Vitamin C Foundation points out, all the study actually showed was that the arteries of test subjects were thicker – a sit-

uation that would have been expected. The Foundation quotes Dr Robert Cathcart, a leading proponent of high dose vitamin C treatment, who postulates that thickening of the carotid artery with vitamin C is simply reversing the thinning that occurs with ageing. In other words, there is no evidence that vitamin C furs up arteries, only that it strengthens – thickens – arterial walls.

According to Owen Fonorow, director and co-founder of the vitamin C Foundation, 'This is exactly what you want to avoid heart disease. Vitamin C is needed for collagen, and stronger collagen-reinforced blood vessels can better resist injury. Plaque forms in response to injury.'

As the Foundation points out, other evidence demonstrates that vitamin C may be beneficial to arteries. In one study, after subjects

given 2g of vitamin had a significant reduction in 'augmentation index', which measures arterial stiffness and also a reduction in platelet aggregation (tendency to clot). As the study concluded, 'vitamin C supplementation might prove an effective therapy in cardiovascular disease'.¹

There's also evidence that vitamin C can help with arterial dilation in patients with chronic heart failure.²

There's no doubt that treatment and study of vitamins is individual and complex. A vitamin supplement taken on its own without balancing it with levels of other micronutrients can be dangerous, particularly when dispensed by GPs who have no training in nutrition. New evidence shows that folic acid, which GPs are blithely dispensing to any woman considering becoming pregnant, can increase the risk of miscarriage. Plus, nutritional needs, like everything in life, are an individual, moveable feast. What's optimum for you may be toxic for me.

Nevertheless, the wholesale industrialisation of food production has made it virtually impossible for us to get all the nutrition we need from modern-day foods. Vitamin supplementation represents a necessary revolution in healthy eating, thanks to strange new environment of approximately 20,000 chemicals in our food, air and water. It is best studied and managed by people who appreciate what humans are up against to stay healthy in the 21st century.

Lynne McTaggart is editor of *What Doctors Don't Tell You*, a monthly newsletter which exposes dangers and unproven practices in modern medicine. Annual subscriptions: £34.95. For details: Satellite House, 2 Salisbury Road, London SW19 4EZ or tel: 0181 944 9555.

Further Reading

1. *J Cardio Vas Pharma*, 1999; 34: 690-93.
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The wholesale industrialisation of food production has made it virtually impossible for us to get all the nutrition we need from modern-day foods

ECAs EXPOSED

EXPORT CREDIT AGENCIES, EXPLAINS SIMON RETALLACK, ARE THE WORLD'S LARGEST PUBLIC FINANCIERS OF ENVIRONMENTAL DESTRUCTION.

BY USING TAXPAYERS' money to back environmentally-destructive projects around the world, ECAs are lining the pockets of multinational companies at the expense of the planet.

AS MORE AND more people join the international campaign against corporate globalisation and its most visible global icon – the World Trade Organisation – they would do well to note that an entity lurks in most of their own countries that is just as destructive. Like the WTO, it pursues a corporate agenda, operates in secret, tramples on people's rights and ravages the environment. The difference is that it is using billions of public money to do so and is getting away with it. The entity in question is an Export Credit Agency (ECA).

Most industrialised countries have at least one ECA, mainly operating as an official branch of government. Their principal function is to promote corporate exports and investments abroad. By providing taxpayer-backed loans, guarantees and insurance, ECAs enable national companies to conquer export markets and secure new investments in developing countries and emerging economies.

Together, ECAs are the world's largest public finance institutions supporting private sector projects, subsidising more than 10 per cent of world trade. The volume of the financial assistance they provide collectively exceeds that of the World Bank and all the other multilateral and bilateral aid agencies put together. In 1997, ECAs approved \$105bn in new loans, guarantees and insurance – a four-fold increase in a decade – half of which went towards large infrastructure projects in developing countries.

Not only do ECAs have far more resources with which to support corporate activity abroad than any other public body, but the majority lack even the most basic standards of publicly acceptable behaviour. Unlike even the World Bank, most ECAs have no public disclosure policy, enabling them to conduct their business in secret and to take decisions on the advice of councils made up entirely of businessmen, many of which are connected with companies that benefit from ECA guarantees.

The majority also have few if any of the

detailed social and environmental standards now adopted (though not always enforced) by bilateral aid agencies and multilateral development banks (MDBs). Thus most ECAs do not mandate the carrying out of environmental impact assessments, or the participation of affected groups, or the prohibition of involuntary resettlement and harm to indigenous peoples, wetlands and forests. They lack even the pretence of a public service remit such as the pursuit of 'poverty alleviation' or 'sustainable development'. Such is the nature of most ECAs that many care little even of the economic viability of the activities they sponsor – frequently supporting

to the bottom as pressure is applied to lower standards that do exist in order to win new business.

The most horrific example of this dynamic is the case of the Three Gorges Dam on the Yangtze River in China – widely viewed as the world's most environmentally and socially destructive infrastructure project. Touted as the largest-ever hydroelectric dam, it will forcibly displace two million people and inundate precious arable land and archaeological sites. Furthermore, within 50 years scientists expect sediment from the Yangtze to fill much of the dam's reservoir and thereby impair all power production, impede navigation and increase the risk of a catastrophic collapse in a heavy flood. On environmental grounds alone, the World Bank and the US Export-Import Bank refused to support the project, prompting the standard-less ECAs of Germany, Switzerland, Japan, Sweden, Canada and France to scramble into the gap to provide hundreds of millions of dollars of

loans and guarantees to help their national corporations to build the dam. Two US ECAs, the Export-Import Bank (Ex-Im) and the Overseas Private Investment Cooperation (OPIC), have subsequently faced sustained pressure from US industry and Congress to eliminate those environmental and social standards that prohibited them from helping US companies win contracts for the Three Gorges Dam. That pressure already seems to have had an impact, as the Ex-Im has joined other ECAs in preliminarily supporting the latest most controversial environmentally destructive infrastructure project with \$850m in export credits and guarantees: the Ilisu hydroelectric dam in Turkey. This dam on the River Tigris will not only



Three Gorges Dam: creating water and people displacement

projects associated with large-scale corruption and mismanagement, according to the NGO Transparency International.

Consequently, the worst type of infrastructure and export projects that multilateral development banks and bilateral aid agencies now reject as environmentally, socially and economically unsustainable are being undertaken all over the world as a direct result of the provision of loans, guarantees and insurance by ECAs using taxpayers' money. In fact, because ECAs are highly competitive with one another in their quest to win new contracts for their native businesses, they are usually eager to back projects that other MDBs and ECAs have refused on environmental and social grounds. This removes any incentive to apply or raise standards and leads to a race

forcibly displace over 15,000 principally Kurdish refugees, flood 52 villages and 15 towns, including a legally protected medieval site, but it will also enable Turkey to block flows of the Tigris to Iraq, further enflaming political tension in the region. The project thus violates five policy guidelines of the World Bank and core provisions of a key UN Water Convention.

Among the ECAs considering final support for the Ilisu Dam is the UK's Export Credits Guarantee Department, whose minister in charge, Stephen Byers, stated late last year that he was 'minded' to grant a £200m export credit to the British engineering company Balfour Beatty, which is part of the Swiss-based consortium that will build the dam. If the export credit is granted, the British Government will have permanently discredited its so-called 'ethical foreign policy'.

NUCLEAR REACTIONS

Other environmentally catastrophic white elephants that ECAs are keen to help build in developing countries are nuclear power stations, just as the tide has begun to turn decisively against them in the developed world. Thus the UK's ECGD has backed the Daya Bay and Quishan plants in China, and the Canadian ECD is backing the sale of Canadian Candu nuclear reactors to Korea, Romania and China, despite the fact that seven of the Candu models were shut down for safety reasons in Ontario. Even the co-governing Green Party has not prevented the German ECA Hermes from approving credit guarantees last March for three atomic power stations overseas.

Perhaps even more disturbing is ECA support for other energy-related projects. Just as governments are publicly acknowledging the need to reduce greenhouse gases from fossil-fuel combustion in order to avoid the devastating impacts of climate change, they are allowing their ECAs to finance the construction of coal-fired power plants and oil and gas developments throughout the developing and former-Communist worlds.

The British ECGD, for example, is backing the construction of the Liaocheng, Heze II, Shiheng II and Huaneng coal-fired power plants in Shandong and Dalian Provinces, China, as well as an enormous coal-fired plant in Visakhapatnam, India. Similarly, the massive Paiton coal plant complex in Java, Indonesia, has been backed with \$3.9bn in guarantees and loans from the Japanese, US and German ECAs in deals which the *Wall Street Journal* reported, in December 1998, were riddled with corrup-

tion. The cumulative support for coal, oil and gas projects by the US ECAs Ex-Im and OPIC alone between 1992 and 1998 totalled \$23.2bn. According to the US-based Institute for Policy Studies, these projects will release 29.3bn tonnes of carbon dioxide over their lifetimes – more than all global emissions for 1996. In every instance, renewable energy options are ignored, snagging developing countries on the hook of fossil-fuel dependency as the entire world needs rapidly to extricate itself from it.

The actual construction of ECA-backed fossil-fuel projects – particularly the oil and gas pipelines and roads upon which they depend – also have immediate, devastating impacts for natural habitats and biodiversity. The Urucu Gas and Oil Project, financed with a \$64m loan by the Japanese ECA JEXIM, for example, involves the construction of a processing plant, two 500 km-long pipelines and 15-30 metre-wide construction and service roads along the entire length of the pipelines in the heart of some of the most pristine rainforest of the Brazilian Amazon. Widespread forest destruction is predicted, not least as a result of the access provided to loggers, miners, ranchers and colonists by the project's pipelines and roads into hitherto remote and undisturbed areas.

Forest degradation, oil spills and human rights abuses have already taken place as a result of the construction of the Orensa Pipeline in the rainforests of Colombia for BP and Total with loans and guarantees from JEXIM and the Italian SACE.

Large-scale mining is another particularly ecologically destructive activity that ECAs have been keen to promote. The Australian Export Finance and Insurance Corporation (EFIC) and the US Ex-Im have provided loans totalling over \$320m to Australian and US companies working on the OK Tedi mine in Papua New Guinea – the third largest open-cut copper mine in the world. Even worse is the Porgera gold mine in the Enga Province of Papua New Guinea (PNG), backed, once again, by the EFIC with \$120m in loans, whose toxic discharges reach levels that have been measured at up to 3,000 times PNG limits.

The only beneficiaries of this whole system are large corporations, for whom ECAs effectively play the role of giant welfare providers, exposing the supposed superior 'efficiency' of 'free' trade in the modern global economy as a hollow sham. It's a clever racket that involves far more than the provision of loans, as significant as that is. To avoid the risks of operating overseas, cor-

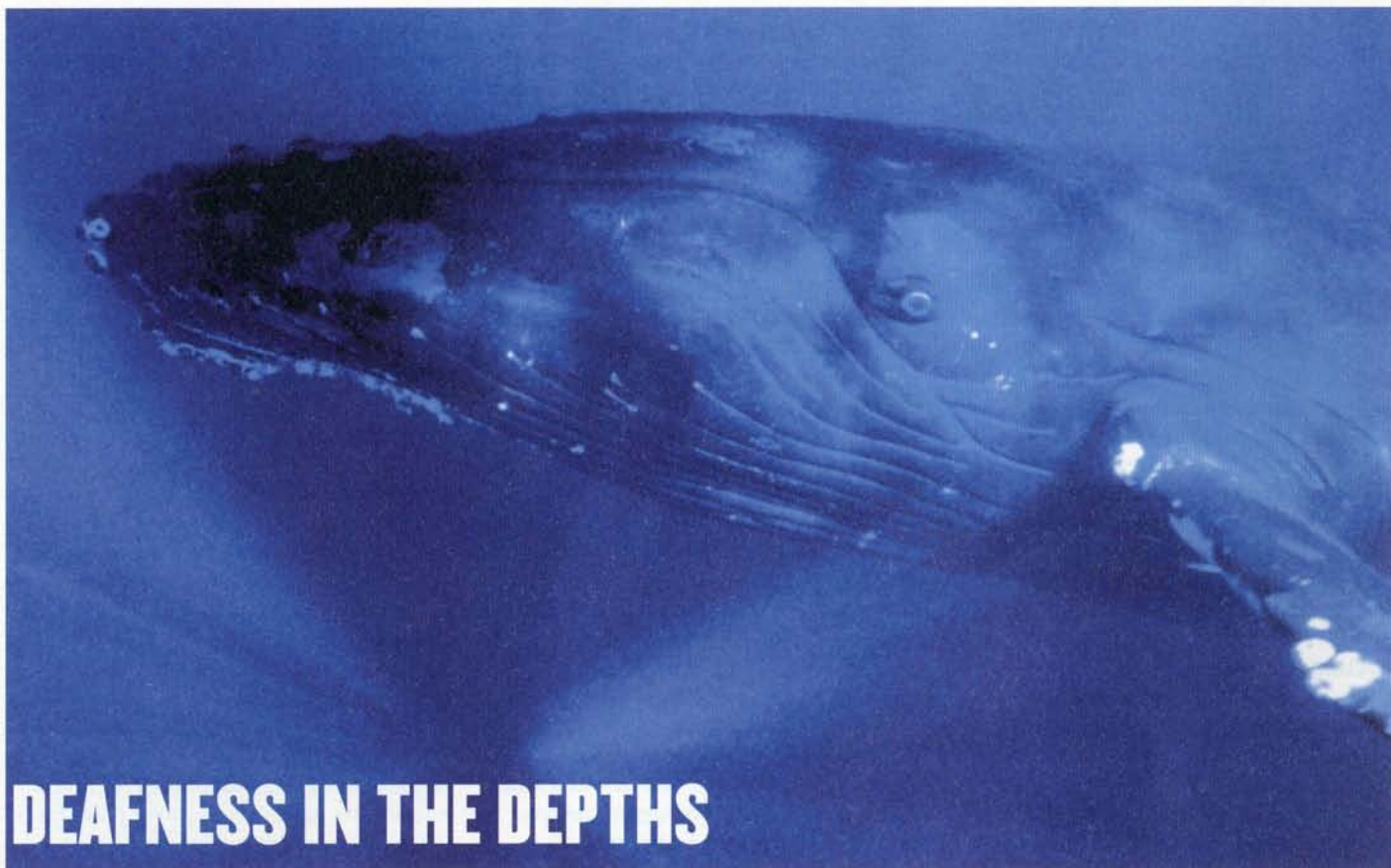
porate exporters of goods or services take out insurance with an ECA which guarantees to pay them for the exported goods or the services rendered if the importer defaults or the project fails. When this happens, the ECA initially uses taxpayer money to pay the corporation before passing the bill on to the governments of the importing country which adds it to its stock of foreign debt. The world's poor therefore ultimately pick up the tab, and that tab is increasingly high: a quarter of developing countries' total external debt, and over half of all their official debt, is now owed to ECAs, causing a huge drain on scarce resources.

WHAT CAN BE DONE?

Clearly this scandalous abuse of public funds must be stopped. For over two years, some 140 non-governmental organisations (NGOs) have been campaigning around the world for radical ECA reform. They are calling for greater transparency and public participation, particularly of affected groups, in all ECA decision-making processes. They are also demanding mandatory, independently prepared environmental and social impact assessments, as well as screening procedures that would prohibit support for environmentally and socially harmful projects, respecting rather than contravening, as is currently the case, international agreements on the protection of the environment and human and social rights. Finally, based on these principles, they are urging governments to agree common environmental and social standards for all ECAs within two years.

While the leaders of the G8 countries have at long last publicly accepted part of the NGO challenge on ECA reform – calling upon the OECD to negotiate common environmental standards for ECAs by June 2001 – progress has been extremely slow and as governments are applying little pressure for real change, there is a serious risk that the OECD talks will break down. That cannot be allowed to happen. Increased public pressure on governments must be applied to overcome lobbying by entrenched private interests. ECAs are among the last bastions of publicly sponsored corporate misrule. It's high time that their gross misuse of public resources was brought to an end for good.

Simon Retallack is deputy editor of The Ecologist's special issues. This article was based on research by ECA-Watch, The Corner House, Environmental Defence Fund, and Friends of the Earth UK. For more information on ECAs see especially: www.eca-watch.org



DEAFNESS IN THE DEPTHS

LEIGH CALVEZ REVEALS WHY THE LORDS OF THE SEA AREN'T SINGING ANY MORE.

A NEW THREAT to whales, dolphins and other marine life exists in the world's oceans, as the US Navy's new sonar technology could have huge long-term effects on their whole way of life.

EVER EAGER TO protect itself against enemies, the US Navy has developed a new technology to help it detect hostile submarines. It's called Low Frequency Active (LFA) Sonar, and is capable of sending low-frequency sound pulses – up to 240 decibels into the water over hundreds of miles, bouncing an echo back to the listener, thus detecting an enemy submarine.

In the depths of the oceans, man-made sonar is nothing new, but this is the first time that it has been as loud and as powerful. Surely, then, it has been tested for its effects on the creatures of the sea that depend upon sound in the way that we depend on sight: the whales and dolphins?

Not sufficiently, say many scientists. Studies published in scientific literature over the past 20 years suggest that sounds from 110 to 120 decibels begin to cause disturbance to whales. Dr Linda Weilgart, a

Canadian biologist from Dalhousie University, who has studied sperm whale communication for 16 years, points to the long-term effects from the use of this technology as reason for concern. In *The Christian Science Monitor*, she states, 'to determine the health of a population (that is, whether it will survive), we need detailed, accurate population size figures, birth rates, death rates, and growth rates. We have none of these statistics for almost any whale or dolphin likely to be affected by LFAS'.

After using the technology for years without completing an Environmental Impact Statement (EIS), thus violating the US National Environmental Policy Act (NEPA), the Navy agreed to test the sonar system in order to complete an EIS. It hired a team of US scientists to design a study testing the effects of LFAS on only four species of whales. Blue and fin whale feeding behaviour and gray whale migration patterns were tested off the coast of California in September 1997 and January 1998, respectively. Humpback whale

behaviour was tested off the Big Island of Hawaii in March 1998, during the breeding and calving season. These experiments only tested immediately observable changes in behaviour to an exposure level of around 150 decibels, a sound well below the 240 decibel level at which the technology will be deployed. Long-term effects are extremely difficult to test in the natural system of the ocean and were ignored by the scientists.

During the tests off California, scientists recorded a decrease in the number of blue and fin whale calls. The results of the gray whale tests posted on the Navy's SURTASS (Surveillance Towed Array Sensor System) LFA Sonar website state, 'Source in migration path: increased avoidance with increased source level'. This significant result was reported as: 'No biologically significant response', a questionable assertion in scientific research since this is impossible to know until long-term impacts can be assessed.

In Hawaii, half of the humpback whales tested temporarily stopped singing – the

behaviour for which this species is famous. Additional aberrant behaviours from other whales and dolphins in the area were also reported. Twelve days after the tests began, a three-month-old humpback whale calf was sighted without its mother for at least five hours and displayed unusual behaviour. Nine days later a two-to-three-month-old spinner dolphin calf was seen without its mother or pod, (a family unit), while a single melon-headed whale calf was found alone, dehydrated and without its pod nine days after the testing ceased. Interference with the crucial mother-calf bond has been cited as reason for concern over the use of LFAS.

NATO has also tested a similar type of sonar with serious effects on a little-known species of deep-diving beaked whale. On 12 and 13 May 1996, twelve Cuvier's beaked whales were stranded and died along the Kyparissiakos Gulf coast of Greece. Alexandros Frantzis, a Greek scientist, who reported the findings in *Nature*, concluded NATO's LFA Sonar caused the deaths. In his posting of this article on MARMAM, an

electronic bulletin board for the Marine Mammal Society, he added, 'I close this message hoping that the following article could be a "useful tool" in the hands of specialists who are discussing with the US Navy, in order to convince them to stop their dangerous games'.

Most opposition to LFAS has come from scientists outside the US. Dr Hal Whitehead, from Dalhousie University, who studies sperm whales, explained this conflict of interest in his article, *Deaf Whale Dead Whale*. Almost all experienced marine mammal scientists in the US working on acoustics have links to the US Navy. This means that there are very few competent scientists who feel free to criticize US Navy projects.

The draft EIS was submitted on 29 August 1999 for a 90-day public comment period. Seven days before the end of the period, the Navy made public its intention to deploy the sonar by applying for an incidental take permit from the National Marine Fisheries Service (NMFS). This action acknowledged the potential for harm, disturbance or death

in 43 species of marine mammal including endangered humpback and blue whales and critically endangered northern right whales and Hawaiian and Mediterranean monk seals. The effects of loud, low-frequency sound are virtually unknown for endangered turtles, diving sea birds, fish, plankton and basic ocean life processes.

Thus far the Navy has spent \$350m on the project and defends the use of this new technology on the website under the heading *Why America Needs LFA Sonar*, by explaining the need to protect billions of dollars of raw materials and manufactured goods destined for nations around the world. The military used to defend citizens; now it's defending commerce.

We depend on the oceans for life. Until we have a clear understanding of the long-term impacts of this technology, not only on whales but all ocean life, its use should be prohibited and alternative methods to protect our commerce should be found.

Leigh Calvez is a marine researcher for the US-based Quiet Sea Coalition.

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STAND UP AND BE COUNTED

A SCIENTIFIC BREAKTHROUGH ALLOWS THE COMPANIES RESPONSIBLE FOR PCB POLLUTION TO BE BROUGHT TO BOOK, SAYS TOM ERIK ØKLAND.

THEY MAY NOW pay for their misdemeanours. A Norwegian research scientist can trace PCB pollution on the seabed along the Norwegian coast directly back to the manufacturer. The Norwegian authorities are considering suing chemical giants such as Monsanto and Bayer for millions of pounds.

PCBs ARE A FAMILY of industrial chemicals used in electrics, manufacturing and various other processes. Considered to be among the most hazardous of the environmental toxins known. They have been linked to cancer, hormonal effects, behavioural changes, and more. Despite the fact that they are artificial, they can be found in the environment, throughout the world. The reason is simple – this environmental toxin was used in a series of products

before it was banned. Common to these products is the fact that they have now all been phased out, or are in the process of being phased out. But industry and the authorities in most countries have shown considerable reluctance to properly dispose of products containing PCB.

TRACED TO THE CHEMICAL GIANTS

Pollution in Norway is a serious problem in many places. The authorities have banned the sale of fish from a number of fjord areas. Clean-up is essential, but it is also expensive. The question of liability therefore arises. In the middle of the 1990s, the Norwegian research scientist Roger M. Konieczny began to develop a system which enabled the identification of the PCB pollution that can be found on the

seabed along the Norwegian coast. Konieczny had worked on the mapping of PCB pollution for many years, when a simple thought occurred to him: Can these PCB analyses be used for anything other than just describing the environmental situation in the area where the samples were taken? Is it possible to find out who produced the environmental toxin? Is there a 'fingerprint' at the pollution 'crime scenes' along the coast? The answer to all these questions was an emphatic yes.

The idea behind the so-called 'chemical fingerprinting' is simple: PCB is not an individual substance but a collective term for 209 different environmental toxins. PCB manufacturers produced a variety of PCB blends. Konieczny's method is just as simple – if we know the composition of the



Hazardous waste disposal: taking samples from contaminated drums

ALL PICS: TONY STONE

blends, we can also locate them today.

'Using over twenty reports written from the middle of the 1970s up to the middle of the 1990s, I found out that about 20 blends of PCB had a clear pattern in terms of their composition. I was therefore able to create just as many standard profiles,' explains Konieczny.

These profiles mean that you could, for example, distinguish Monsanto's Arochlor 1248 from Bayer's Clophen A60.

GIVES AN INDICATION OF USE

'Using these standard profiles, it is easy to determine the type of PCB in the sediments along the Norwegian coast. You present the composition of the PCB find graphically and compare it with each of the fingerprints. In some cases, the find will provide a perfect match with the fingerprint, and you can then be virtually 100 per cent certain that you have found that particular blend,' continues Konieczny.

The technique means that it is possible to determine the degree of chlorination of the PCB toxin which has ended up in the sediments in a particular area. If you know the degree of chlorination, you can also say something about the commercial area of use for the PCB. For example, low chlorinated PCB was used in hydraulic oils, whilst high chlorinated PCB's were used in paint for ships.

'If you find high-chlorinated PCB close to a shipyard, the obvious conclusion would be that paint used on ships is the cause of the pollution. If the find also indicates a particular commercial blend, this can be linked to the paint production. In Norwegian territorial waters, we find large quantities of Clophen A60 near shipyards. Last year, we finally verified that this commercial blend was largely used in the production of paint for ships in Norway up until 1980', says Konieczny.

PCB POLLUTION WITHOUT CONTROL

Per-Erik Schulze from the Norwegian Society for the Conservation of Nature has worked on the PCB problem for ten years. His work has concentrated on identifying which products contain PCB and where these products are today. Schulze's findings are disturbing.

The Norwegian Society for the Conservation of Nature can document that PCB was used in a series of products:

'Small condensers were used in everything from washing machines to fluorescent tube fittings, glue used in double-glazing, concrete additives used for floors in

bathrooms, kitchens, etc in Norwegian houses, ship paint. Several hundred tonnes of PCB were used in these products. And no one knew where the PCB toxin could be found today.'

This created the basis for 'The Great Toxin Hunt', a campaign that involved two boat trips along the Norwegian coast in 1998 and 1999. The intention was to do the job that the authorities had never done – to find the sources of the PCB pollution along the Norwegian coast. Schulze's idea was simple – if PCB is found in the middle of a fjord, there must be one or more sources. If the same type of PCB is found offshore from a nearby shipyard, this is the probable source. His theory held. Almost all the samples taken during the trips showed higher PCB concentrations than the authorities had previously demonstrated.

‘Is it possible to find out who produced the environmental toxin? Is there a ‘fingerprint’ at the pollution ‘crime scenes’ along the coast? The answer to all these questions was an emphatic yes.’

BASIS FOR A LEGAL CASE

In 1999, the Norwegian Society for the Conservation of Nature felt that the time had come to call in legal expertise. The solicitor Øivind Østberg was asked to produce a legal report on the PCB problem. Østberg, an experienced expert on environmental law, does not believe that the chemical giants will have a good case. PCB clean-ups on the seabed cost several million pounds and the Norwegian authorities and companies are therefore looking for someone to share the bill with. The principle of 'the polluter pays' is well established in Norway.

The question is therefore who the polluter is. Øivind Østberg considers that it is '...highly reasonable that companies which have produced, sold and earned income from PCB and which have been closer than anyone else to knowing about the harmful effects of the substance should contribute towards the cost of clean-up.'

One of Østberg's main arguments against

the chemical giants is the fact that the harmful effects of PCB have been known for a long time.

According to his legal report, the environmental toxin's bio-accumulated properties have been known since the end of the 1960s. In Norway, the substance was included on the so-called 'Poison list' in 1971 and, in the following year, the use and import of PCB was banned in the neighbouring country of Sweden. Nevertheless, Bayer, Monsanto and Rhone Poulenc continued to produce PCB.

Østberg believes that the producers of PCB have a special responsibility for keeping themselves informed on research into their own products. Since this research was actually carried out in the 1960s, the companies must surely, in other words, have known of their environmental sins.

INADEQUATE INFORMATION

Another core argument is the inadequate provision of information to users of products containing PCB.

At the same time that Bayer knew that PCB was dangerous, they were selling the substance to Norwegian paint manufacturers with no mention of this. The shipyards were therefore unaware of the potential problems which could have led them to introduce preventative regulations for painting work. The result was pollution which could have been avoided.

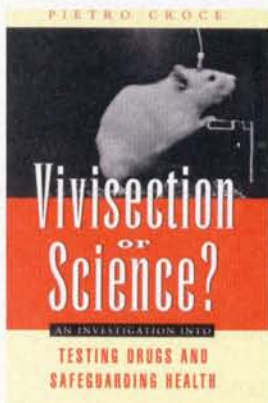
A short time ago, the Norwegian Society for the Conservation of Nature presented all the arguments to the authorities in Oslo. Norway's capital is planning to build a new opera house on a site that was previously used by a large shipyard. The seabed in the area is heavily polluted by PCBs. The construction of the opera house will have to be postponed until the seabed has been cleaned up. This is expected to cost as much as £10m.

The Oslo harbour authorities and the environmental town council in Oslo were immediately interested in the information presented by the Norwegian Society for the Conservation of Nature. The authorities are now considering legal action. Regardless of the outcome of any legal case, Bayer and Monsanto are unlikely to appreciate the negative publicity. If the Norwegian authorities win the case, the victory will be extremely important – and not just for Norway. PCB pollution is after all a global problem.

Tom Erik Økland is an environmental editor and journalist.

VIVISECTION OR SCIENCE? AN INVESTIGATION INTO TESTING DRUGS AND SAFEGUARDING HEALTH

By Pietro Croce
ZED BOOKS LTD/£22.50



Professor Pietro Croce, who for a long time experimented on animals himself, here exposes vivisection as a pseudo-science based on a methodological error. He repeatedly demonstrates,

through a whole range of examples, the fundamental scientific (rather than ethical) objection to vivisection: the results of animal experimentation cannot be extrapolated to humans, especially when healthy but deliberately injured animals are taken as experimental models for diseases occurring

naturally in people.

Animals differ amongst themselves and – most importantly – from humans in their reactions to chemicals. Penicillin for instance, therapeutic for humans, will kill a guinea-pig or a hamster; while strychnine, favourite weapon of the murderer, is harmless to the same guinea-pig, a chicken or a monkey. How, Croce asks, if animals differ so much from humans in their reactions, can one test drugs on them intend-

‘Penicillin for instance, therapeutic for humans, will kill a guinea-pig or a hamster; while strychnine, weapon of the murderer, is harmless to the guinea-pig, a chicken or a monkey.’

On VIVISECTION OR SCIENCE?

ed for humans? Worse still, how can you test the efficacy of a drug intended for a particular human illness on an animal that does not suffer from the same disease? The vivisectionist responds by artificially inducing the disease in the animal. In the

case of osteoarthritis, for example, the researcher attempts to mimic the human deformity using dogs, sheep and cats by beating joints with hammers or injecting them with irritants. As Croce says, it is incomprehensible that such a procedure, which produces no more than fracture and inflammation in the joint, can be used as an acceptable model of human osteoarthritis.

Animals are frequently used to test the toxicity of a new drug, especially its cancer causing potential. But reaction differences between human and animal, and from species to species, render the results problematic. The spontaneous development of cancer in laboratory animals, especially in rats and mice, further confuses readings. The result, according to Croce, is the acquisition of a wealth of information, ‘which is apparently useful but which, on closer examination, turns out to take us further from our goal and to complicate the existing problems’. Instead of furthering medical science the research serves as a means of publishing papers and acquiring academic titles; ‘researchers have clear ideas about their targets: career and money,’ says Croce bluntly.

Croce reveals the clear contradiction in

THE NEW FOODS GUIDE

By John Elkington and Julia Hailes
GOLLANCZ/£7.99

The products on our shelves evolve amorously around us. We are as unaware of the changes as we are of our hair growth. But reading this book opens your eyes. Suddenly the shop shelves are full of the book's three categories: Functional foods, New Organic, and GM. Are these categories reductionist? At first I thought they might be, but a wander around my local deli assured me otherwise. The green tea, organic apples and ‘live’ yoghurt in my shopping basket confirmed my complicity with today's food producers.

Or rather, they revealed the extent to which food production and the consumer are involved in a constant dialogue. We want and they supply. Indeed, *The New Foods Guide* is a heartening signal of the extent to which food manufacturers really do listen to their customers. When nutritionists pointed out the benefits of the essential fatty acid Omega-3, for example, food producers quickly devised ways to incorporate the oil into eggs.

Of course, cynics would say that what this book really proves is that, today, food, like clothing, is more fashion than function, and that a manipulative food industry makes a tidy profit preying on our mercurial desires. The book leaves this open to suggestion.

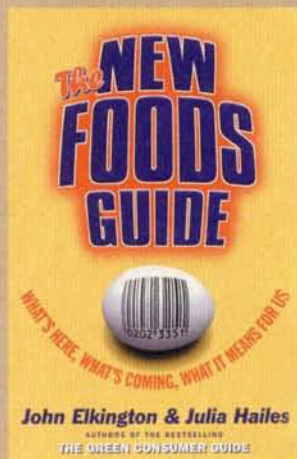
Hailes and Elkington also take a thorough look at food processing. Suddenly, formerly Jabberwockian ingredients start to make sense. The role and makeup of additives like colourings, thickeners, syrups and sta-

bilisers are all explained. Did you know, for example, that fructose and glucose aren't just fruit or sugar cane syrups, but the product of an extensive chemical process, whereby vats of rice, wheat or corn starch are brewed with specially formulated enzymes to create syrups? The book can rob you of misconceptions.

The extent to which genetic modification is part of our food chain was one of them. With GMOs in corn starch, food colourings, aspartame, and yeasting agents, avoiding biotechnology is now a near impossibility. Even if a product itself contains no GMOs, often its ingredients will have been created with GM enzymes. In fact, the GM enzyme industry is now so ubiquitous that most manufacturers don't even know whether their products rely on them or not.

The New Foods Guide is primarily a witty, well put-together mine of information on today and tomorrow's food. Elkington and Hailes' personal politics are kept under wraps. As a result the mainstay of the book is balanced and reasonable, to the point of seeming polite. But a ten-point ‘manifesto’ in the concluding chapter sets their own message out quite clearly. ‘A ban on organophosphates’, they say; shortened food chains, fair trade, animal welfare considerations, identity preservation, responsible labelling, no pesticide residues or antibiotic growth promoters... so a book with bite to boot.

Lucinda Labes



the attitude of the vivisector towards animals. On the scientific level experimentation is founded on the similarities between animal and man; on the moral level it is justified on the basis of differences between them. Croce does not touch upon the moral arguments against vivisection, the 'emotional' limb of the movement, as he slightly condescendingly refers to it (though his frequent use of the word 'torture' to describe the experiments is telling). Rather, he confines his attention to refuting the scientific basis for vivisection and outlining the genuine scientific methods of biomedical research.

According to Croce, clinical trials, where drugs are tested on patients in hospitals, is an indispensable method of research. He also suggests that epidemiological research (the large-scale observation of humans) and computer simulation, have a vital role to play. Finally, he outlines the achievements and huge potential of experimenting with cell and tissue cultures.

The animal lover may find this book a little cold, but it is a contribution to the anti-vivisection debate that is desperately needed if the movement is ever to turn the minds of those who will only listen to 'science'. For further information on the subject of the scientific relevance of animal experimentation, turn to *Beastly Practice (The Ecologist Vol 30, No 3)*.
Ed Metcalfe.

GREEN POLITICAL THOUGHT

By Andrew Dobson
ROUTLEDGE/ £15.99



'Once a photograph of the Earth, taken from the outside, is available... a new idea as powerful as any other in history will be let loose.' – Astronomer Fred Hoyle in the 1940s, as quoted in *Green Political Thought*.

In 1968, the cameras of Apollo 8 brought back a picture of a blue-white planet Earth,

suspended like a living pearl above the horizon of the moon. It would not be too fanciful to claim that Fred Hoyle was right, and that that one image crystallised the beginnings of the modern green movement – that new and most powerful idea whose time is yet to come. Certainly there were only a few years between that image first being seen and the formation of some key green organisations and movements – Green Parties around the world, Friends of the Earth, Greenpeace... and *The Ecologist*, in 1970.

This third edition of Andrew Dobson's essential handbook to the ins and outs of ecological thinking seeks to explain what that movement is about, and what greens

‘Throughout, the framework he constructs is built upon the work of key green thinkers from the last 30 years, supplemented with a historical perspective and clear views of his own.’

On GREEN POLITICAL THOUGHT

really stand for. First published in 1990, it's been updated and is all the more valuable for it. No matter how much you know about green ethics, philosophy, political strategies and relationships to other ideologies, you will learn something from this book.

Dobson's central contention is that there is a significant, but often unacknowledged, difference between what he calls the ideology of 'ecologism' and simple environmentalism. To confuse the two, he argues, is a 'serious intellectual mistake'. The difference is simple: 'environmentalism argues for a managerial approach to environmental problems, secure in the belief that they can be solved without fundamental changes in present values or patterns of production and consumption... ecologism holds that a sustainable and fulfilling existence presupposes radical changes in our relationship with the non-human natural world...'

Taking this as his starting point, he launches himself into an erudite exploration of the many aspects of 'ecologism' – its origins, its central tenets, its key thinkers, its philosophy and ethics and its relationship to other ideologies such as socialism, liberalism and conservatism. Dobson is professor of politics at the University of Keele, and his years of study on this subject are clear in his writing. Throughout, the framework he con-

structs is built upon the work of key green thinkers from the last 30 years, supplemented with a historical perspective and clear views of his own.

What is perhaps most interesting about the book is the dilemmas it throws up for the green movement as a whole. Not content merely to catalogue green ideas and strategies, Dobson also highlights problems, inconsistencies and falsehoods where he believes they are to be found. He is critical of green pacifism, for example, asking what defence policy, if any, would be adopted in a green world, and how non-violent civil disobedience can ever succeed against a hostile army (answer: it can't, unless a vast number of people are prepared to die without resisting – and even then...) He neatly describes the dilemmas faced by green parties who seek political power whilst endeavouring at the same time not to be co-opted or watered down by it, and he quotes the ever-principled Petra Kelly: 'If the Greens end up becoming mere ecological Social Democrats, then the experiment is finished.' He talks of dilemmas posed by direct action, pessimism, decentralisation and more.

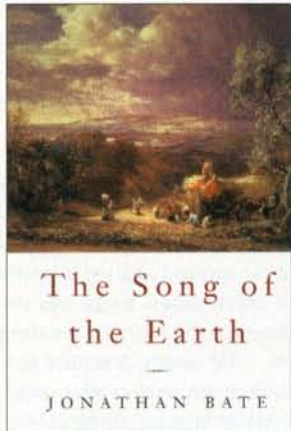
But more importantly, and more lastingly, Dobson's book is a reminder of just how powerful, and radical, green thinking can be. Ecologism, he contends, is the most radically challenging political idea since the Enlightenment – more so even than communism, which never challenged anthropocentrism, the material growth economy or industrialism itself. Probably most importantly of all, the book outlines a message that has run through green thought since it emerged: we are destroying the non-human world at unprecedented rates – and we don't have much time to reverse this destruction.

It might be appropriate to end with a quote from the Club of Rome's seminal 1974 report *The Limits To Growth*, which Dobson uses to illustrate the ecological case against procrastinating while the Earth burns: 'Suppose you own a pond on which a water lily is growing. The lily plant doubles in size each day. If the lily were allowed to grow unchecked, it would completely cover the pond in 30 days, choking off the other forms of life in the water. For a long time the lily plant seems small, and so you decide not to worry about cutting it back until it covers half the pond. On what day will that be? On the twenty-ninth day, of course. You have one day to save your pond.'

Paul Kingsnorth

THE SONG OF THE EARTH

By Jonathan Bate
PICADOR/ £18



'This is a book about why poetry continues to matter... It is a book about modern western man's alienation from nature. It is about the capacity of the writer to restore us to the earth

which is our home.' Thus begins Jonathan Bate's *The Song of the Earth*.

To many, poetry is something that remains in closed books; decoratively stored away, except for rare moments of personal solace or flashes of childhood memory. But, according to Bate, poetry is alive. This book is a voyage through life, with words that live because their source is organic, their arrangement reflective and their symbolism eternal.

Throughout the journey, one encounters characters ranging from Rousseau to Wordsworth, Coleridge, Byron, Clare and on to Snyder, and finally via Rilke to Heidegger. Meanwhile, Bate the guide explains the apparent rift between nature and society and advances a thesis seeking to explain how poetry is capable of healing this schism.

The argument is profound. Bate sees the sort of poetry that affirms the existence, uniqueness and sacredness of all that lives as more profound than the crass determinism and jargon-laden school of *The Selfish Gene* and the like.

'If you are an artist, you are likely to begin with the creation of the human mind, whereas if you are a scientist you are likely to begin with particles, elements, genes or organisms.'

One needs only call to mind Descartes' reduction of animals to automata and the Cartesian distinction between *res cogitans* and *res extensa* to sense the dead cosmos and the historical origins of this division.

Take the weather, and consider Byron's poem *Darkness*. In 1816, the year it was

written, there was a bad summer. The cause was the eruption of a volcano in Indonesia, whose resulting cloud reduced the transparency of the Earth's atmosphere. Byron's *Darkness* is a product of this event. A climatologist's response to that same occasion would have avoided the very elements of participation described by Byron.

The reason is very simple; it would severely compromise the detachment of his observation.

Now take Man. In order to discover himself or to grow to his entirety, Man needs to explore a multitude of 'realities'. To use the weather as a metaphor: whilst Byron's

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On THE SONG OF THE EARTH

poem embraces and reflects upon the infinite elements of that moment, the scientist is limited by and within his forecast. Yet vital components of life are beyond scientific observation.

Again, the idea behind compartmentalisation is more complex. 'To describe an ecosystem, you have to stand imaginatively outside it, you cannot be simply ("naturally", "unthinkingly") dwelling within it. Concordantly, the very conception of a "politics of nature" is self-contradictory: politics is what you get when you fall from nature.'

This is where Bate turns to Heidegger. Histories, theories, political systems are all enframing. To read eco-poetically is to find 'clearings' or 'unconcealments'. To quote Heidegger: 'Wherever Man opens his eyes and ears, unlocks his heart, and gives himself over to meditating and striving, shaping and working, entreating and thanking, he finds himself everywhere brought into

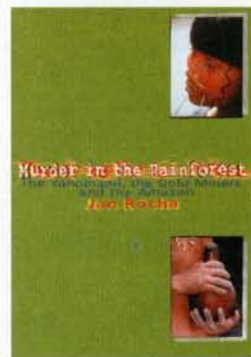
the unconcealed.'

This is the reason why *The Song of the Earth* is of such importance. Bate's ecocriticism does not enframe literature into a political statement, but uses ecology to make the far more progressive point about what it is to be human. It is not surprising that at a time when arguments of this nature are becoming exceedingly narrow and personal, poetry should be capable of re-framing the mental horizon. By taking Man beyond his attempt to master Nature, poetry enables him to come to terms with the fact that his time for dwelling on Earth is 'naturally' limited.

Stephanie Roth

MURDER IN THE RAINFOREST

By Jan Rocha
LATIN AMERICAN BUREAU
(RESEARCH AND ACTION) LTD
1999/£7.99



In this significant book, Jan Rocha tells the story of the brutal massacre of Yanomami Indians in the Amazon rainforest by Brazilian garimpeiros (gold miners). Though she centres on the massacre, the book also

explores the wider theme of the invasion and terrifying destruction of an indigenous people, its culture and environment.

In response to the killing of four Yanomami youths by garimpeiros, the Yanomami – in accordance with their traditions – seek revenge, killing one gold miner and wounding another. This sparks a blood-thirsty counter-attack. A heavily armed posse of gold miners set out for the village of Haximu on the border of Venezuela and Brazil. On 23 July 1993 they arrive at the Indian village and kill everyone they find – mostly young women, children and the aged.

The killings become headline news in Brazil and around the world.

While some reports claimed that as many as 73 Indians had been murdered, others, notably the Brazilian military, questioned whether it had really happened at all; claiming it to be an invention of the

Indians and foreign propagandists. It was French anthropologist Bruce Albert, one of the few to speak Yanomami, who provided definitive evidence that 13 Indians had been killed.

Albert found the gourds containing the ashes of the murdered Indians, now considered sacred by the Yanomami. Though these were not the complete bodies of the dead, which are usually needed for a trial, they constituted the only physical evidence of the massacre, and as such this evidence was accepted by the courts. Three and a half years later five garimpeiros were convicted of murder, even though only two were ever found and imprisoned.

Rocha goes on to describe how for centuries the Yanomami have hunted, fished and foraged in the Amazon without destroying it. She talks about their spirit world and the shamans who commune with and call upon them through the medium of hallucinogenic plants. Rocha explains that for the Yanomami the forest is Urihi, meaning, 'our place, our land' – not a property for sale.

The Yanomami land was first invaded by the Brazilian military government's road

building programme of the 1970s. Then, in the 1980s, came the gold rush with miners being lured into the Amazon by the promise of gold by Brazil's government,

‘Rocha describes how for centuries the Yanomami have hunted, fished and foraged in the Amazon without destroying it. She talks about their spirit world and the shamans who commune with and call upon them through the medium of hallucinogenic plants. Rocha explains that for the Yanomami the forest is Urihi, meaning, ‘our place, our land’ – not property for sale.’

On MURDER IN THE RAINFOREST

which saw the Amazon as an ‘empty’ wilderness that needed to be occupied. The miners came from Brazil's rural and urban poor in search of their only chance of wealth.

They brought with them guns, alcohol, prostitution, pollution, crime, and most fatally of all for the Yanomami, illness and disease.

Rocha explains how the Yanomami see the garimpeiros as ‘earth eaters’ – a band of wild hogs snuffing in the mud. In a metaphor for the evils of materialism, the shamans warn that the mining of gold releases a harmful vapour spirit from the subsoil that is dangerous for both the Yanomami and white man alike, and it is a process that will make the whole world sick.

Rocha's research is detailed and she writes without emotion or sentimentality, letting the facts, which are truly heart-rending, speak for themselves.

Anyone interested in the plight of the Amazon and its people should read this book. It may be short, but it's certainly authoritative.

Ed Metcalfe

McGill University School of Environment

Applications are invited to the McGill School of Environment (MSE) from potential nominees for a 2001 NSERC University Faculty Award (UFA). Candidates must have a research background in an area related to: Health in a Changing Environment; Ecosystems, Biodiversity and the Conservation of Community; Stewardship of Global Systems; Culture, Commerce, and Environment; or, The Ethics of Civilization in Nature. Applications must reach NSERC by November 1, 2000 and are required at McGill no later than August 15, 2000. Successful applicants will be appointed at the Assistant Professor level (tenure track) in the School, and cross-appointed with another department/faculty.

Candidates must, by the appointment date, possess a PhD in a related field. Relevant postdoctoral experience is an asset. The UFA program aims to increase the representation of women in the sciences; accordingly, the competition is limited to women who have not previously held a tenure track appointment at a Canadian University. Program information is available at http://www.nserc.ca/programs/sf/UFA_e.htm. Information on the MSE and McGill is found at <http://www.mcgill.ca/mse>. In accordance with the terms of NSERC's UFA program, this advertisement is directed only to women who are, or will be by November 1, 2000, Canadian citizens or permanent residents of Canada.

Applications will consist of: a full curriculum vitae (including evidence of relevant formal training); statements of teaching specializations and research interests; up to three reprints; three confidential letters of recommendation sent under separate cover by the candidate's references addressing the applicant's teaching and research ability and promise; completed NSERC Personal Data Form (form 100), and Application for a Grant Form (form 101).

Send applications to the MSE, att: K. Scott, 3534 University, Montreal (QC) H3A 2A7, Canada.



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DEVELOP AND BE DAMNED

If the 'developing' world must develop, says THE CROW, please don't let it develop like the 'developed' world.

One of President Clinton's favourite phrases is 'growing the economy'. You can grow tobacco, and you may be able to grow a moustache, but I'll be darned if you can 'grow' the economy. The economy can be boosted or improved, but it cannot be grown. That is one of those annoying examples of illogical and grammatically incorrect newspeak which permeated Wall Street and Fleet Street in the last days of the 20th century.

Another prime example of this latter-day linguistic laziness is the use — or abuse — of the word 'development'. You can develop a film or a rash, but you'll have a tough time developing a nation. Yet it is hard to turn on the telly or open the papers these days without reading some reference to the urgent need of developing nations. And if what we mean is nations 'developing' — a word ineluctably tainted with condescension — the question arises: from what to what? From an agrarian society steeped in centuries-old communal traditions to a stressed-out, high-tech, dog-eat-dog existence with traffic congestion, urban sprawl, high crime rate and everybody on the internet and clutching a cell phone, lest they be 'left out of the loop' for a single second?

For what is really meant by this mantra of Milton Friedman orthodoxy is the need for industrialised nations to develop new markets for their resource-depleting production among the teeming billions of Asia, Africa and Latin America, thus boosting the stock value of the multinationals — under the benign guise of raising the standard of living among the new converts to consumerism. For the cross and sword of the conquistadors of yore we have substituted the dollar sign and the sweat shop.

Much like 'the Third World', catch-words like 'underdeveloped' or 'developing' are manifestations — however well intended their application in global economics — of a prevailing, if unwitting, arrogance inherent in so-called civilised (read: white, Christian and capitalist) society. One need only read the recent spirited exchange in these pages between Economist editor Bill Emmott and Indian environmentalist Vandana Shiva (Vol 30, No 2) to recognise the truth of Kipling's assertion that 'East is East and West is West, and never the twain shall meet'. Their measured politeness and mutual respect prove that it is possible to disagree without being disagreeable. The irony is that both writers are 'right', even though they represent diametri-

cally opposed points of view. As the saying goes, it depends where you're coming from, or, on which culture you have been weaned.

Bill Emmott represents the pragmatic Western point of view which holds that — the teachings of Christ, Marx et al notwithstanding — shortsighted self-interest is the primary motivating factor driving human activity. Vandana Shiva, on the other hand, advances a more idealistic, but not necessarily less realistic, world view, mirroring a deeper insight into human existence, one embodied in the Hindu and Buddhist concepts of Nirvana, and expressed in Matthew 16: 'What is a man profited, if he shall gain the whole world, and lose his own soul?'

One is reminded of the possibly apocryphal account of the meeting between Diogenes and Alexander the Great. The Macedonian conqueror was so intrigued by tales of the Greek sage who lived in an old wine barrel — apparently content to dispense with the most rudimentary comforts of life — that he paid him a visit. Summoning Diogenes to step outside his vintage abode, the emperor asked him if there wasn't anything he wanted, so that he, Alexander, might grant him his wish.

'Sire', came the prompt reply, 'I wish you would step aside, so as not to block the sun'.

'You can develop a film or a rash, but you'll have a tough time developing a nation'

Cultural and philosophical differences aside, it is simply not possible for the rest of the world to consume finite resources and emit ozone-depleting gases, or to pollute and trash the environment, at the rate we in the West are doing it. Such a scenario would spell the absolute and unquestionable extinction, not just of the thousands of other species who share the planet with us, but also of the human race. As Gandhi said, were all the world's people to consume at the same rate, a dozen planets would be needed to accommodate our lifestyle. And since the Mahatma uttered those words, world population has doubled to six billion — an annual increase of 90 million people to house and feed!

No. The alternative to globalisation must be for the rest of the world ('emerging economies', 'developing nations', 'the Third World' — pick your own cliché) to bypass our untenable form of economic activity and set its collective sights on a more sustainable Way of Life. The time and technology is ripe for those nations not already addicted to fossil fuels and wasteful consumerism to adopt a truly renewable economic infrastructure. To paraphrase Disraeli, global trade is not a principle, but an expedient.

The Crow is a mouthpiece for thinkers with individual and strong views. This month, the role of The Crow was taken by Gard Binney.

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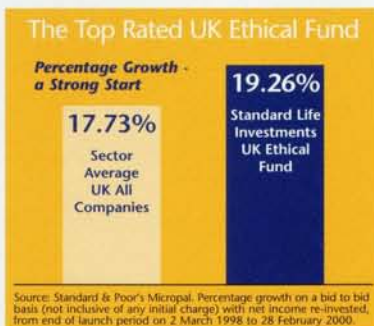
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