

Rethinking Basic Assumptions...

The Ecologist

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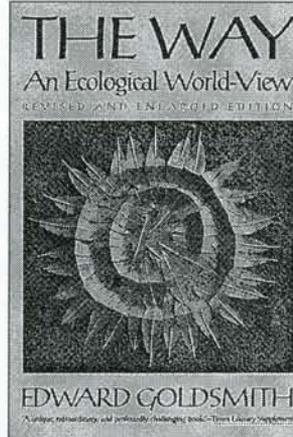
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The Monsanto Test

by Zac Goldsmith

OUR AIM IS NOT to dwell on the matter, but it is very hard to avoid once again reporting on the activities of Monsanto Corporation. The reason is simply that almost everything they do is an outrage. From their new propaganda campaign in India and their illegal testing of genetically modified crops in that country, to the political arm-twisting by the US of the highly sceptical New Zealand government over the issue of labelling genetically contaminated foods, they must surely be going too far.

That is certainly what their own advisers have warned them. In two leaked reports prepared by Greenberg Research apparently on behalf of Monsanto, the company is advised of an "ongoing collapse of public support for biotechnology" in the UK, and a "maturing crisis" in Germany. The reports, entitled *The British Test*, and *Germany: The Maturing Crisis*, presumably commissioned by Monsanto, are based on national surveys, polls and interviews in the UK and Germany. The purpose of the study is primarily to assess the impact of Monsanto's recent PR campaign and publicity on its image as a company, and its conclusion is that Monsanto needs urgently to launch either a 'corporate image campaign, or simply to prepare for crisis management'. What the reports do not mention are other forms of active opposition to Monsanto and its products. In India for example, a movement was launched a few weeks ago to expel Monsanto entirely from that country. It has been named "Operation Cremate Monsanto". In France, where opposition is fast growing, moves have been made by ECOROPA to sue Monsanto

in the courts for lying in its advertisements about the benefits of food biotechnology and the justifications for it. Our own experience at *The Ecologist* has been enormously encouraging, with widespread support and interest in our special issue on Monsanto. The issue has been read by more people than usual, despite difficulties we had in finding a printer willing to publish it, and despite a reluctance on the part of leading wholesalers to distribute the magazine to their various outlets.

The embarrassing results of the surveys, which, had they not been made public by

The embarrassing results of the leaked surveys can only lead to an admiration for Monsanto, who have single-handedly managed to unite a divided social and ecological movement.

Greenpeace, would most likely have been shelved, can only lead to an admiration for Monsanto, who have single-handedly managed to unite a divided social and ecological movement. Mainstream, otherwise apolitical, members of society have teamed up with radicals. The left is working with the right. Consumer groups and environmental groups have rarely been so close. Otherwise law-abiding citizens are showing a willingness to take part with 'professional' protesters in direct and often extra-legal action. Monsanto has itself become an issue, and the company is faced with what the Greenberg report describes as "large forces at work that are making public acceptance problematic."

"Biotechnology and Monsanto", the first report begins, "face their toughest European test in Britain. The broad climate is extremely inhospitable to biotechnology acceptance and, absent political support in government, Monsanto would surely face unfavourable decisions on its key products. Over the past year, the situation has deteriorated steadily and perhaps at an accelerating pace. At each point in this project, we keep thinking that we have reached the low point and that public thinking will stabilize, but we apparently have not reached that point. The latest study shows a steady decline over the year."

Referring to Germany, the second report begins: "[t]here is no place in Europe – at least where we have researched – where the public stands so opposed to genetic engineering and the introduction of GM foods."

By any standards, Monsanto is in serious trouble. Its mass 'information' campaign has backfired and so too has its routine aggression towards critics and its astonishing disregard for the consumer.

Negative reactions to the very concept of adding genetically modified ingredients to foods have, according to the survey, risen dramatically in the UK from 38% a year ago, to 51% today. A third of the public is now "extremely negative", up from 20%. The number of people in the UK for whom the addition of such ingredients is "acceptable" has decreased from 33% to just 25%, again over the last year. The situation in Germany is even grimmer, for Monsanto: "On the general issue of food products improved with GM ingredients, just 16% respond positively, but 81% respond negatively (including 42% who are very negative). The response among German women is worse: 86% negative."

Government For, By and ~~Of~~ Monsanto

The United States, the world's largest producer of genetically modified food, has been accused of "bullying" foreign governments to protect the global ambitions of Monsanto Corporation.

Cabinet documents from New Zealand show that the US government threatened to pull out of a potential free-trade agreement with New Zealand over its plans for labelling and testing genetically modified food.

The documents also show that the US was concerned that curbs on selling GM foods in New Zealand might set a precedent for European countries.

Those claims of bullying tactics were further backed by former New Zealand Health Minister, Neil Kirton, who says he was visited twice regarding the issue by an "aggressive" US Ambassador, Josiah Beeman, after he called publicly for the compulsory labelling of genetically modified food. Mr Kirton's replacement in office consequently adopted the opposite stance on the issue, and supported the view that GM foods need not be labelled.

Opposition MPs have accused the New Zealand government of backing down on GM food under pressure from the US. British MPs say the documents give the first

clear evidence of the lengths to which the US will go to defend the interests of the American biotechnology industry.

What's more, they believe that Tony Blair has privately come under similar pressure from President Bill Clinton and the US government. They ask now that he reveal publicly what discussions the British government has held with the White House (which has famously close links with Monsanto) about the growth and sale of GM crops in Britain.

Adapted from articles in *The Independent* and *The Evening Post*

Editorials

But what began as an issue of genetic engineering has developed fast into an issue of corporate dominance of the food chain; the very basis of human life on earth. "[German] opposition has begun to centre on the American character of this technology, on transnational corporate threats to the consumer, and on the role of Monsanto in particular."

"There is considerable evidence," the report continues, "that the anti-biotechnology discourse focuses on American companies in general and Monsanto in particular. The company is seen to employ aggressive practices and to enter the market with a certain disregard for the German consumer. In Germany, genetic engineering and biotechnology are associated with big multinational and globally active corporations. For the opponents in particular, these companies are 'surrounded by a certain aura of mystery and threat'. The anti-corporate discourse in Germany already includes the idea of corporate control of the food chain and threats to independent farming. Biotechnology companies are seen [by the general public] to be willing to risk great human danger in order to make profits."

• • •

Greenberg's explanation of Monsanto's PR failure centres not on the products themselves, or on the nature of the technology, but more on what is seen as a backwardness among European consumers, and a general 'immaturity' or ignorance, particularly among the press. "The media elite are strongly hostile to biotechnology and Monsanto. While individual reporters may have improved their knowledge, there is no evidence of that among the media elite – who did not read the [presumably 'educational'] advertising and who do not seem particularly informed on the issue."

Objections raised by a number of media 'elite' interviewed by Greenberg included among other things issues of regulation, of independent agencies, of labelling. They favoured, for the most part, a temporary moratorium on the release of GM foods – a fairly reasonable platform, but one which is apparently incompatible with that of Monsanto. "Reading these comments it is unlikely that the press is about to usher in a change in the climate in Britain," concludes the report – 'a change in climate' no doubt meaning unconditional acceptance of Monsanto's products.

The problem in Germany, according to Monsanto's advisers lies in "an ideological opposition to 'processed foods' which are seen to not be real." In the UK, the study shows that the public are fast losing their faith in "scientific progress", indeed they are seen by Greenberg to be "the most sceptical in Europe". Similar studies backed by Unilever, the Green Alliance and

Open Letter

from Peter Melchett, executive director of Greenpeace UK

Dear Robert Shapiro,

As chairman and chief executive of Monsanto you may know that last week UK Greenpeace released two of your internal reports, one from Britain and the other from Germany. They say that there is 'an ongoing collapse of public support for biotechnology and GM foods' in the United Kingdom. They also say that 'overall feeling towards foods with genetically modified ingredients have grown dramatically more negative'. The British report goes on to say that this is 'probably the best measure of our declining fortunes in Britain'.

It seems to Greenpeace that these two reports contain information of great significance to your shareholders, because it could materially affect the valuation of your shares. Greenpeace will be writing to your major shareholders in the UK to share the information in these reports with them, information which it seems to us you have so far failed to disclose.

I would be very grateful if you could let me know if you will be making these reports available to your shareholders worldwide, or whether, in the interests of open debate which you say you have spent £1 million promoting in this country, you will take steps to encourage all your shareholders to visit the Greenpeace website at <http://www.greenpeace.org.uk/monsanto> where both documents may be viewed.

Greenpeace understands that there may be further reports available from Stan Greenberg, in particular about public views in the United States on genetically engineered food. Will you make this further information publicly available as part of the 'information campaign' you say you embarked on this summer to 'stimulate informed debate'?

Finally, it does not seem to make good business sense that you are trying to sell a product that your own market research shows the public do not want. We think it is time you took heed of what your pollsters are telling you, and pulled out of the GMO business.

Reprinted from *The Observer*, 22 November, 1998.

the University of Lancaster have shown, what's more, that consumers in the UK harbour "mixed feelings about the integrity and adequacy of present patterns of government regulation, and in particular about official scientific assurances of safety."

But what is astonishing in all this is a total inability on the part of Monsanto's advisers to rest any responsibility for this 'maturing crisis' on its unacceptable products or on the behaviour of Monsanto itself (except for minor reference to their clumsy introduction of genetically modified soya). What is even more disturbing is their lack of interest in doing so. The purpose of the report seems to be that of analysing means either of sweeping the issue under the carpet until such a time as the issue is forgotten, or else of twisting the language and adapting the arguments until they prove more persuasive to a fundamentally distrustful public. In the UK, the emphasis is on terms used to describe Monsanto's

work, with polls having been carried out to determine which of the various options meets with least disapproval. In Germany, where there is wide-scale rejection of Monsanto's ecological or health justifications for introducing GM foods, the report suggests a shift in emphasis towards "stress[ing] economic and macro benefits and avoid[ing], at this point, intrusions on the sanctity of the German consumer."

Monsanto's next advertising campaign (should they be foolish enough to launch one) will therefore focus on different arguments in different regions, and will be tailored as a result of this and other studies, on exactly that which Monsanto believes we, the consumer, want to hear. We don't like the term genetic modification in the UK – we won't be hearing it. The Germans no longer believe the ecological justifications for genetic engineering – they will only have to endure the economic ones. In other words, the path of industrial progress has

"Absent political support in government, Monsanto would surely face unfavourable decisions on its key products." – The British Test

"At each point in this project, we keep thinking that we have reached the low point and that public thinking will stabilise, but we apparently have not reached that point."

– The British Test

"There is no place in Europe where the public stands so opposed to genetic engineering and the introduction of GM foods"

– Germany: The Maturing Crisis

become one in which a product is born, and, regardless of its social value is then sold to a gullible consumer with the use of artificial arguments. Bovine Growth Hormones, as discussed in our special issue on Monsanto, must surely be the finest illustration of that process, whereby a highly questionable means of increasing the milk (and pus) output of a cow has been foisted on a nation already burdened with a massive milk glut.

The overall flavour of the Greenberg report is negative as far as Monsanto is concerned. But there is sadly still scope for Monsanto's further entry into the two countries on which the reports are based.

The British retailers for example, are "quite well briefed, in some cases citing Monsanto briefing statistics word for word." In contrast to a year ago, "they no longer seem focussed on safety concerns."

Among the political elite too, there has been "clear evidence of progress". The reason, according to Greenberg: "these members of the elite saw the advertising and clearly understood the messages." The political elite in Germany too are "strongly supportive, perhaps even proponents." The report uses terms such as 'stability' and 'maturity' for those sectors which are beginning to see things in Monsanto's favour. "The interviews (in Germany) suggest a mature politics that has largely left the issue settled, or at least off the table."

But the best news of all for Monsanto is

a feeling of utter helplessness which seems to have consumed the public both here in the UK, and particularly in Germany.

"The [German] public, while strongly opposed to GM foods, believes these products are on the market and that the public is relatively powerless to stop their introduction."

Even though, according to all available studies, German consumers believe that GM food "constitutes a danger to all mankind," 92 per cent say "GM foods will definitely come and cannot be stopped." In what must be one of the more vivid illustrations of the near complete separation of interests between state and citizen, there is now a situation in which the federal state of Germany is seen by a heavily opposed public to be an advocate for biotechnology. As a result, according to one consumer representative, the consumer feels powerless. "One day you're confronted with the stuff, and what can you do? You haven't got any choice." Another consumer representative believes that although "[t]here would be a lot of squabbling, I don't think that genetic engineering can be stopped."

According to Greenberg, "few of the opponents expect the [German] Greens to use their leverage to get the SPD to shift on genetic engineering. All the players seem to think these are developments that cannot be stopped."

A British MP is quoted as saying, "I'm sure in five years time, everybody will be happily eating genetically-modified apples, plums, peaches, peas." This, despite the fact that the process currently faces enormous (and growing) popular resistance.

. . .

Which leaves Monsanto with the question as to what might be done to correct the situation. What is clear in both countries surveyed, is that the more people learn about genetic engineering, the greater is their resistance to it. What is also clear is that the answer does not lie in trying to persuade the public of the merits of GM foods. This is certainly the view of Monsanto's advisers. "The overwhelming weight of evidence argues for a low-profile approach – in effect doing little to influence the process and certainly doing little to elevate Monsanto's profile in Germany. Obviously one should continue to press the government for favourable decisions on seed introductions and one should support efforts to expand information and knowledge about biotechnology."

This is also what EuropaBio, Europe's largest biotechnology trade federation, was advised by PR firm Burson Marsteller. The task of persuading consumers to accept the new technology should, they advised, be left to "those charged with public trust – the politicians and regulators". The American

Educating India



Mr. Myth

Mr. Reality

In a new booklet prepared by Monsanto's public relations consultants in India, with the aim of "Clarifying Myths About Biotechnology...", the corporation portrays itself as 'Mr. Reality' and its critics (as well as its customer target) as 'Mr. Myth'.

'Mr. Reality', a clean-cut and friendly looking man has taken it upon himself to correct 'Mr. Myth's' unjustified fears about biotechnology.



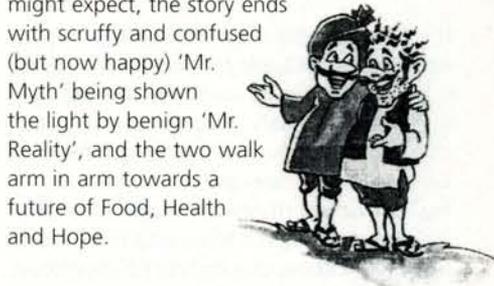
After twenty pages of shockingly simplistic 'myth-busting', in which 'Mr. Myth' and 'Mr. Reality' exchange dialogue on issues such as

food shortages and environmental protection, the former is left dazed and confused.

"They're not so bad after all, and their arguments make sense," he seems to be saying to himself.

Naturally enough, Monsanto's arguments remain faithfully inaccurate, and as one

might expect, the story ends with scruffy and confused (but now happy) 'Mr. Myth' being shown the light by benign 'Mr. Reality', and the two walk arm in arm towards a future of Food, Health and Hope.



Editorials



ANDREW TESTA

government has after all already leapt out of the democracy closet and has revealed itself unashamedly to be little more than an embassy for Monsanto and other large corporations.

Monsanto now realizes, and will surely capitalize on, consumer despair. For, as long as people believe that the issue is dead, that giant corporations like Monsanto will have their way come what may, then there can seem little point in fighting. A gradual atmosphere of semi-tolerance or of "maturity" as Greenberg puts it, is already developing among a demoralized public which no longer sees any real gain in guaranteeing political opponents of genetic engineering political advantage over biotechnology advocates.

• • •

It is alarming that even with majority opposition to biotechnology, consumers appear to be at the point of caving in to what they see as 'evolutionary' forces. What does this mean for democracy, when people feel that no matter how unpopular, the interests of big business will always come first? But equally alarming for Monsanto is a realization that, without that feeling of impotence, there can be little, if any, light at the end of their genetically modified tunnel.

We witnessed in Germany last year what has been described as "one of the biggest shows of defiance to a European state by its own people." 15,000 locals, anti-nuclear protesters and environmentalists, united in rejection of the risks they were being asked



ANDREW TESTA

German anti-nuclear protest at Gorleben

What does this mean for democracy, when people feel that no matter how unpopular, the interests of big business will always come first?

by their leaders to shoulder, set about bringing an end to the transportation of nuclear waste to the much feared Gorleben nuclear waste reprocessing plant. They were met with 30,000 police officers the largest mobilization of such forces in post-war Germany. The operation cost the German government £35 million, and it seems highly unlikely that the government will attempt to repeat the process.

Likewise, there can be no guarantee that

consumers around the world will not rise up – as they did in Germany – in resistance to what is an unacceptable trend. Alan Simpson MP has already warned that genetic engineering may be too important an issue to be left to politicians. By all accounts of the behaviour of our politicians today, and their relationships with companies like Monsanto, he is right. If our governments fail us on this issue, as they have on so many others, then perhaps they too should anticipate such a reminder that democracy, the environment and our health belong to us, and that these things are not tradable. □

Note: The author of the two leaked reports, Stan Greenberg, Chairman and Chief Executive of Greenberg Research, has served as polling adviser to President Clinton, Prime Minister Tony Blair and Chancellor Gerhard Schroeder.

India Cheers While Monsanto Burns

by Paul Kingsnorth

"We send today a very clear message to all those who have invested in Monsanto in India and abroad: take your money out now, before we reduce it to ashes."

— **Karnataka State Farmers Association, India**

One of the most morally dubious claims made in Monsanto's recent newspaper advertising blitz was the assertion that the widespread use of food biotechnology is the only way to feed the world's poor. The corporation's argument went like this: millions of people currently go hungry in developing countries. In the future, as global population increases, this problem is set to worsen. Only high-yield agriculture can possibly produce enough food to meet this increased demand. Therefore, quite obviously, only "biotechnology can feed the world."

Monsanto's strategy was to try to portray its genetically modified (GM) crops as the solution to the hunger and poverty problems of the Third World. The company even tried to round up a group of 'respected voices' from developing countries to endorse an advert entitled 'Let The Harvest Begin', which praised biotechnology as "the seed of the future", which will "feed the world in the next century." Monsanto was playing a clever game: it was trying to portray opponents of food biotechnology as selfish and insular. What right, asked the corporation, do well-fed Western environmentalists have to deny the poor farmers of the Third World access to this wonderful new technology, which could feed their families and improve their living standards dramatically in years to come?

But this tactic is beginning to backfire spectacularly. In trying to use developing countries as pawns in its game, as it plays for dominance of the world's food markets, it is alienating the very people it claimed to be supporting: the poor. In India, where millions of peasant farmers still live a life of small-scale, subsistence agriculture, the corporation is facing nothing less than a crisis. Its trademark evasion, deception and subterfuge has enraged farmers all over the country. And if it won't go voluntarily, they are prepared to chase it out, by any means necessary.

At 1.30 in the afternoon on 28th November 1998, in Sindhanoor, in the Indian state of Karnataka, the leader of the Kar-



Malla Reddy and other members of Andhra Pradesh Ryta Sangha standing in the uprooted field. Malla Reddy is the main defendant in the case that Monsanto has filed against Indian farmers.

nataka State Farmers Association (KRRS), a movement which claims a membership of ten million, arrived at one of India's first Monsanto test sites. The owner of the field, Basanna Hunsale, came out to greet him. With the help of Basanna's neighbours, a number of KRRS members, other local grassroots organizations representing 'untouchables' and landless farmers, they proceeded to tear up every one of the genetically modified cotton plants growing there. They stacked them in a heap in the middle of the field, and set them on fire. In minutes, Monsanto's test crop was reduced to ashes.

This was the first strike in a grassroots campaign that is spreading rapidly across India: 'Operation Cremate Monsanto'. Professor Nanjundaswamy, a committed Gandhian and leader of the KRRS, issued a statement to the press as the field burned. "We denounce the ignorance, incompetence and irresponsibility of the Union government to gamble with the future of Indian agriculture," said the Professor. He went on to demand that all tests of genetically modified crops in India be stopped, that the country's Patent Act be amended to stop the patenting of basic crop varieties, and that Monsanto be banned from the country. Otherwise, he said, Indian farmers would continue to take the situation into their own hands.

Since that first action, at least three more Monsanto test sites have been burned, in Karnataka and Andhra Pradesh, and

more cremations are promised. The tactic has spread from the KRRS to other grassroots organizations. In December 1998, following actions by local farmers and concern about illegal growing of GM crops, the government of Andhra Pradesh ordered Monsanto to stop the seven trials it was operating in the state. The first shots have been fired by Indian farmers in what is increasingly looking like a war against the giant corporation.

Monsanto has been operating in India since 1949, and is a market leader in agricultural chemicals. In recent years it has spent much time and money trying to win over Indian politicians and officials to the cause of GM crops, on which it has staked its future. It operates three Indian subsidiaries: Monsanto India, Monsanto Enterprises and Monsanto Chemicals, and early in 1998, Monsanto quietly acquired a 26 per cent stake in the Indian seed company Mahyco.

Mahyco-Monsanto is the organization through which Monsanto is attempting to push its GM crops onto the Indian people. The company is already claiming patent rights over thirty 'new' crop varieties — including corn, rice, tomatoes and potatoes — which it has genetically altered to be resistant to its own herbicides. But Mahyco-Monsanto's biggest effort in India at present is going into the testing of GM cotton. Cotton is grown widely in India, and Monsanto hopes that its GM variety — known as 'bollgard' cotton — can corner



Bollu Sami Reddy, confirming to the local Parliament Representative Raja Reddy who is also a member of Andhra Pradesh Ryta Sangha, from his records, that the Bt. cotton was brought to him on the 26th June for planting. The clearance for these trials was given only on the 27th July by the Department of Biotechnology which in any case is the inappropriate authority for biosafety clearance of field trials.



A woman farmer of Andhra Pradesh from the village Ulli in front of her failed cotton crop. Companies such as E.I.D. Parry, which is now owned by Monsanto, have sold spurious seed to the farmers leading to cotton failure in more than 36,000 acres. This is aggravating the cycle of debt which pushed more than 500 farmers in the district of Warangal to commit suicide last year. The suicides in the cotton areas are the propelling force behind the farmers' suspicions of corporate takeover of seed.

this market. The cotton is modified to be resistant to the boll weevil, a major cotton pest.

Of course, Monsanto wouldn't be Monsanto without a bit of subterfuge, and this is where the tale gets murkier. Monsanto apparently doesn't trust Indian farmers to swallow its propaganda as easily as it would like. So, in order to avoid having to persuade farmers of the case for GM crops, it has tried a different tack: growing GM crops on the farmer's land without telling him.

This is what happened to Basanna Hunsale, on whose land the first cremation took

Of course, Monsanto wouldn't be Monsanto without a bit of subterfuge, and this is where the tale gets murkier.

place. According to the farmer, he was approached in July 1998 by officials from Mahyco-Monsanto, who offered him the chance to grow – free of charge – a new variety of cotton, which they claimed would give him wonderful results. They omitted to tell him that the cotton was genetically modified, or that it had not been approved for testing by the government. In effect, Monsanto tricked Basanna Hunsale into unknowingly growing illegal crops on his land. Moreover, Basanna was unimpressed with what he saw. Despite Monsanto's claims, he said that the GM 'bollgard' cotton grew "miserably", and reached less than half the height of the traditional strains he was growing in nearby fields. Worst of all, they were heavily infested with boll weevils.

These illegal tests on Basanna Hunsale's land were carried out with no safeguards in place. There was no 'buffer zone' around the field, and none of the farmer's neighbours was notified of the potentially hazardous crops that were growing near their fields. Basanna only discovered the truth about what was growing on his land when Karnataka's Minister of Agriculture publicly announced, in November, the locations of Monsanto's test sites in the state.

Monsanto had obviously calculated that Indian farmers were easily fooled and too ignorant to bother informing about what was really happening on their own land. It is this corporate arrogance that has enraged farmers' groups all over India, and seen support for 'Operation Cremate Monsanto' spread rapidly since its inception. After the truth about Basanna Hunsale's field was discovered, Monsanto belatedly signed a statement in which they admitted their deception, and promised to behave themselves in the future. But when, a few weeks later, the government of Andhra Pradesh announced it was stopping all Monsanto trials in the state, it cited similar deceptions as the reasons for its decision.

So, what future for Monsanto in India? None at all, if another group of campaigners – the 'Monsanto Quit India' – campaign has its way. 'Monsanto Quit India' is a coalition of NFOs opposed to GM crops, and to Monsanto's attempts to monopolize Indian agriculture. It was launched on 9th August 1998 – the anniversary of the day when Gandhi famously told the British to 'Quit India'. Now, say the coalition, the same message is being sent to Monsanto's headquarters in Illinois. The Monsanto Quit India campaign has already distributed thousands of 'Quit India' postcards to

NGOs, community groups and farmers across the country. So far, just four months after the campaign began, over 10,000 people have signed these postcards and sent them to Monsanto's headquarters.

Resistance to Monsanto, and to their vision of a future where farmers everywhere will be dependent on global corpora-

What future for Monsanto in India? None at all, if another group of campaigners – the 'Monsanto Quit India' – campaign has its way.

tions for their livelihood, and where consumers have no choice about the food they eat, is growing fast in India. The recent decision by the Indian government to allow the mass import of American soya beans is beginning to alert the Indian public to the potential hazards of GM foods. Campaigners say that, due to the lack of labelling, there is no way of telling whether or not the beans from America are genetically modified.

The Monsanto Quit India campaign already claims tens of thousands of supporters, as do the various organisations and local efforts concentrating on burning Monsanto's crops until the corporation begins to listen to those who have worked the land for generations. Perhaps in future, before Monsanto claims that its supercrops are the only way to save the people in developing countries from a future of penury and hunger, they might care to ask those people themselves. In India, at least, they will find themselves increasingly unwelcome. □

A Very Happy Birthday for NAFTA.

by Paul Kingsnorth

Everybody's favourite regional 'free' trade treaty is celebrating its fifth year. And this could be the best birthday it has ever had. For NAFTA – and the giant, unaccountable multinationals which it serves – could be about to receive a wonderful birthday gift: the right to override the legal verdicts of American juries in the interests of corporate profit.

Readers of *The Ecologist* will probably be less than surprised to hear another tale of corporate predators seeking to use international trading agreements to overturn national laws which get in the way of their business activities. Today, any nation foolhardy enough to defend its own laws designed to protect the environment, safeguard jobs, or favour the small and local over the enormous and global, will soon find an army of corporate lawyers baying for its blood, waving the General Agreement on Tariffs and Trade (GATT), the statutes of the World Trade Organization (WTO) or, perhaps at some time in the near future, the Multilateral Agreement on Investment (MAI). At the same time, anybody naïve enough to question the rapid development of a New World Order in which the interests of vast, unaccountable private companies take precedence over those of elected governments will be told, patiently, that this model of 'development' is the only way to ensure the world's future prosperity.

The latest demonstration of corporate despotism disguised as 'free' trade comes from the USA, and is perhaps the most worrying example yet. In this case, a foreign company is not only claiming millions of dollars worth of damages from the US government for 'restriction' of its trade, but is seeking to overturn the verdict of a jury of twelve ordinary Americans, which decided that the company had acted illegally in the first place.

The Loewen Group is a Canadian funeral company, which owns more than 700 funeral homes and 109 cemeteries across the USA. In 1995, it was involved in a legal dispute with a small businessman named Jeremiah O'Keefe. O'Keefe, the owner of a small family funeral parlour in Mississippi, took Loewen to court, complaining that they were using their size and power to drive small, local businesses like his to the wall. He alleged that Loewen had committed various illegal, anti-competitive and

predatory acts against his business.

A Mississippi jury agreed with O'Keefe, and awarded him damages totaling \$500 million. Glenn Millen, the foreman of the jury, said of the Loewen case, "ordinary people saw through this company and, quite frankly, I don't see how they have a leg to stand on."

And there it should have ended: a predatory multinational penalized by a citizen jury for attempting to drive a smaller rival out of business. Large companies like Loewen have come to dominate the American funeral industry in recent years. In this context, Jeremiah O'Keefe's legal victory set a significant precedent for other small firms to follow.

But Loewen would not give up. Defeated by US State law, it turned to NAFTA for salvation. The North American Free Trade Agreement, under which Canada, the US and Mexico agreed to remove all barriers to mutual trade, was passed in the US Congress in 1993 by just four votes. As with other such supranational agreements, its ultimate effect is to give the interests of corporations precedence over those of democratic governments, and the people they represent. Buried deep in the hundreds of pages of dry prose that make up the agreement is Chapter 11, which clearly lays out the principle that foreign investors must be treated in the same way as domestic ones. Loewen, with clever lawyers has managed to use this chapter of the treaty to bring a legal case against the US government, claiming substantial cash damages for violating NAFTA.

This is the first time that the Chapter 11 provisions of NAFTA – which allow a corporation to directly sue a government for cash damages, to compensate for investment denied – have been used in the US, and it sets a hugely important precedent. If Loewen wins the case, and succeeds in overturning a jury verdict and squeezing millions of taxpayers' dollars out of the US government, it could conceivably spell doom for small businesses all over America. It will certainly mean that any other multinationals which are currently having trouble picking off their smaller rivals will start forming an orderly queue outside their lawyers' offices.

Loewen claims that Mississippi's civil justice system violated international norms of 'fairness', by discriminating against the corporation because it was Canadian. They also claim that, in awarding damages to



"NAFTA is not so much about trade as about creating powerful new rights for corporations and investors."

– Lori Wallach, Director of Public Citizen's Global Trade Watch.

Jeremiah O'Keefe, the court attempted to 'expropriate' Loewen's assets without compensating the company. Both of these accusations, were they true, would be violations of NAFTA. Overall, says Loewen, the court case which they lost was a 'denial of justice'. Those involved in the original case, though, point out that Loewen's claims are disingenuous, to say the least. Glenn Millen, the foreman of the original jury, calls Loewen's NAFTA action "indefensible". The jury's verdict he says, was reached simply because Loewen was clearly in the wrong. "The thing I really just don't get," he says, "is what NAFTA and trade has to do with Loewen. They acted like crooks and were found liable. End of story."

But Lori Wallach, the Director of the US NGO Public Citizen's 'Global Trade Watch', thinks she does get it. As she has been pointing out since NAFTA's inception (and as she highlighted in her *Ecologist* article in May/June 1998) NAFTA is "not so much about trade as about creating powerful new rights for corporations and investors at the expense of the public interest and democratic governance." The Loewen case, she says, is merely the next, logical step for NAFTA to take as it seeks to meet these objectives.

"This case is not before any US court," she points out, "but will be heard by a NAFTA tribunal, without any of the due

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process, conflict of interest or openness guarantees of the US system. It is hard to imagine that the narrow margin of US Congress people who passed NAFTA in 1993 would have done so had they understood the powers it conferred upon investors and how these powers would be used by corporations to attack basic public interest laws ... and to tear down the everyday workings of the courts."

So, will Loewen win? The answer may very well be 'yes'. The Chapter 11 provisions of NAFTA have been used twice before. In August 1998, the Canadian government was forced to revoke a national ban on the toxic gasoline additive MMT after its producer, the US Ethyl Corporation, sued them under NAFTA for \$250 million. Another suit using these same provisions has been taken out against the Mexican government by the US Metalclad Corporation, demanding compensation because Mexican law halted its plans for a toxic waste plant on an environmentally sensitive site.

The Loewen case is yet one more, depressing, example of the largely secret tranche of international laws which have already been established to give corporations precedence over governments in the 21st century. NAFTA in North America is the regional equivalent of the World Trade Organization, which operates very similar

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— Lori Wallach

rules globally, and which has already led to a significant grinding-down of national laws designed to protect workers, the community and the environment (see 'The WTO's Record So Far', *The Ecologist*, July/August 1997). And last year, the world's multinationals almost succeeded in launching the Multilateral Agreement on Investment (MAI) on to an unsuspecting world, which would have extended global corporate dominance even further.

Fortunately, after strong opposition from NGOs around the world, and growing discontent from national and regional politicians (many of whom, due to the deliberate secrecy of the negotiations, only found out about the MAI from NGOs), the

MAI has been shelved — certainly for the near future, and, with any luck, permanently. The rapid growth of global opposition to the very idea of such a treaty is at least a heartening sign that opponents of globalization can make themselves heard if they shout loud enough.

But nobody should be fooled by this minor setback. The would-be rulers of the economic roost do not give up that easily. The global corporate vultures will soon be back, with the MAI, the WTO, NAFTA or something even worse under their wings, to pick over the bones of democracy, local economies and environmental regulation. Riding roughshod over the interests of ordinary people, small and medium-sized businesses and — now, with the Loewen case — even democratically established legal systems, is the only way that the multinationals can establish the unassailable global dominance that so many of them seek.

There is nothing 'free' about their version of global capitalism, and there is nothing 'fair' about their terms of trade. Winner, as they well know, really does take all. There can never be a fair deal for the environment, for people or for small-scale, sustainable economics while treaties like NAFTA, and unelected organizations like the WTO are allowed to hold sway over the 'New World Order'. □

Our Urban Future?

by David W. Orr

It ain't what we don't know that gives us trouble, it's what we know that ain't right.

— Will Rogers

At the top of my list of the things that we know that "ain't right" I would place the belief that we are now an urban species and that by and large this is a good thing or at least one that cannot be changed. For 99 per cent of our evolutionary career, however, *homo sapiens* lived in small bands and tribes in places that would now be considered wilderness. For most of the remaining 1 per cent we were either rural or lived in small hamlets and towns surrounded by countryside. From an evolutionary perspective, the vast megapolitan areas of the 20th century are a sudden aberration.

Believers in the urban ideology presume that our rural origins are unimportant and often go on to assume that: (a) a prosperous and democratic culture does not require a stable and prosperous rural foundation; (b) we are smart enough to provision megapolitan areas with food, water, energy, materials, public safety, transport, employ-

ment, and entertainment, and to dispose of their wastes, and do all of these things in perpetuity; (c) cities in contrast to everything else on Earth, have no maximum size beyond which they decay or collapse; (d) urban and suburban life can satisfy our deepest human needs; and (e) we will never change our minds. Urban boosterism masks a wager of sorts that our evolution-

From an evolutionary perspective, the vast megapolitan areas of the 20th century are a sudden aberration.

ary past is of no consequence, our bets do not need to be hedged, and that "nature does not set booby traps for unwary species," as biologist Robert Sinsheimer once put it.

I offer a demurral and explore some of its implications for conserving biological diversity and for education. First, however, I must bow to the numbers that show unequivocally that humans continue to herd themselves into metropolitan regions. The United States, for example, is over-

whelmingly urban and suburban and becoming even more so. In 1950 almost half of Americans still lived in rural areas. By 1990, however, the number was less than one in four (22.9 per cent), and only 1.9 per cent of Americans lived on farms.¹ Within a few years 50 per cent of the Earth's people will be urban and that number, we are told, will continue to rise until the vast majority will be city folk. What is it about these numbers that "ain't right"? What long-term forces could possibly stop or even reverse the trend toward urbanisation?

You can make your own list, but mine includes such things as the end of the era in which we can burn cheap fossil fuels and ignore ecological costs — it is cheap fossil energy that allows us to provision large urban populations; the vulnerability of concentrated populations to new diseases like AIDS and ebola and the return of old ones such as tuberculosis in more virulent form;² the decline of ecological resilience worldwide because of species loss, desertification, deforestation, soil erosion, climatic change, and other factors such as increased ultraviolet radiation that will reduce the surpluses that provision cities: the unmanage-



GUY MANSFIELD/PANOS PICTURES

ability of all cities beyond a certain size; and not the least, the preferences of a persistent majority of people who say they would rather live in small towns or rural areas were it economically feasible to do so.

In the face of epic changes looming in

The question, I think, is not whether the urban tide will ebb, but when, how, how rapidly, and whether those returning to rural areas in the century ahead do so willingly or as ecological refugees driven by necessity, perhaps desperation.

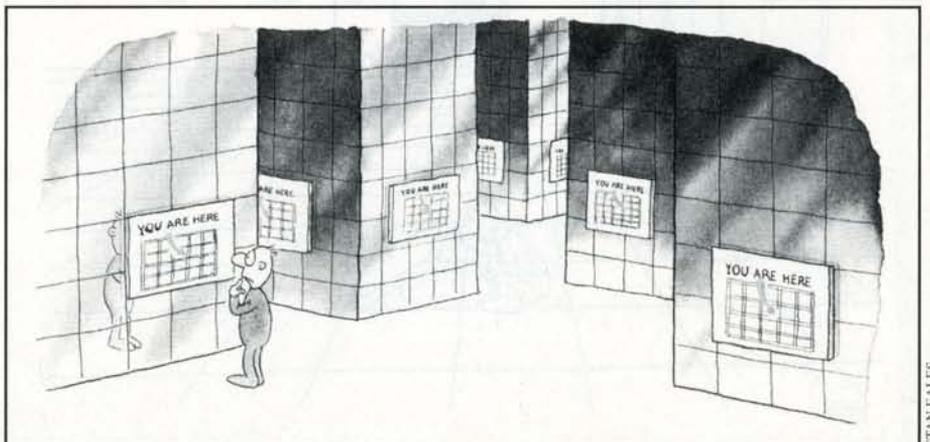
the century ahead it is difficult to avoid the conclusion that "Long before 2030 the trend toward ever larger cities and an increasing ration of urban-to-rural dwellers is likely to have reversed".³ The question I think is not whether the urban tide will ebb, but when, how, how rapidly, and whether by foresight or happenstance. In other words, the choice is whether those return-

ing to rural areas in the century ahead do so, in the main, willingly and expectantly with the appropriate knowledge, attitudes, and skills or arrive as ecological refugees driven by necessity, perhaps desperation.

What does the possibility of an urban diaspora have to do with the conservation of biological diversity? Simply this: if large numbers of people reinhabit rural area ignorantly and carelessly, the effects on biological diversity and ecosystems will be devastating. If so, present rates of species extinction will pale by comparison, bring-

A mind that knows how to do many things well has a complexity, agility and resilience unknown to the specialist (what Nietzsche called an "inverted cripple", i.e., one with a single overdeveloped faculty instead of an impaired one).

ing to ruin the efforts to halt the rapid decline of biological diversity. The contemporary experience of ecological refugees in parts of the Third World or of suburban sprawl and uncontrolled rural development elsewhere point to the same conclusion. Yet no country has a policy worthy of the name



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to plan future reruralization, and none to my knowledge believes this to be either important or desirable.

What does the prospect of reruralization have to do with education? Whether it occurs in a way that conserves biological diversity or not will be determined, in large part, by what people returning to rural areas know, what they expect, and what they can do. Who will teach these things? Rural cultures virtually everywhere are in disarray and decline. Moreover, there are few schools or colleges that aim to equip students with the skills and aptitudes necessary to develop sustainable and sustaining rural cultures. As a result, today's high

Today's high school or college graduate is poorly prepared for anything but a fossil fuel-powered, urban existence.

school or college graduate is poorly prepared for anything but a fossil fuel-powered, urban existence. For all of the fashionable talk about cultural diversity, schools, colleges and universities have been agents of fossil energy-powered urban homogenization. There is one curriculum, which, as Wes Jackson notes, prepares the young for "upward mobility" in an urban world.⁴ We educate the young, from country and city alike, to be urban with urban appetites, skills, minds, dependencies and expectations. But if the human future will be as much (or more) rural as urban what will the young need to know?

For one, they will need to know how to do more than they are now being taught to do. But a considerable number of skills

useful for rural life in a post-fossil fuel world are being lost. An Amish friend of mine, for instance, describes his father in these words:

Father was one of those rare people who possessed many of the arts and skills needed in thriving rural communities. Besides being a farmer and a husbandman, he was a thresherman (a title that also included silo filling, corn husking with the machine, fodder shredding and clover hulling), a sawyer, orchardist, his own mechanic, a carpenter (he could design and build anything from kitchen cabinets to mortise and tenon frame buildings), for a short time his own blacksmith, plumber, and for a while he even whitewashed our milking stable using the orchard sprayer.⁵

Outside the Amish community, however, these are no longer common skills. But the more serious loss is the decline of the qualities of mind that permit skill to flourish. A mind that knows how to do many things well has a complexity, agility, and resilience unknown to the specialist (what Nietzsche called an "inverted cripple", i.e., one with a single overdeveloped faculty instead of an impaired one). This is a mind capable of shifting from one material to another, from one set of tools to another, and from mechanics to biology to animal husbandry all in the same day. It is a mind with the wherewithal to design, build, repair, grow, heal, form, tinker, orchestrate, improvise, neighbour (a verb), and tell good stories: a mind with range and stretch to it.

Furthermore, the young will need more practical knowledge of nature in the raw than they now have. They will need to be

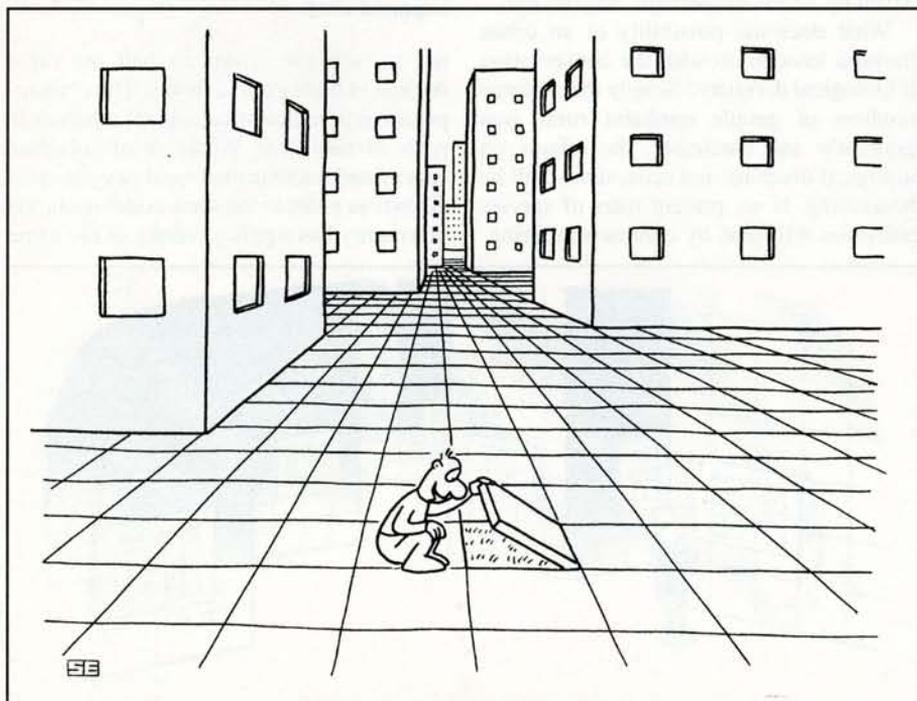
serious students of nature and of their places. If we intend to preserve biological diversity, we will have to build a sizeable constituency whose livelihood depends on it, not just an informed electorate who vaguely understand biodiversity to be important but could not say why if their own lives depended on it. This kind of detailed knowledge about how nature works comes only from patient and alert observation of a particular place. Writing about the location of fruit trees in the landscape, for example, farmer and writer Gene Logsdon, says:

"Grow sun-loving fruit trees as forest-edge trees. In nature that's where the fruit bearing trees are. They grow on forest edges and will not survive the shade of the deeper woods. Another advantage of forest edges is that the forest ameliorates the temperature on frosty nights a little ... Fruit trees, by the same token are excellent trees to grow in fencerows where, in addition to plenty of light, the grazing animals are handy for eating up the drops and surplus fruit ...but the main reason for scattering fruit trees out along forest edges and fencerows is that these trees are, in my experience, harmed less by insect predation than the ones clustered in the more formal orchard."⁶

This is useful knowledge. It is the kind of knowledge that enhances biological diversity and promotes "integrity, stability, and beauty" in working landscapes, with a bit of cash on the side. It is the kind of knowledge that comes from affection for a particular place, the necessity to earn a living from it, and the understanding that biological diversity enhances the living in the fullest sense of the word. It was not generated as a research project, but as an act of pleasure and stewardship. It is the kind of knowledge, moreover, that is needed in order to imagine and create ecologically complex landscapes that include well-managed farms and forests, wilderness, wildlife, a diverse biota, renewable energy technologies, fewer roads, and rural economies artfully woven into ecosystems.⁷ In fact, there is no other realistic model of "sustainable development" as world population rises from 5.5 billion to 12 billion in the 21st century.

• • •

The skills and aptitudes necessary to build sustainable rural economies are not so different from those that will be required to rebuild cities along more sustainable lines.⁸ That project, too, will require greater know-how, a more thorough knowledge of nature, ecological imagination and social inventiveness. Urban landscapes will have to become more biologically diverse with



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more city farms, gardens, greenways, marshes, parks, forests, and wildlife. Whether rural or urban the critical question is where will the young learn these things?

One interesting answer to that question is offered in the work of Rutgers University professor Michael Hamm who has organized an urban gardening programme for children, adolescents and older citizens of New Brunswick, New Jersey. Hamm's project is intended to convey knowledge about gardening, composting, agriculture, nutrition, ecology and direct marketing while helping an inner-city community take control of a significant part of its food supply. In its first year of operation (1993) the community harvested over 5,000 lbs. of fresh vegetables, fruits and herbs, of which 1,000 lbs. was donated to area soup kitchens and senior centres. Hamm has plans to extend the programme to other New Jersey cities including Perth Amboy and Newark. This is an effort worthy of emulation elsewhere under the sponsorship of colleges and universities. Its inclusion of children and adults in the same educational process is particularly promising in a reru-

ralizing urban society in which ignorance will not be based on age.

A second answer is taking shape near Mansfield, Ohio, at Malabar Farm, begun by Louis Bromfield in 1939. Bromfield, a writer of considerable distinction, founded Malabar as an agricultural demonstration and experimentation centre. After his death in 1956, Malabar eventually became an Ohio State Park. Efforts are now underway to pick up where Bromfield left off. Making Malabar a "comprehensive learning centre for the future" focussed on agriculture and conservation. Every state, province, and region will need similar kinds of institution to maintain and advance the know-how and know-why needed for a more rural world.

For a world destined to be as much rural as urban, agriculture will become more, not less, important for a large number of people. British sociologist, Raymond Williams once put it this way:

"If we are to survive at all, we shall have to develop and extend our working agricultures. The common idea of a lost rural

world is then not only an abstraction ... it is in direct contradiction to any effective shape of our future, in which work on the land will have to become more rather than less important and essential."□

Adapted with permission from Conservation Biology, Volume 8, No.3, Pages 622-624.

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And Some Good News...

by Zac Goldsmith

The *Ecologist* is pleased to announce that we and all the many magazines across the world seeking to make sense of our failing human experiment can hereby cease to exist. We have been made redundant. There is no further cause for concern. Global climate change ... near-exponential cancer epidemics ... resurgence of deadly infectious diseases and the birth of even deadlier new strains ... mass extinction of the world's remaining species ... general social breakdown ... global domination by aberrant corporations and the homogenization of the world's rich mosaic of cultures - the world's problems will be solved, and all thanks to British Telecom's generous contribution of anything up to £40 million to the expansion of 'communication technology'.

The Concept?

BT's 'Soul Catcher', a microchip capable, according to their esteemed scientists, of recording a person's every lifetime thought and sensation, is being aggressively developed, and could be available in just thirty years. The aim is to bring about what Dr. Chris Winter of British Telecom's artificial life team describes as "the end of death". We will, according to this scientist, be able to relive other people's lives simply by playing back their experiences on a computer. "By combining this information with

a record of the person's genes, we could recreate a person physically, emotionally and spiritually." In effect, we are told, an entire lifetime's experiences could be injected into the mind of a new born baby ... presumably giving that baby an eighty-year advantage over its peers in the ever more competitive world we inhabit.

The Science?

The proposal to digitize existence, so the argument goes, is based on "solid calculation of how much data the brain copes with over a lifetime." Ian Pearson, BT's 'official futurologist', has measured the flow of impulses from the optical nerve and nerves to the skin, tongue, ear and nose. "Over an eighty-year life, we process 10 terabytes of data, equivalent to the storage capacity of 7,142,857,142,860,000 floppy disks".

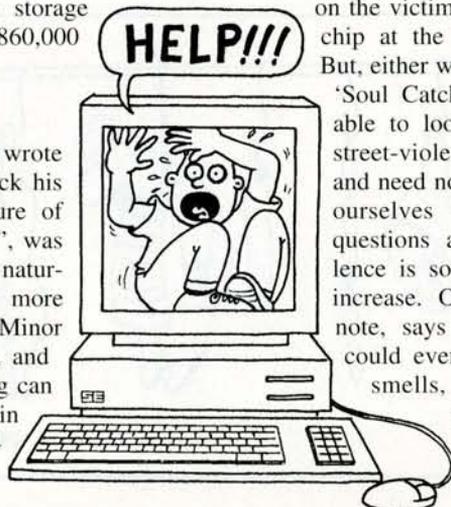
The Philosophy?

Descartes, who famously wrote that he would frequently kick his dog, simply for the pleasure of "hearing the machine creak", was correct in his analysis of the natural world. We are nothing more complex than a machine. Minor tinker here, re-wiring there, and Bob's your uncle... anything can happen. All the senses can in fact be measured and quantified. Feelings of guilt, hap-

piness, loneliness, love, embarrassment ... can all be stored on your office computer, and can be experienced by anyone with the appropriate zip-drive, software and of course ... the computer know-how.

The Purpose?

And, needless to say, our conscientious scientists have come up with an extremely valuable use for this outrageously costly little gadget (yours for a little under £40 million). It can be used, according to BT (who are, they assure us, taking 'Soul Catcher 2025' very seriously), in routine police work. "For example, police would be able to use it to relive an attack, rape or murder from the victim's viewpoint to help catch a criminal." That of course depends on the victim wearing such a chip at the time of attack. But, either way, thanks to the 'Soul Catcher' we will be able to look forward to a street-violence-free future, and need no longer concern ourselves with troubling questions as to why violence is so heavily on the increase. Or, on a lighter note, says Dr. Winter, "I could even play back the smells, sounds and sights of my holiday to my friends."□



Entertainment Foods

A revolution has taken place in our eating habits, and its implications for agriculture, health and the environment are enormous. The interests of agribusiness and fast-food corporations are now merging with those of the media and entertainment industries, and the result is an unprecedented corporate takeover of our food supply which is transforming not only how we eat, but also how we think. Food has lost its significance, has been wholly de-ritualized, and has become little more than pre-packaged family entertainment. **By Claire Hope Cummings.**

Fast-food is such a pervasive part of American life, it has become synonymous with American culture. fast-food was born in America and it has now bloated into a \$106 billion industry.¹ Our worldwide export of fast-food, and its attendant corporate culture, has probably been more influential and done more to destroy local food economies and cultural diversity than any government propaganda programme could hope to accomplish. No corner of the Earth is safe from its presence and no aspect of life is unaffected. fast-food is now found in shopping malls, airports, hospitals, gas stations, stadiums, on trains, and increasingly, in schools. McDonald's alone has 23,000 restaurants, and opens

another 2,000 every year.² Its effect has been the same on the millions of people it feeds daily and on the people it employs. Fast-food culture has changed how we work, from its assembly-line kitchens filled with robotic frying machines to the canned phrases spoken to customers by its poorly paid part-time workforce.³

The effect on personal health is no less alarming. The industrial diet is based on refined foods, stripped of nutrients ... sugar, white flour and rancid and altered vegetable oils. These foods do not satisfy the body's basic needs and the appetat responds by demanding more food. Americans are eating much larger portions and restaurants have even increased the size of their serving plates. In 1980, our annual per capita food consumption was 84 pounds, it is now up to 101.6 pounds.⁹ Not surprisingly, 54 per cent of Americans are heavier than is considered healthy. In 1980 only 8 per cent of Americans were obese, today it is 20 per cent. At the same time, we are spending \$40 billion every year on diets and weight loss treatments.¹⁰ Studies in the UK show that the British diet is also one of the worst in the developed world and lacks fresh fruit and vegetable intake. It is also too high in sugar and other refined foods.

Astonishingly, the connection between increased dependence on 'cheap' fast-food and the soaring costs of health care are rarely made. And while, according to the American Cancer Society 1 in 2.5 people will get cancer in their lifetime, the larger health risks of our industrialized food supply have gone unreported and the corporate interests are all but invisible to the consumer.¹¹ An International Food Information Council study concluded that media coverage of food information was declining (there was a drop of 17 per cent in 1997) and that the voice of governments giving health and nutrition advice was weakening and was being replaced by that of the paid spokesperson.

Cheap Food

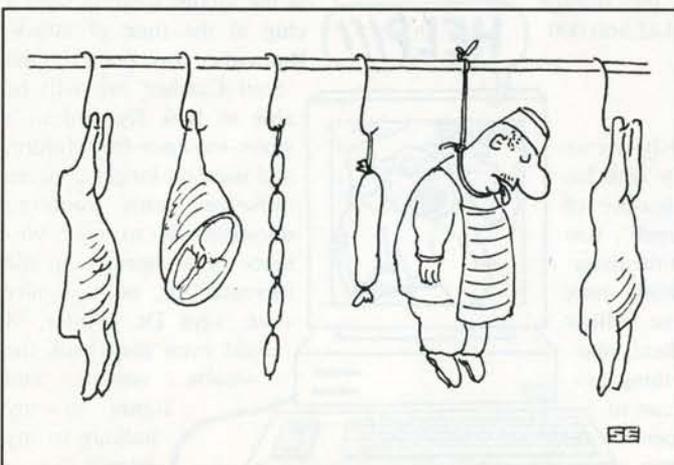
Cheap food has long been defended as the basis of a strong economy. In a market economy, the price of food acts as the primary rationing device controlling the equilibrium between demand and supply. All well and good, except that our industrialized food system is not a market economy. Corporate consolidation of the financial resources, land ownership for the growing, processing and distribution of food (McDonald's is the largest owner of retail property in the world),¹² and the shrinking number of companies who sell seeds and agricultural inputs, now keep the industrial

Americans spend more money on fast food than they do on higher education.

In the United States, more that 57 per cent of the population eat meals away from home on any given day, according to a 1995 study.⁴ Americans spend more money on fast-food than they do on higher education, personal computers, or even on new cars.⁵

The massive growth of fast-food enterprises has had a devastating impact on the farm economy. The buying practices of fast-food corporations gives them enormous control over producers. McDonald's is the largest purchaser of beef and potatoes: it is the second largest purchaser of poultry in the United States.⁶ A new

breed of chicken was even developed to facilitate the production of "McNuggets".⁷ The power that these corporations exert, with their constant demand for uniform commodities, puts them in an unprecedented bargaining position and gives them the ability to keep prices artificially low. This purchasing power also maintains industrial farming practices necessary for the production of the commodities demanded by fast-food giants. As a result the small producer and family farmer, whose costs are higher, are squeezed out of the market.⁸





We are building houses, strip malls and fast-food outlets on prime farmland at the rate of 1 million acres per year. That is two acres of productive farmland lost, every minute, to urban sprawl.

farmer in virtual serfdom. 'Cheap' food is in any case not 'cheap'. Were it not for enormous corporate subsidies of every conceivable sort and the practice of externalizing all the associated environmental, health and social costs of industrial food production, so-called 'cheap' foods would be very much more expensive than their smaller-scale counterparts.

Certainly, the artificially low price of food to the consumer does not favour the farmer, who generally receives little more than 21 per cent of the US food dollar.¹³ The rest goes to the corporations.

Since 1980, depending on how the term is defined, America has lost almost one million medium to small-sized family farms.¹⁴ The last two summers have been the hottest ever recorded, and the attendant droughts and crop damage in North America are driving even more farmers out of business. With prices so low, the cheap food system is contributing to the decline of United States' world-renowned \$600-billion agricultural sector. We are building houses, strip malls and fast-food outlets on prime farmland at the rate of 1 million acres per year.¹⁵ That is two acres of productive farmland lost, every minute, to urban sprawl. In September, 1998 the United States Department of Agriculture (USDA) announced an effort to save US farmland, saying it would spend \$17.2 million in 19 states, because, as Agriculture Secretary Dan Glickman said, "Our farms are in danger of becoming subdivisions of shopping malls." However, the USDA is so intricately involved with industrialized farming that their pro-

grammes, on the whole, do not support farmers who raise food sustainably, but are instead geared towards creating export markets for American corporate agribusiness and protecting multinational food and staple commodity corporations' interests in foreign markets. The Clinton administration has for example demanded that the US Congress pass legislation giving the USDA "fast-track" authority, which would mean that it could negotiate trade agreements to open new markets, without amendments by Congress. This "fast-track" legislation is opposed by a coalition of more than 60 farmer and farm-related organizations that say they have been more hurt than helped by previous trade pacts.¹⁶

Sports, entertainment, news, fast food and movies have become barely indistinguishable.

The attitude of most industrialized governments has been one of casual lack of concern. Wedded to the principle of 'comparative advantage' whereby countries are encouraged to specialize in those crops best suited to their environments, the emphasis has been on transforming the rural economies of (particularly Third World) countries to suit the requirements of the global economy. The hidden costs of long-distance transportation of goods, and the accompanying packaging and preservatives are routinely overlooked by economists, and consumers are fooled into believing that mass-produced, so-called 'cheap foods' are cheaper than that produced locally without the use of chemicals.

Food as Entertainment.

Fast-food is taking over popular culture. American television viewers are bombarded with adverts that combine images from both food and entertainment industries. Asteroids from summer movie blockbusters are shown crashing into "Big Macs" to demonstrate that you can double your fun by consuming both fast-food and films at the same time. Sports, entertainment, news, fast-food and movies are barely indistinguishable, and the marriage of food and entertainment is no accident. It is rather the result of a concerted effort by both multinational agribusiness and food corporations and media conglomerates to take over more and more of every day life and spending habits. Disney and McDonald's have signed a ten-year global marketing agreement. McDonald's has joined with the National Basketball Association and the Olympics in their promotions, and the mammoth Tricon Global Restaurants, the world's largest fast-food restaurant operating business with 30,000 restaurants, has a three-year deal with the US National Collegiate Athletic Association.¹⁷ The \$55-billion soft-drink industry is spending millions on brand placement in cash-starved public schools in the US and all these companies 'help' teachers with instructional materials, laden with advertising, fast-food corporations now supply food for 13 per cent of American schools. The result has been, as they describe in their own literature, a direct

avenue into the habits of their "core consumers".¹⁸

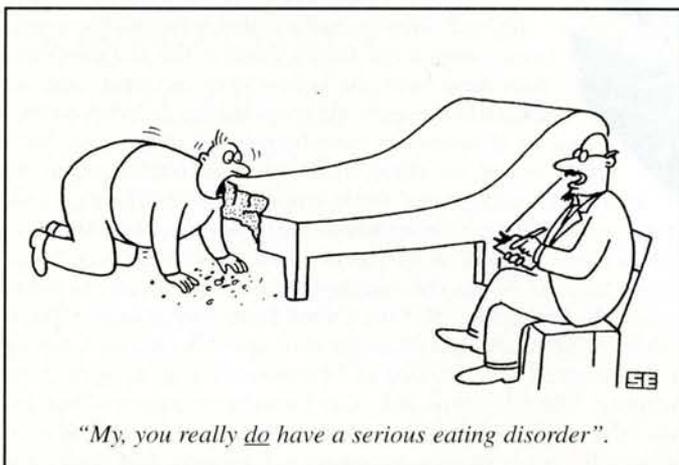
The media are highly implicated in the proliferation of fast-food culture. For those corporations that control television, radio, news, music, movies, sports and all the hardware, technology and programming that comes with it, advertising revenues from food companies are significant. McDonald's alone spent \$548.7 million in advertising last year, 95 per cent of it in television.¹⁹ And those revenues are linked to tie-ins with companies like Times-Warner, with \$13.36 billion in sales, which controls a vast sports, news, music and publishing empire and thus controls much of the ideas and illusions that dominate American life. Disney, which reaps \$22.5 billion in sales from entertainment, massively supports fast-food corporations by promoting their products. Universal Studios is owned by Seagram Co., the liquor giant, which also owns Tropicana Juice and Polygram records. Not surprisingly, we get blatant product placements in our movies and plastic versions of Disney movie characters with our mindless happy meals. The "Teenie Beanie Baby" promotion by US McDonald's demonstrates that sometimes it isn't even about the food any more. People have been buying dozens of dinners just to get the toys, and throwing away the food.²⁰

Americans get their news primarily from commercial television, and the entertainment industry is clear about its priorities. It admits that it is not about delivering information any more. As one executive from KNBC, owned by the \$91-billion giant General Electric, put it, his news department is not performing a public service – rather, he said, they are "in the business of selling eyeballs to advertisers."²¹ Like a chorus, the food and entertainment industries keep echoing each other's message. The head of Starbucks Coffee, which had \$1 billion in sales in 1997, made this very clear when he stated that he was not in the food commodity business, not even in the fast-food business – rather, he said, he was in "the business of providing instant gratification."²²

Not all the influence of the media is so indirect. Public television news in the United States is sponsored by Archer Daniels Midland (ADM), who spent millions of dollars repeating every day, in every possible public and commercial market, that they can be trusted as the "Supermarket to the World". These ads do not sell ADM's corn or soybean products they are intended to inoculate the public against their concerns about the food supply and to convince consumers that technology, bio-engineering and genetics will solve the problem of world hunger. Rupert Murdoch's Fox television, which owns and operates most television stations in the United States, actually shelved a series which documented damaging evidence against the use of hormones in dairy cows and connections between biotechnology giant Monsanto and US government agencies. According to the two award-winning reporters commissioned to prepare the story, its removal came just days after Monsanto pressured Fox News Network to drop the series.

An interesting study prepared by Professor Tim Lang and Dr. Martin Caraher at the Centre for Food Policy at Thames Valley University, London, throws another light on food and entertainment. They found that there is a dramatic rise in the number of cooking shows on television in the UK, a trend that holds true in America. Cooking has become entertainment, even while it appears that people in industrialized countries are cooking less. At the same time, as their study shows, young people are losing cooking skills. 93 per cent of those surveyed could master a computer game, yet only 38 per cent could cook a potato in the oven.²³

A look at consumer spending in the United States reveals our priorities, when it comes to food and entertainment. In 1956, the average American household spent 18.6 per cent of its income on food. By 1997 it had fallen to only 9.6 per cent.²⁴ (By contrast, food can take up 80 per cent or more of personal income in less developed countries.) While relative spending on food has plummeted, real personal income has risen. Just last year, household income in the US was up by 4.8 per cent.²⁵ During the last few decades Amer-



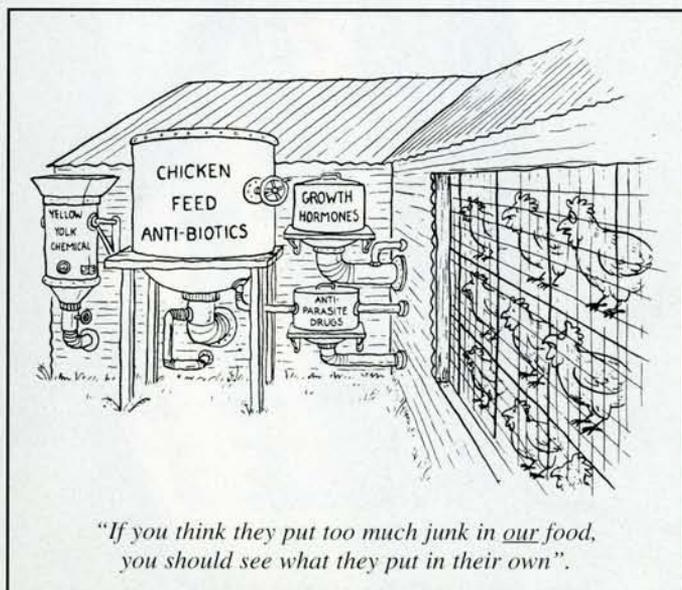
icans dramatically increased spending on entertainment, such as music, movies, indoor and outdoor recreation and sports, and ticket prices for these events continues to rise. While the price of food has dropped, the price of tickets to concerts, movies and sporting events, even museums, has almost doubled. Americans are also spending increasing amounts on gambling and drugs. Gambling, which used to be a highly restricted activity in the United States, is now so increasingly available that it attracts over 100 million players and takes 9 per cent of total personal income.²⁶

In 1996 Americans spent more than \$8 billion on explicit videos, live acts, adult cable programming, magazines and other sex entertainment items, an amount larger than Hollywood's entire domestic box office receipts.

Americans spend another \$150 billion a year on recreational drugs and are spending more than ever on sex-related "entertainment".²⁷ The United States has become the world's largest producer of pornography. In 1996 Americans spent more than \$8 billion on explicit videos, live acts, adult cable programming, magazines and other sex entertainment items, an amount larger than Hollywood's entire domestic box office receipts.²⁸ More consumer money was spent on sex entertainment, according to an article in the February 1997 issue of the . than on country music, Broadway's plays, non-profit theatres, opera, ballet, jazz and classical performances combined.

Spending our personal income on entertainment and fast-food degrades the meaning of food and elevates entertainment as a central value in our lives. What is important about this is that we have not just abandoned the kitchen, as our grandparents may have left their farms and given up growing food a generation or two ago, but we have relinquished something much more precious: the right and ability to feed ourselves. The blending of the food and the entertainment industries is what finally blurs the difference between feeding ourselves and being fed. It creates "the entertained mind", a passive mentality which is so overstuffed with fuzzy information that it no longer senses its own powerlessness. One social activist in the United States, Caroline Casey, quipped that fast-food is really "consensus food". She added that at the time of the American 'Desert Storm' war in the Gulf she ate at a McDonald's, and "for about two hours afterwards, I had no problem with our foreign policy."

We thought we were giving up drudgery by not growing food



and by eating out. We have been sold on expediency. But do we really have more time, a better family life, a more robust health? The loss of control over one's food supply is a loss of a basic freedom. Powerlessness to feed oneself is a fundamental indication of personal poverty. But we are not alarmed. Advertising tells us we have a choice: we are free to select cheap fast-food, to enjoy the easy convenience and variety that it offers. But the illusion might be shattered if we noticed that this seemingly endless array of products is all produced, grown, packaged, shipped, promoted and sold by a small handful of corporations and that the profits from all these parts of the food system end up in the same place. In the end, what corporate control of the industrialized food system really gives us are 31 artificial flavours, and no choice between junk food and the real McCoy.□

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2. McDonald's feeds almost one per cent of the world population each day, serving food and culture in what William Greider called "The advance scout for the global revolution". (*Far Eastern Economic Review*; November 20, 1997) There are now golden arches in 109 countries, with a total of 23,132 restaurants as of the end of 1997. (*Wall Street Journal*, April 3, 1998.) McDonald's has 2,700 domestic franchises (*N.Y. Times*, *op.cit.1.*) And McDonald's has plans to open another 2,000 a year around the globe (*Parade*, *op.cit.1.*)
3. Although the US has about a million farm-workers who earn an average of \$5.58 an hour, there are about 2.5 million fast-food workers who earn an average of \$5.74 an hour, making them the largest group of low-paid workers in America. Eric Schlosser, fast-food Nation, *Rolling Stone*, September 3, 1998, page 70.
4. "Eating Out in America: Impact on Food Choices and Nutrient Profiles" United States Department of Agriculture, Agricultural Research Service, speech by Lori Borrud, Food Surveys Research Group, regarding the 1994-1996 Continuing Survey of Food Intakes. Also, the USDA estimates that Americans routinely throw away and waste one-fourth of the nation's total food supply. (USDA report, July 1997)
5. *Rolling Stone*, *op.cit.3* page 61.
6. *Ibid.*
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8. "Shrinking competition in the food industry has enabled agribusiness to pay farmers below their costs of production for raw food products while increasing the prices consumers pay." Since 1980, farmers share of the food dollar has fallen 40 percent. *Farm Aid News*, June 28, 1995.
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15. American Farmland Trust.
16. Reuters, September 10, 1998.
17. Associated Press reports that Tricon had \$20 billion in sales, closing in on McDonald's with \$30 billion. Sports and food industry deal notes from *Rolling Stone*, *op.cit.*
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Nasty, Brutish and Short?

In order to believe that our society has 'progressed', we must believe first that the lives of our ancestors were indeed nasty, brutish and short. But, as study after study has confirmed, the health of traditional peoples was vastly superior, in almost every way, to that of modern industrial man. **By Sally Fallon**

Modern technology – father of the combine harvester, the automobile, the flush toilet and the fully electric house – does not bestow his blessings without a price. These twentieth century tools that have conferred freedom of movement and comfort, and freedom from drudgery and dirt, leave dark trailings of pollution, congestion and alienation. This much is apparent. The virtues of technology have exercised the minds of thinkers and writers for a fair number of decades. Less obvious is the connection between modern technology and health. Conventional wisdom asserts that our current health crisis – in which one in three people in the Western world develops cancer and almost half suffer from heart disease – will be solved by more technology, not less, and that disease, like drudgery and dirt, will give way to a combination of innovation and funding.

What allows the typical patient to claim that he is healthy is the same technology that gave us the vacuum cleaner and the computer. Without the modern inventions used to shore up his teeth, safely remove his tonsils, repair his hernia and help his wife give birth, our typical patient would be a toothless, childless cripple – or dead before adulthood.

My colleague, Dr. Tom Cowan, likes to tell the story of a typical patient who comes in for a check-up. "It's just a precaution," says the patient, "I'm actually very healthy." Yes, he had his tonsils removed when he was a youngster; he had his wisdom teeth taken out and his teeth straightened with braces; he has a mouth full of fillings and several root canals; he had a hernia operation a few years ago and his back bothers him sometimes. True, he often feels under stress, even depressed, and wishes he had more energy, but he passes these off as normal conditions, just what one would expect in the course of the average life-span.

A family history reveals a sister who died at the age of 40 from breast cancer and a father who is senile with Alzheimer's living in a nursing home. Both his children were born by Caesarean section. They needed extensive (and expensive) orthodontics. His daughter suffers from allergies and his son attends a special school for the hyperactive and learning-disabled.

What allows Dr. Cowan's typical patient to claim that he is healthy is, indeed, the same technology that gave us the vacuum cleaner and the computer. Without the modern inventions used to shore up his teeth, safely remove his tonsils, repair his hernia and help his wife give birth, our typical patient would be a toothless, childless cripple – or dead before adulthood. But the technology



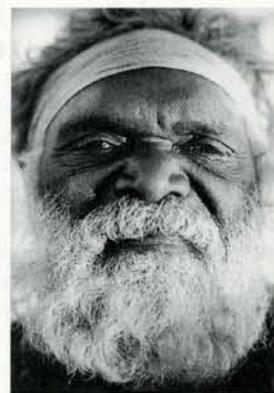
that allows him to fly to California in five hours and illuminate his living room with the flick of a switch was not able to save his sister from cancer nor his father from Alzheimer's. The solutions proffered for his depression and fatigue, his daughter's allergies and his son's difficulties in school are palliative at best, and dangerous at worst.

Modern technology allows the appearance of health but not the substance. The age of solutions has a health crisis it cannot solve. Although heart disease and cancer were rare at the turn of the century, today these two diseases strike with increasing frequency, in spite of billions of dollars in research to combat them, and in spite of tremendous advances in diagnostic and surgical techniques. In America, one person in three suffers from allergies, one in ten will have ulcers and one in five is mentally ill. Every year, a quarter of a million infants are born with a birth defect, who then undergo expensive heroic surgery, or are hidden away in institutions. Other degenerative diseases – arthritis, multiple sclerosis, digestive dis-

orders, diabetes, osteoporosis, Alzheimer's, epilepsy and chronic fatigue – afflict a significant majority of our citizens. Learning disabilities such as dyslexia and hyperactivity make life miserable for seven million young people – not to mention their parents.

Today, chronic illness afflicts nearly half of all Americans and causes three out of four deaths in the United States. These diseases were extremely rare only a generation or two ago.

These diseases were extremely rare only a generation or two ago. Today, chronic illness afflicts nearly half of all Americans and causes three out of four deaths in the United States. Most tragically, these diseases, formerly the purview of the very old, now strike our children and those in the prime of life. We have almost forgotten that our natural state is one of balance, wholeness and vitality.



Australian Aborigine communities were noted for containing a sizeable number of old people, who lived together as a separate group and for whom were reserved special foods that were easy to gather and hunt. Left: The Maasai of East Africa were cattle-keeping people. Their diets consisted largely of milk, blood and meat, supplemented in some cases with fish and with small amounts of grains, fruits and vegetables. They were noted for their fine physiques and great height.

A. McNAUGHTON/PANOS PICTURES

BETTY PRESS/PANOS PICTURES

It seems as if the twentieth century will exit with a crescendo of disease. Things were not so bad back in the 1930s, but the situation was already serious enough to cause one Cleveland, Ohio dentist to be concerned. Dr. Weston Price was reluctant to accept the conditions exhibited by his patients as normal. Rarely did an examination of an adult patient reveal anything but rampant decay, often accompanied by serious problems elsewhere in the body such as arthritis, osteoporosis, diabetes, intestinal complaints and chronic fatigue. (They called in neurasthenia in Price's day.) But it was the dentition of younger patients that alarmed him most. Price observed that crowded, crooked teeth were becoming more and more common, along with what he called "facial deformities" – overbites, narrowed faces, underdevelopment of the nose, lack of well-defined cheekbones and pinched nostrils. Such children invariably suffered from one or more complaints that sound all too familiar to mothers of the 1990s: frequent infections, allergies, anaemia, asthma, poor vision, lack of co-ordination, fatigue and behavioural problems. He was rather inclined to believe that the Creator intended physical perfection for all human beings, and that children should grow up free of ailments.

He had heard utopian stories about the good health of primitive cultures and resolved to find out if the "backward" societies that America was intent on evangelizing and colonizing were indeed healthier than his own. For the next ten years, he travelled to various isolated parts of the Earth, where the inhabitants had no contact with "civilization", in order to study their health and physical development. His investigations took him to isolated Swiss villages and a windswept island off the coast of Scotland. He studied traditional Eskimos, Indian tribes in Canada and the Florida Everglades, Southsea islanders, Aborigines in Australia, Maoris in New Zealand, Peruvian and Amazonian Indians, and tribes in Africa.

Nutrition and Physical Degeneration is the kind of book that changes the way people view the world, because it describes not only societies in which excellent health was the norm, but also because it shows us how healthy people look.

Once Price had gained the confidence of the tribal or village elders, he did what came naturally to him – he counted cavities. Imagine his surprise at finding groups of people in whom less than one per cent of the permanent teeth were decayed. He found 14 isolated groups in all where tooth decay was rare to non-existent, in people who had never seen a dentist and never brushed their teeth. Freedom from caries always went hand in hand with freedom from disease, both chronic disease like cancer and heart disease, and infectious disease like tuberculosis, which in Price's day afflicted much of the world in epidemic proportions.

These studies occurred at a time when there still existed remote pockets of humanity untouched by modern inventions; but when one modern invention, the camera, allowed Price to make a permanent record of the people he studied. The photographs Price took, the descriptions of what he found and his startling conclusions are preserved in a book considered a masterpiece by many nutrition researchers who followed in Price's footsteps: *Nutrition and Physical Degeneration*.¹ Yet this compendium of ancestral wisdom is all but unknown to today's parents and the medical community.

Nutrition and Physical Degeneration is the kind of book that changes the way people view the world, because it describes not only societies in which excellent health was the norm, but also because it shows us how healthy people look. Healthy people have faces that are broad, well-formed and noble. Their teeth fill the smile with a band of dazzling whiteness, as even and perfect as ... false teeth. Price took photograph after photograph of beautiful smiles, and noted that "healthy primitives" were invariably cheer-

ful and optimistic. Such people were characterized by "splendid physical development". The women gave birth with ease. Their babies rarely cried and their children were energetic and hearty. Many others have reported a virtual absence of degenerative disease, particularly cancer, in isolated, so-called "primitive" groups.²

Price observed a number of societies in transition where stores or outposts had been established and native foods were replaced by the products of Western civilization – sugar, white flour, condensed milk, canned foods, chocolate, jams and pastries – what Price called the "displacing foods of modern commerce". His photographs capture the suffering caused by these foodstuffs – chiefly rampant tooth decay. Even more startling, they show the change in facial development that occurred with modernization. Parents who had changed their diets gave birth to children who no longer exhibited the tribal patterns. Their faces were more narrow, their teeth crowded, their nostrils pinched. These faces do not beam with optimism, like those of their healthy ancestors. The photographs of Dr. Weston Price demonstrate with great clarity that the "displacing foods of modern commerce" do not provide sufficient nutrients to allow the body to reach its full genetic potential – neither the complete development of the bones in the body and the head, nor the fullest expressions of the various systems that allow humankind to function at optimal levels – immune system, nervous system, digestion and reproduction.

The diets of the healthy "primitives" Price studied were all very different: in the Swiss village where Price began his investigations, the inhabitants lived on rich dairy products – unpasteurized milk, butter, cream and cheese – dense rye bread, meat occasionally, bone broth soups and the few vegetables they could cultivate during the short summer months. The children's teeth were covered in green slime but Price found only about one per cent decay. The children went barefoot in frigid streams during weather that forced Dr. Price and his wife to wear heavy wool coats; nevertheless childhood illnesses were virtually non-existent and there had never been a single case of TB in the village. Hearty Gallic fishermen living off the coast of Scotland consumed no dairy products. Fish formed the mainstay of the diet, along with oats made into porridge and oatcakes. Fishheads stuffed with oats and chopped fish liver was a traditional dish, and one considered very important for growing children. The Eskimo diet, composed largely of fish, fish roe and marine animals, including seal oil and blubber, allowed Eskimo mothers to produce one sturdy baby after another free from any health problems or tooth decay. Well-muscled hunter-gatherers in Canada, the Everglades, the Amazon, Australia and

The foods that allow people of every race and every climate to be healthy are whole natural foods – meat with its fat, organ meats, whole-milk products, fish, insects, whole grains, tubers, vegetables and fruit – not newfangled concoctions made with white sugar, refined flour and rancid and chemically altered vegetable oils.

Africa consumed game animals, particularly the parts that civilized folk tend to avoid – organ meats, blood, marrow and glands, particularly the adrenal glands – and a variety of grains, tubers, vegetables and fruits that were available. African cattle-keeping tribes like the Maasai consumed no plant foods at all – just meat, blood and milk. Southsea islanders and the Maori of New Zealand ate seafood of every sort – fish, shark, octopus, shellfish, sea worms – along with pork meat and fat, and a variety of plant foods including coconut, manioc and fruit. Whenever these isolated peoples could obtain sea foods they did so – even Indian tribes living high



By all accounts the Maoris of New Zealand were, and still are, where their customs have not changed, in excellent health.

in the Andes. Insects were another common food, in all regions except the Arctic. The foods that allow people of every race and every climate to be healthy are whole natural foods – meat with its fat, organ meats, whole milk products, fish, insects, whole grains, tubers, vegetables and fruit – not newfangled concoctions made with white sugar, refined flour and rancid and chemically altered vegetable oils.

Modern nutrition researchers are showing renewed interest in the food ways of our ancestors, but myths about primitive diets abound. The first is easily dismissed – that traditional diets were largely vegetarian. Anthropological data confirm what Price found, namely that throughout the globe, all societies show a preference for animal foods and fats.³ Modern scientific literature does not support the claims made for vegetarian diets.⁴

Dr Price's trip to Africa gave him the opportunity to compare primitive groups composed largely of meat eaters, with those of similar racial stock that were mostly vegetarian.⁵ The Maasai of Tanganyika, Chewya of Kenya, Muhima of Uganda, Watusi of Ruanda and the Neurs tribes on the western side of the Nile in the Sudan were all cattle-keeping people. Their diets consisted largely of milk, blood and meat, supplemented in some cases with fish and with small amounts of grains, fruits and vegetables. The Neurs especially valued the livers of animals, considered so sacred "that it may not be touched by human hands ... It is eaten both raw and

cooked." These tribes were noted for their fine physiques and great height – in some groups the women averaged over six feet tall, and many men reached almost seven feet. Until his Africa trip, Price had not found groups that had no cavities at all, yet Dr. Price found six cattle-herding tribes that were completely free of dental decay. Furthermore, all members of these tribes exhibited straight, uncrowded teeth.

Bantu tribes such as the Kikuyu and Wakamba were agriculturists. Their diet consisted of sweet potatoes, corn, beans, bananas, millet and kaffir corn or sorghum. They were less robust than their meat-eating neighbours, and tended to be dominated by them. Price found that vegetarian groups had some tooth decay – usually around 5 or 6 per cent of all teeth, still small numbers compared with whites living off store-bought foods. Even among largely vegetarian tribes, dental occlusions were rare, as were degenerative diseases. It is a mistake, however, to think that these groups consumed no animal products at all, as is often claimed. Some Bantu tribes kept a few cattle and goats which supplied both milk and meat; they ate small animals such as frogs; and they put a high value on insect food. "The natives of Africa know that certain insects are very rich in special food values at certain seasons, also that their eggs are valuable foods. A fly that hatches in enormous quantities in Lake Victoria is gathered and used fresh and dried for storage. They also use ant eggs and ants." Other insects, such as bees, wasps, beetles, butterflies, moths, cricket, dragonflies and termites are sought out and consumed with relish by tribes throughout Africa.⁶ It is significant that the vegetarian groups prac-

tised the feeding of special foods during gestation and lactation. Apparently carnivorous groups found no need to supplement the diet, as it was already rich in the factors needed for reproduction and optimum growth.

Another myth about primitive diets, and one that is harder to dispel, is that they were low in fat, particularly saturated animal fat. Loren Cordain, PhD, probably the most well-known proponent of a return to Palaeolithic food habits, recommends a diet consisting of "lean meat, occasional organ meats and wild fruits and vegetables". While this prescription may be politically correct, it does not jibe with descriptions of Palaeolithic eating habits, either in cold or hot climates.

Vilhjalmur Stefansson, who spent many years living with the Eskimos and Indians of Northern Canada, reports that wild male ruminants like elk and caribou carry a large slab of back fat, weighing as much as 40 to 50 pounds. The Indians and Eskimo hunted older male animals preferentially because they wanted this backslab fat, as well as the highly saturated fat found around the kidneys. Other groups used blubber from sea mammals like seal and walrus.

"The groups that depend on the blubber animals are the most fortunate in the hunting way of life," wrote Stefansson, "for they never suffer from fat-hunger. This trouble is worst, so far as North America is concerned, among those forest Indians who depend at times on rabbits, the leanest animal in the North, and who develop the extreme fat-hunger known as rabbit-starvation. Rabbit eaters, if they have no fat from another source – beaver, moose, fish – will develop diarrhoea in about a week, with headache, lassitude, a vague discomfort. If there are enough rabbits, the people eat till their stomachs are distended; but no matter how much they eat they feel unsatisfied. Some think a man will die sooner if he eats continually of fat-free meat than if he eats nothing, but this is a belief on which sufficient evidence for a decision has not been gathered in the North. Deaths from rabbit-starvation, or from the eating of other skinny meat, are rare; for everyone understands the principle, and any possible preventive steps are naturally taken."⁷

Normally, according to Stefansson, the diet consisted of dried or cured meat "eaten with fat", namely the highly saturated cavity and back-slab fat that could be easily separated from the animal. Another Arctic explorer, Hugh Brody, reports that Eskimos ate raw liver mixed with small pieces of fat and that strips of dried or smoked meat were "spread with fat or lard."⁸ Pemmican, a highly concentrated travel food, was a mixture of lean dried buffalo meat and highly saturated buffalo fat. (Buffalo fat, by the way, is more saturated than beef fat). Less than two pounds of pemmican per day could sustain a man doing hard physical labour. The ratio of fat to protein in pemmican was 80:20. As lean meat from game animals was often given to the dogs, there is no reason to suppose that everyday fare did not have the same proportions: 80 per cent fat (mostly highly saturated fat) to 20 per cent protein – in a population in which heart disease and cancer were non-existent.

Obtaining adequate fat in the diet was a greater challenge for the Australian Aborigine, living in a very different climate.⁹ They were close observers of nature and knew just when certain animals were at their fattest. For example, kangaroos were fat when the fern leaf wattle was in flower; possums when the apple tree was in bloom. Other signs indicated when the carpet snake, kangaroo rat, mussels, oysters, turtles and eels were fat and at their best. Except in times of drought or famine, the Aborigine rejected kangaroos that were too lean – they were not worth carrying back to camp. During periods of abundance "animals were slaughtered ruthlessly, and only the best and fattest parts of the killed game were eaten." Favourite foods were fat from the intestines of marsupials and from emus. Highly saturated kidney fat from the possum was often eaten raw. The dugong, a large seagoing mammal, was another source of fat available to natives on the coasts.

Other sources of fat included eggs – from both birds and rep-



The Seminole Indians living today in southern Florida largely beyond contact with the white civilization still produce magnificent teeth and dental arches of which these are typical. They live in the Everglades forest and still obtain the native foods.

tiles – and a great variety of insects. Chief among them was the witchety grub, or moth larva, found in rotting trunks of trees. These succulent treats – often over six inches long – were eaten both raw and cooked. Fat content of the dried grub is as high as 67 per cent. The green tree ant was another source of valuable fat, with a fat-to-protein ratio of about 12 to one. Another important seasonal food in some parts of the country was the begong moth. The moths were knocked off rock walls on which they gathered in large numbers, or smoked out of caves or crevices. They were roasted on the spot or ground up for future use. Moth abdomens are the size of a small peanut and are rich in fat.

Modern investigators find it hard to accept the fact that groups

Modern investigators find it hard to accept the fact that groups exhibiting superb physical development and perfect health ate liberally of the very dietary component that modern nutritionists have demonized.

exhibiting superb physical development and perfect health ate liberally of the very dietary component that modern nutritionists have demonized: saturated animal fat. Yet, even a cursory look at disease trends exonerates traditional fats like butter, lard and tallow. As these fats have been replaced by commercial vegetable oils in the Western diet, cancer and heart disease have soared. Dietary saturated fats actually play many important roles in the human chemistry: saturated fatty acids constitute at least 50 per cent of the cell membranes, giving them necessary stiffness and integrity; they play a vital role in the health of our bones;¹⁰ they lower Lp(a), a substance in the blood that indicates proneness to heart disease;¹¹ they protect the liver from alcohol ingestion;¹² they enhance the immune system;¹³ they are needed for the proper utilization of essential fatty acids;¹⁴ they are the preferred food for the heart;¹⁵



The Seminole Indians of Florida who are living in contact with our modern civilization and its foods suffer from rampant dental caries.

and they have important anti-microbial properties, protecting us against harmful micro-organisms in the digestive tracts.¹⁶

Even more important, animal fats are carriers for vital fat-soluble vitamins A and D, needed for a host of processes, from prevention of birth defects to health of the immune system, to proper development of the bones and teeth. In fact, Price was convinced that these "fat-soluble activators" were key to the beautiful facial development and freedom from dental caries that characterized the people he studied. When he analyzed their diets, he found that they contained at least four times the minerals – calcium, phosphorous, magnesium, iron and so forth – and ten times the fat-soluble vitamins in the American diet of his day. The richest sources of vitamins A and D are the very foods modern man eschews: animal fats, organ meats, lard, fish, shellfish, eggs and butter – but not pale, commercial store-bought butter. Butter rich in fat-soluble vitamins is the soft, orange-yellow product that comes only from cows eating green grass on fertile pastures, a commodity that is almost impossible to find in Western supermarkets. Vitamin A from animal sources is not the same as its precursors, the carotenes found in plant foods. The conversion of carotenes in the human body is often compromised, and even under optimal conditions is not efficient enough to supply the amount of true vitamin A Price found in the diets of healthy isolated populations.¹⁷

A surprising source of nutrients in traditional diets is shrimp, which contains ten times more vitamin D than liver. Shrimp sauces and shrimp pastes made from dried shrimp, and therefore a concentrated source of vitamin D, are used throughout Africa and the Orient. This is the most likely explanation for low rates of osteoporosis in these regions, as well as a virtual absence of diseases linked to vitamin D deficiency such as colon cancer and multiple sclerosis.

Price accurately predicted that Western man would develop more and more diseases as he substituted vegetable oils for animal fats, and that reproduction would become increasingly difficult.

By some estimates, 25 per cent of American couples are now infertile, a condition that may send the population reductionists into paroxysms of glee but that causes untold heartache to millions of individuals. Infertility treatments are problematic, painful and expensive compared with the primitive prescription: more animal fat. "The flesh of bear hath a good relish, very savory and inclining nearest to that of Pork," wrote American colonist Colonel William Byrd in 1728. "The Fat of this Creature is least apt to rise in the Stomach of any other. The Men for the most part chose it rather than Venison ... And now, for the good of mankind, and for the better Peopling an Infant colony, which has no want but that of Inhabitants, I will venture to publish a Secret of Importance, which our Indian ... disclosed to me. I asked him the reason why few or none of his countrywomen were barren? To which curious Question he answered with a Broad grin upon his Face, they had an infallible secret for that. Upon my being importunate to know what the secret might be, he informed me that, if any Indian woman did not prove with child at a decent time after Marriage, the Husband, to save his Reputation with the women, forthwith entered into a Bear-dyett for Six Weeks, which in that time makes him so vigorous that he grows exceedingly impertinent to his poor wife and 'tis great odds but he makes her a Mother in Nine Months."

Dried fish roe was highly valued by a number of tribes Price studied – from the Eskimos of Alaska to Indian tribes living high in the Andes. When Price asked these disparate groups why they ate fish eggs, the answer was the same: "So we will have healthy babies." Scientists have discovered numerous factors in fish roe that contribute to fertility – vitamins A and D, iodine and other minerals and special elongated fatty acids – but such is the mindset of modern medicine that this information is not passed on to parents-to-be. Other special foods given to pregnant women and growing children included shellfish, organ meats and deep yellow butter, all of which Price found to be extremely rich in minerals and "fat-soluble activators".

The response of orthodox palaeo-diet researchers to overwhelming evidence that the hunter-gatherers sought out and consumed large quantities of animal fat and high-cholesterol foods, rich in fat-soluble vitamins, is that while the primitive diet allowed for optimal reproduction and development – borne out not only by Dr. Price's photographs, but by skeletal remains of hunter-gatherers from throughout the world – it had the unhappy side effect of shortening his life-span. Yet Arctic explorers reported great longevity among the Eskimo;¹⁸ Australian Aborigine communities were noted for containing a sizeable number of old people, who lived together as a separate group and for whom were reserved special foods that were easy to gather and hunt.¹⁹ The diets of traditional groups noted for longevity were rich in animal fats; the people of Hunza consume large quantities of fermented goat milk products, and goats milk is higher in fat, and contains more saturated fat, than cows milk; the inhabitants of Vilcabamba in Ecuador consume fatty pork and whole-milk products; and the long-lived inhabitants of Soviet Georgia also eat liberally of pork and whole-milk yogurt and cheeses. In fact, a Soviet study found that longevity was greatest in rural communities where people ate the most fatty meat, compared with town dwellers who ate more carbohydrate.²⁰

Yet carbohydrates, in the form of whole grains and related seed foods, are not absent in healthy traditional diets, even in the diets of hunter-gatherers. Price found that millet and corn were consumed throughout Africa; quinoa and amaranth in south America. American Indians consumed wild rice, corn and beans; Australian Aborigines gather a species of wild millet and consume a large variety of legumes. One school of thought claims that grains and pulses should be avoided, arguing that they were absent from the Palaeolithic diet and citing the obvious association of grains with coeliac disease and studies linking grain consumption with cancer.²¹

What researchers often overlook is the fact that seed foods – grains, legumes and nuts – are prepared with great care in traditional societies, by sprouting, roasting, soaking, fermenting and sour leavening.²² These processes neutralize substances in whole grains and other seed foods that block mineral absorption, inhibit protein digestion and irritate the lining of the digestive tract. Such processes also increase nutrient content and render seed foods more digestible. For example, in India, rice and lentils are fermented for at least two days before they are prepared as idli and dosas; in Africa the natives soak coarsely ground corn overnight before adding it to soups and stews and they ferment corn or millet for several days to produce a sour porridge called ogi; a similar dish made from oats was traditional among the Welsh; in some Oriental and Latin American countries rice receives a long fermentation before it is prepared; Ethiopians make their distinctive injera bread by fermenting a grain called teff for several days; Mexican corn bread cakes, called pozol, are fermented for several days and for as long as two weeks in banana leaves; Cherokee bread was similar, but wrapped in corn husks; before the introduction of commercial brewer's yeast; Europeans made slow-rise breads from fermented starters; in America the pioneers were famous for their sourdough breads, pancakes and biscuits, and throughout Europe grains were soaked overnight, and for as long as several days, in water or sour milk before they were cooked and served as porridge or gruel. Grains carefully prepared in this manner confer far more nutritional value than modern quick-rise breads, granolas, rice bran concoctions, extruded breakfast cereals and, of course, denuded white flour products.

Weston Price's studies convince him that the best diet was one that combined nutrient-dense whole grains with animal products, particularly fish. The healthiest African tribe he studied was the Dinkas, a Sudanese tribe on the western bank of the Nile. They were not as tall as the cattle-herding Neurs groups but they were physically better proportioned and had greater strength. Their diet consisted mainly of fish and cereal grains. This is one of the most important lessons of Price's research – that a mixed diet of whole foods, one that avoids the extremes of the carnivorous Maasai and the largely vegetarian Bantu, ensures optimum physical development.

Purists argue that, as with grains, man should not eat dairy products because the keeping of herds dates back only a few thousand years, a mere drop of time in the evolutionary bucket. But there are many healthy milk-drinking populations including disease-free traditional Europeans, Americans up to the First World War, Greeks and other inhabitants of the Mediterranean, Africans, Tibetans, the long-lived inhabitants of Soviet Georgia and the hearty Mongols of northern China. Even today, the use of relatively processed milk products is associated with longevity in countries like Austria and Switzerland.²³ Modern milk is denatured through pasteurization and homogenization; stripped of its valuable fat content; filled with antibiotics and pesticides; laced with additives and synthetic vitamins; and comes from cows bred to produce huge amounts of milk and fed everything under the sun except what cows are supposed to eat – green grass.²⁴ There is evidence to link such milk with the whole gamut of modern ailments including heart disease, cancer, diabetes, breast cancer, osteoporosis, autism and allergies.

Other practices common to traditional groups throughout the world include the use of animal bones, usually made into broth that is added to soups, stews and sauces; the preservation of vegetables, fruits, grains and even meats through the practice of lacto-fermentation to make condiments, meat products and beverages; and the use of salt. In areas where salt is not available, sodium-rich grasses and other plants are burnt and added to foods.

Familiar lacto-fermented foods include old-fashioned sauerkraut and yogurt. Almost any food can be preserved by this method, which encourages the proliferation of beneficial bacteria.



Postcard prepared by Baby Milk Action as part of their campaign to boycott Nestlé, producers and marketers of artificial infant formula Nescafé.

The lactic acid they produce is an excellent, natural preservative which keeps plant foods as pickles and chutneys, meats as sausage and haggis, milk as a variety of soured products and grains as chewy breads and thick sour porridges. Lacto-fermented beverages are ubiquitous in traditional cultures – from kaffir beer in Africa to kvass and kombucha in Slavic regions. Lacto-fermented foods are artisanal products – instead of mass-produced items preserved with vinegar and sugar – which taste delicious and confer many health benefits. They add valuable enzymes to the diet, and enhance digestibility and assimilation of everything we eat.

Gelatin-rich broth also enhances digestion and provides the gamut of macro-minerals in easily assimilated form. Broth-based soups are snack foods in Asian countries, usually prepared in mom-and-pop shops; and they form the basis of both peasant and gourmet cuisines throughout Europe. But in most Western countries, the stock pot has given way to convenience foods whose meat-like flavour derives from flavour enhancers – MSG and other neurotoxic additives.

The first happy lesson gleaned from a study of traditional diets is that healthy food can and should taste good; that we can put butter on our porridge and cook in lard, that it's OK to consume whole milk, fatty meats, liver and onions, shrimp and lobster, even insects, if you like them; that heavenly sauces made from bone broth and cream confer more benefits than pills and powders and ersatz low-fat concoctions, the stepchildren of technology, palmed off as health foods.

Wisely used, technology can take the drudgery out of cooking, and help us bring properly grown and prepared foods to the market-place. Wrongly used, technology produces breads that are soft and sweet rather than sour and chewy; coca-cola rather than cottage-industry lacto-fermented soft drinks; bouillon cubes rather than home-made broth; sugar-embalmed ketchup with infinite shelf life rather than enzyme-rich condiments and pickles preserved to last a few months in a way that adds nutrients, instead of taking them away.

The second lesson is that healthy eating is good for the ecology. The building blocks of a healthy diet are pesticide-free foods raised on mineral-rich soil, and healthy animals that live free to manure the paddocks of thousands of farms, rather than suffer in factories, confined to misery and disease. The road to health starts with a willingness to pay a good price for such food, thus rewarding the farmer who preserves the land through wise farming practices, rather than the agribusiness that mines the soil for quick profits.

And, finally, a return to traditional foods is a way of taking power away from the multinationals and giving it back to the arti-

san. The kind of food-processing that makes food more nutritious is the same kind of food-processing that the farmer or the farming community can do in situ – sour milk and grain products, aged cheeses, pickles, sausages, broth and beverages. All the boxed, bottled and frozen products in modern supermarkets – the cheerios, crackers, cookies, egg-beaters, margarines, diet sodas and TV dinners – have made fortunes for a few and impoverished the rest of us. The way we eat determines not only how healthy we will be,

Technology propels us headlong into the future, but there will be no future unless that technology is tamed to the service of wise ancestral foodways.

but what kind of economy we have – the kind where a few people make millions and millions of dollars or the kind where millions of people make a decent living.

Technology propels us headlong into the future, but there will be no future unless that technology is tamed to the service of wise ancestral foodways.□

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Asian Financial Crisis: The Movie

Walden Bello, author of the seminal *Dragons in Distress*, which correctly identified all the weaknesses of the so-called Dragon economies more than ten years ago, explains in this article what really caused their current economic woes. **By Walden Bello**

After seeing Steven Spielberg's syrupy tribute to Yankee patriotism, *Saving Private Ryan*, I told myself that, surely, I could manage something better on the Asian financial crisis. Anyway, here's the screenplay for a movie tentatively titled *Asian Financial Crisis: The Movie – Heroes, Villains, and Accomplices*.

First of all, there are no heroes. The Japanese could have played the role of knight in shining armour nearly a year ago, when they had the chance to reverse the descent into depression via the proposed Asian Monetary Fund (AMF) – a mechanism capitalized to the tune of \$100 billion that was designed to defend the region's currencies from speculative attacks. But, in typical fashion, they shelved their proposal when Washington opposed it. Though the AMF is now resurrected as the Miyazawa Plan that would give the troubled Asian economies \$30 billion in financial aid, it is too little and too late.

Villain of the Piece: Crony Capitalists or Foreign Speculative Investors?

On the other hand, there are a number of candidates for the role of principal villain. Taking the cue from the Western press, one might begin with the practices and institutions that are usually presented to the public as the villains of the piece – that is, aside from Prime Minister Mohamed Mahathir of Malaysia, who has become the US media's favourite whipping boy – at the same time, it must be noted, that they are in the process of elevating Philippine Actor-President Joseph Estrada to the status of Asia's new hero.

One might begin by quoting a person who has come to be the chief screenwriter of one version of the crisis, US Treasury Secretary Robert Rubin. In assigning the blame for the financial crisis, Mr. Rubin assigned pride of place to lack of information on the part of investors. In a speech he gave at the Brookings Institution in April 1998, Rubin said:

"[T]here are obstacles to getting good information about economic and financial matters. One is the temptation – in the private sector and in government – to avoid disclosing problems. But sooner or later, as we have seen in Asia, the problems will make themselves known. In many cases, lack of data meant that no one had a true understanding of this build-up or of these economies' vulnerabilities."¹

This lack of transparency on the part of financial institutions went hand-in-hand with distorted incentives, lack of supervision, and the absence of so-called prudential regulation. All this is, in turn, part of a witches' brew of unsound and corrupt practices known as 'crony capitalism', which Larry Summers, the famous economist who is Rubin's Undersecretary, says is "at the heart of the crisis."² Interestingly, it might be pointed out, Summers and others picked up a term – crony capitalism – that we Filipinos coined during the Marcos period.

Before going on, one might also briefly note here that this is a massive reversal of the view that held sway at the World Bank when Summers, who now plays an overweight, over-the-hill Sun-

dance Kid to Rubin's Butch Cassidy on CNN, was that institution's chief economist in the late eighties and early nineties. For those too young to remember what the orthodoxy was then, one might cite the Bank's famous East Asian Miracle published in 1993:

"In each HPAE [high performing Asian economy], a technocratic elite insulated to a degree from excessive political pressure supervised macroeconomic management. The insulation mechanisms ranged from legislation, such as balanced budget laws in Indonesia, Singapore, and Thailand, to custom and practice in Japan and Korea. All protected essentially conservative macroeconomic policies by limiting the scope for politicians and interest groups to derail those policies."³

To repeat, economic policy-making by Asian technocrats was largely insulated from political and business pressures, and this was a large part of the explanation for the so-called Asian miracle. Every mortal is, of course, entitled to an about-face. But the problem with the latest intellectual fashion from the Summers' salon is that the practices of 'crony capitalism' were very much part of economic life in the three decades that East Asian countries led the world in the rate of growth of GNP. If, indeed, crony capitalism was the chief cause of the Asian collapse, why did it not bring it about much, much sooner? How could economies dominated by these practices of rent-seeking that supposedly suffocate the dynamism of the market – including Japan and South Korea – even take off in the first place?

Moreover, 'crony capitalism' has, in recent months, become so elastic in its connotations – which range from corruption to any kind of government activism in economic policy-making – as to become useless as an explanatory construct. It is one thing to say that corruption has pervaded relations between government and business in East Asia. It has, as it has in Italy or in the United States, where it is legalized through such mechanisms as 'political action committees' (PACs) that make politicians' electoral fortunes dependent on favourable treatment of corporate interests. It is quite another thing to say that corruption and its companions, lack of regulation and lack of transparency, constitute the principal reason for the downfall of the East Asian economies.

Now, in the light of the developments of the last two months, criticizing the crony capitalist thesis might strike those who have followed recent events closely as beating a dead horse. It is, but this dead horse deserves to be beaten and buried because it has a way of resurrecting in Dracula fashion periodically. In any event, after the Russian crash two months ago and the collapse, the bailout of the hedge fund Long-Term Capital by the US Federal Reserve a few weeks ago, and Brazil's teetering on the edge, there is now little doubt that the central cause of the financial crisis was the quick, massive flow of global speculative capital and bank capital into East Asia in the early 1990s and its even more massive and even swifter exit in 1997.

And there seems to be little doubt as well that the multilateral institutions – in particular, the International Monetary Fund (IMF), played a key facilitating role by pressing the Asian governments



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incessantly to liberalize their capital accounts, in order precisely to encourage massive foreign capital inflows into their economies in the belief that foreign capital was the strategic factor in development. Indeed, one can say that the IMF has been the cutting edge of globalization in the region, since it is financial liberalization that is the cutting edge of the integration of these national economies into the global economy.

Now, Western speculative funds came to Asia not because they were conned by crafty and dishonest Asian financial operators. Don't get us wrong: Asia was swarming with crooked financial operators. But that these Western investors were conned or fooled? Come on! No, speculative investors came into Asia because they perceived the opportunities to gain greater margins of profit on financial investments here to be greater than in the Northern money centres in the early 1990s, owing to the much higher interest rates, the low stock prices, and – not to be underestimated – the incredible hype created around the so-called Asian economic miracle.

The fact is, money was very eager to get into Asian capital markets in the early nineties, and whether or not the information was available, investors and fund managers were quite nondiscriminating in their moves into these markets. As Rubin himself admitted in a speech at Chulalongkorn University five months ago:

"One of the things that has most struck us about the Asian crisis is that, after the problems began to develop and we spoke to the institutions that had extended credit or invested in the region, so often we found these institutions had engaged in relatively little analysis and relatively little weighing of the risks that were appropriate to the decisions."⁴

The fund managers were going to see what they wanted to see. Not only did many not assess their investments and local partners or borrowers, but they actually made their moves mainly by keeping an eagle eye on the moves of other investors – especially those with great reputations for canny investing like George Soros or Long-Term Capital's John Merriwether. But if there was little room or desire for serious analysis of markets in the entry phase,

there was even less in the exit phase, as the rush of investment leaders communicated panic to one and all.

Indeed, in the first months of the crisis, Stanley Fischer, the American deputy managing director of the IMF, was attributing the crisis, not to politicians or to lack of transparency or to crony capitalism but to the investors' herd behaviour: "Markets are not always right," he said. "Sometimes inflows are excessive, and sometimes they may be sustained too long. Markets tend to react late; but they tend to react fast, sometimes excessively."⁵

Bangkok, for instance, was a debtor's rather than a creditor's market in the early 1990s, with so many foreign banks and funds falling over themselves to lend to Thai enterprises, banks and finance companies, and they were willing to forego the rigorous checks on borrowers that Western banks and financial institutions are supposedly famous for. The bad – indeed, shady financial history of the Thai finance companies – was not a secret. In the 1970s and 1980s, many finance companies resorted to questionable business practices to raise capital, including widespread speculation and manipulation of stock prices, leading to the closure of some of them. Any neophyte in Bangkok's financial club knew this history. Yet, the finance companies were flush with foreign cash, often-times urged on to them by foreign lenders unwilling to forego what could turn out to be a goldmine.⁶

Throughout Asia, American Chambers of Commerce, foreign correspondents' clubs and expatriate circles were replete with stories of rigged bids, double – sometimes triple – accounting, false statistics, cronyism in high places, but everyone accepted that these were the risks of doing business in Asia – you had to live with them if you were going to have your share of the bonanza. In the end, what really served as the ultimate collateral or guarantee for the investments foreign operators made in Asian enterprises and banks was the 6-10 per cent growth rates that they expected to go on far into the future. Now, you might end up with some duds, but if you spread your investments around in this region of limitless growth, you were likely to come out a winner.

Supporting Cast

This brings up the role of strategic expectations and the role of certain players and institutions that encouraged and maintained those expectations. In other words, there was a whole set of actors that played a supporting but critical role, and the speculative investors were operating in a context where they were locked into a mutually reinforcing psychology of permanent boom with these other players.

A key player here is much of the business press. Business publications proliferated in the region beginning in the mid-eighties. But proliferation alone is not adequate to convey the dynamics of the business press, since there was also a process of monopolization at work. The Asian prosperity started attracting the big players from the West, and among the more momentous deals was the purchase of the famous *Far Eastern Economic Review* by Dow Jones, of *Asiaweek* by Times-Warner, and of Star Television in Hong Kong by Rupert Murdoch. CNN, another Times-Warner subsidiary, and CNBC also moved in, with much of their programming devoted to business news.

These news agents became critical interpreters of the news in Asia to investors located all over the world and served as a vital supplement to the electronic linkages that made real-time transactions possible among the key stock exchanges of Singapore, Hong Kong, Tokyo, Osaka, New York, London and Frankfurt a reality.⁷

For the most part, these publications and media, whether they were independent or part of the big chains, highlighted the boom, glorified the high growth rates, and reported uncritically on so-called success stories, mainly because their own success as publications was tied to the perpetuation of the psychology of boom.

Now, for the most part, these publications and media, whether they were independent or part of the big chains, highlighted the boom, glorified the high growth rates, and reported uncritically on so-called success stories, mainly because their own success as publications was tied to the perpetuation of the psychology of boom. A number of writers writing critical stories on questionable business practices, alarming developments, or failed enterprises complained that they could not place their stories, or that their editors told them to accentuate the positive.

Parachute journalism, a phrase applied to writers who flew in, became instant experts on the Vietnam War or the Philippines under Marcos, then left after filing their big stories, became a practice as well in economic journalism in the 1990s, with *Fortune*, *Business Week*, *Newsweek*, and *Time* setting the pace. It was, for instance, Dorinda Elliot of the *Newsweek* airborne brigade, who, more than anybody else, sanctified the Philippines' status as Asia's newest tiger during the Subic APEC Summit of November 1996 – a status that lasted less than eight months, until the collapse of the peso in July 1997.

Many of these business publications, in turn, developed an unwholesome reliance on a character type that proliferated in the region in the early nineties, the investment adviser or strategist – an 'expert' connected with the research arms of banks, investment houses, brokerage houses, mutual funds and hedge funds. Indeed, in many instances, notes Philip Bowring, former editor of *Far Eastern Economic Review*, economic journalism degenerated into just stringing along quotes from different investment authorities.⁸

Interestingly enough, many of these people were expatriates or 'expats', to use a Bangkok term, some of them refugees from the collapse of stock-markets in New York and London in the late

1980s. Some of them were Generation X or pre-Generation X types who had been too young to participate in the junk bond frenzy in Wall Street in the Reagan years but discovered similar highs in the East. Many of these people were as young as Nick Leeson, the 26-year-old broker who brought down the venerable Baring Brothers, but to the reporters in the business press, their advice on

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going underweight or overweight in certain countries or taking short or long positions in dollars or moving into equities and out of bonds and vice versa were dispensed to readers as gospel truth. Now, this is not to say that all of these actors dispensed uniformly optimistic advice to investors playing the region. It did mean, however, that they could not afford to paint too a pessimistic picture of any country in the region, since, after all, their bread and butter came from bringing global capital into Asia.

A good illustration of the modus operandi of these operators is provided by a prominent Singapore-based expat expert, who was widely cited in the *Economist*, *Far Eastern Economic Review*, *Financial Times*, Reuters and the *Asian Wall Street Journal* as the last word on the Southeast Asian investment scene. This is how this expert assessed Thailand in December 1996, when it was becoming clear to the rest of us mortals in Bangkok that the economy was in real deep trouble:

"We believe that current pessimism about the Thai economy is based on a number of key misconceptions. We do not believe any of the following:

- Thailand is entering a recession.
- Investment is collapsing.
- Export growth is collapsing.
- The Bank of Thailand has lost control.
- Current account deficit is unsustainable.
- Thailand faces a debt crisis.
- There is a chance that the Baht will devalue.

Economic prospects for 1997: expect a rebound."⁹

Now, the reason for focussing on Neil Saker of Singapore's SocGen Crosby Securities is that he is one of the best examples of the way markets operate in East Asia. One would have expected that after such a massive misreading of the situation, he would have been run out of Asia by irate investors. But, lo and behold, Saker was able to transform himself from the prophet of permanent boom into the prophet of doom after the financial collapse of 1997, this time issuing statements about how investors would be wise to go underweight in their investments in the region for a long time to come. Lately, he has again reinvented himself, this time as the prophet of the 'Asian recovery', advising investors to go 'overweight' in Thailand and Singapore, which so happened to move into recession on the day he issued his recommendation.¹⁰

And, worse, he is quoted just as frequently today in the *Financial Times*, the *Far Eastern Economic Review*, *Asiaweek*, and the *Asian Wall Street Journal*. The market has such a short memory that it rewards charlatans instead of punishing them.

Academics: Bystanders or Accomplices?

But to lay the blame only on the business press and the investment advisers for the creation of an atmosphere of inflated expectations would not be fair. For the academic world played a key role. Indeed, it was economists and political scientists in the West, who when seeking to explain the high growth rates of the Asian countries from the 1960s on, formulated the interrelated propositions that an economic miracle had come about in Asia, that high growth was likely to mark the region in the foreseeable future, and that Asia would be the engine of the world economy far into the 21st century. What is even more amazing is that there was a remarkable consensus between the left and the right in the academic world that Asian growth was exceptional – though for diametrically opposite reasons. The right insisted that it was because of free markets, the left because of the role of the interventionist state.¹¹

Writing on why and how the tigers evolved and why Asia would be the centre of the world economy in the coming century became big business, and here the most thriving business was those books that sought to equip American businessmen and politicians with insights on how to deal with those formidable Asians, like James Fallows' *Looking at the Sun*. Not to be left out of the boom, the security experts sought to cash in on the Asian miracle mania by



Left: Dr Mahathir Mohamed. Below: George Soros.



writing on how Asian prosperity could produce either peace or war, with crass pop analysts writing on 'the coming war with Japan' or 'the coming war with China', or, like Harvard guru Samuel Huntington, expatiating on the long twilight struggle against the 'Islamic Confucian Connection'.

But whether they liked Asia or saw it as a threat, most academics and policy analysts believed in the long Asian boom.

The few of us who dissented from this consensus were attacked by both sides. Our critique of the increasing stresses of the NIC growth model on account of collateral damage in the form of environmental devastation, the subjugation of agriculture to industry,

the growing income disparities, and the growing technological dependency that was behind the creation of structurally determined trade deficits was dismissed by the right as well as the academic liberals in the centre as a case of 'leftist pessimism'.

But we were also dismissed by the academic left, who saw us as adhering to old-fashioned dependency theory or to obsolete variants of Marxism. Indeed, the most savage criticisms sometimes came from the left. To cite one example, a reviewer of *Dragons in Distress* in a progressive journal said that our suggestion in 1990 that Korea's problem in a few years' time would not be how to enter the First World but how to avoid being hurled back into the

Third World was simply laughable.

In any event, the World Bank stepped in to serve as arbiter between the left and right interpretations in the early 1990s and found merit on both sides of the argument – though more merits, it said, resided on the right than on the left. But what is particularly significant for this discussion is that the Bank declared that, despite slight deviations here and there, the Asian tigers had the economic fundamentals right and were thus geared to enter a period of even greater prosperity. Since the World Bank is the equivalent in development circles of the papacy in the Roman Catholic Church, the World Bank's book *The East Asian Miracle*, which came out in 1993, became a kind of bible, not only in the academic world but in financial and corporate circles, and the rush into Asia of speculative capital in the next few years must certainly be at least partly tied to its thesis of Asian exceptionalism, to Asia as the land of the never-ending bonanza.

To recapitulate the main points of this drama:

Crony capitalist practices pervaded Asian capitalism, but they were definitely not the cause of the financial collapse.

Northern finance capital was not conned into coming into investing in the region by dishonest Asian banks and enterprises that concealed the actual state of their finances. That is, they cooked their books but they fooled nobody.

Portfolio investors and banks moved vast quantities in and out of the region, often without any real effort to arrive at an assessment of local conditions and borrowers and largely as a result of herd behaviour.

The fundamentals of borrowers were often ignored in favour of what many investors and lenders saw as the real collateral or guarantee that they would eventually get a high rate of return from their investments, which was the 8-10 per cent growth rate of the country and that was expected to extend far into the future. Now with such a perspective, you should expect to end up with some bad eggs among your debtors, but if you spread your investment around in this region of everlasting prosperity, you were likely to come out ahead in the end.

Also playing a critical role as accomplices in the Asian financial crisis were three institutional actors: the business press, the investment analysts and, last but not least, the majority of academic specialists on the East Asian economies and political systems.

To reiterate: a global network of investors, journalists, investment analysts and academics were locked into a psychology of boom, where growth rates, expectations, analysis, advice and reporting interacted in a mutually-reinforcing inflationary fashion characteristic of manic situations. Just as in the case of the Cold War lobby in the US, there was a whole set of actors that – perhaps half-consciously, one must concede – developed an institutional interest in the maintenance of the illusion of a never-ending Asian bonanza so that, whether in the press, in the boardroom, or in the academy, alternative viewpoints were given short shrift.

But not to worry, many of the prophets of boom quickly adjusted and became prophets of doom or sanctimonious exponents of the crony capitalist explanation for Asia's problems. Many are coming through with their reputations intact and some are realizing that books on why Asia collapsed can be just as profitable as books on why Asia was going to be the driver of the 21st century during the boom.

But wait a minute: this only brings the story to July 1997, the day the floating of the Thai baht triggered the crisis. The screenplay to the sequel, from July 1997 up till today, still needs to be written, but for this part the story line is much clearer, with the IMF and the US Treasury, Japan and Prime Minister Mahathir serving as chief protagonists, with brief walk-on performances by China, Hong Kong and the World Bank.

And how will this film end? That part of the story remains to be written by the peoples of East and South-east Asia.

In this connection, one might note that, in the script for the first part, quite a number of characters – indeed, hundreds of millions of ordinary Asians – have not been brought in. This is because they were largely passive participants in this drama. Rather than acting, they were acted on. That may no longer be the case, judging from events in the streets of Jakarta, Kuala Lumpur and Bangkok. In the coming period, the region is likely to see the emergence of movements motivated by resistance not only to indiscriminate financial and economic globalization but to its cultural and political aspects as well.

Within the region, we are likely to see a move away from dependence on foreign financial flows and foreign markets toward economic strategies based principally on domestic financial resources and the local market. That means greater pressure on governments for redistribution of assets and income in order to create the dynamic domestic market which can serve as the engine of growth in place of the roller-coaster global economy.

Elements of the domestic alternative are already being discussed actively throughout the region. What is still unclear, though, is how these elements will hang together. The new political economy may be embedded in religious or secular discourse and language. And its coherence is likely to rest less on considerations of narrow efficiency than on a stated ethical priority given to community solidarity and security.

Moreover, the new economic order is unlikely to be imposed from above in Keynesian technocratic style, but is likely to be forged in social and political struggles. For one thing is certain: Mass politics with a class edge – frozen by the superficial prosperity before the crash of 1997 – is about to return to centre stage in Asia.

In short, Asian Financial Crisis III is likely to end with a bang, not a whimper. □

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Respecting Nature: the Maori Way

At the heart of Maori philosophy is the concept of *Mauri*, a life force which unites all creatures and enables them to flourish. Respect for *Mauri* necessarily leads to a respect for nature and our place in it. An accompanying understanding that man is neither detached from nor sovereign over the natural world, but rather that there is no dichotomy between the two, has enabled traditional Maoris to achieve and maintain balance in their relationship with the natural world. **By John Patterson**

When asked why the natural world should be respected, Maoris can give a range of answers, perhaps involving an idea of kinship, perhaps involving an idea of *mana* or of *tapu*. Each of these merits study in its own right. Here, the focus is on one particularly common answer, that we should respect the natural world because each creature has a *mauri* or life force,¹ and that this life force joins all beings – humans, gods, plants and animals, mountains and rivers and seas – into one interdependent whole, each part depending for its well-being upon the health of each other part and of the whole itself.

This idea of life force, which features in many world-views, is found at a very early stage of one of the Maori 'creation' narratives, where it is the first thing said to emerge from the original void or chaos, *Te Korekore*.² Later, when the great god Tane-mahuta breathes life into Hine, the figure he has made from the body of his mother the Earth, the concept of *mauri* features in the words he utters – *Tihe mauri ora!* – meaning (roughly) 'Sneeze, breathe of life!'³ As with any important Maori tradition, this expression forms a part of current living, so that a new venture, and particularly a formal speech, might be initiated by repeating these words.

Rituals such as this constitute significant links between the past and the present. To a contemporary Maori following traditional ways, the proper way to perform an important action may well involve an appropriate ritual. Spiritual entities such as *mauri* are thought to be subject not so much to the laws of science as to the traditional laws that govern ritual.⁴ To omit the ritual invites trouble: what we do will not be taken seriously, and it is likely to fail badly. Thus a formal speech should start with appropriate traditional words. There is a sense in which, when words such as *Tihe mauri ora!* are uttered by appropriate people on appropriate occasions, these events are, literally, re-enactments of the occasion upon which the words were first uttered.⁵ Furthermore, unless the rituals are performed on appropriate occasions, the world will not function properly. So, on occasion, one will hear to this day the ancient chants (*karakia*) which, according to tradition, were performed upon the initial emergence of *mauri* from the chaos of *Te Korekore*. This is not seen as an historical event that is over and done with; part of the idea is that it must be ritually re-enacted from time to time if the *mauri* of the world is to continue to flourish.

So, *mauri* is an important and very real part of a traditional Maori world. And it is part of a contemporary Maori world too. The concept of *mauri* is alive and well at the end of the twentieth century: a local newspaper featured a report on a proposal to cease discharging sewage into the local river, in which a Maori leader says that this discharge has brought about an imbalance in the *mauri* of the river.⁶ Without *mauri*, nothing can flourish. This

applies not only to obviously living things but also to rivers, mountains, villages and even institutions, activities and events. Thus the art exhibition *Te Maori*, which travelled from New Zealand to the United States, had its *mauri* symbolically located in a large block of *pounamu* (greenstone, jade). And carvers refer to the *mauri* of the wood they are carving,⁷ even though the tree from which it came is no longer alive.

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But, one might still ask, just why is it so important to respect the *mauri* of other creatures? A cheerful egoist might wonder why he should worry about others, so long as he himself is all right. And the answer to that is simple: the *mauri* of all creatures are interconnected. If one creature suffers unnecessarily, that causes unnecessary harm to many others. After all, all creatures are regarded as kin, related through the *whakapapa* or genealogical tables that trace all beings back to Papa and Rangi, Earth and Sky. The life force or *mauri* of each creature descends through these genealogical chains, and so is related to that of all other creatures. Rangimarie Rose Pere says that the *mauri* of each creature interacts with that of the Earth,⁸ so that if we treat the Earth well it will flourish. The welfare of the whole depends upon that of each individual; the welfare of each individual depends upon that of the whole. This is why the *mauri* of each creature is to be respected.

This imposes a severe limit to human domination of the environment. If the mauri of a river or forest is not respected, it will not flourish, it will lose its vitality and fruitfulness.

And this imposes a severe limit to human domination of the environment. If the *mauri* of a river or forest is not respected, it will not flourish, it will lose its vitality and fruitfulness. Here as always the idea of balance is important. The natural and healthy state of the natural world is a state of balance, and the natural and healthy state of the human world is also a state of balance, balance with one another and balance with the natural creatures with whom

we live. Any intervention we make must be reasonable, not so much in the fashionable sense of what is economically profitable to the intervening individual or species, as in the deeper sense of maintaining harmony and balance amongst the various creatures involved. So we have to tread with care, restricting our impact on the natural environment to what is reasonable and healthy.

The artefact produced must be worthy of the material from which it is produced.

Some contemporary Maori artists use this idea of *mauri* when spelling out how they relate to the natural materials they use. To make a wooden carving, one has to kill a tree. To weave a fine cloak, one has to kill at least some of the leaves of a flax plant (*harakeke*). The distinguished weaver Erenora Puketapu-Hetet⁹ spells out the conditions that govern the process of weaving. Without a good reason, the practice would not be acceptable, on grounds of kinship alone, given a Maori view of our kinship with all creatures. We cannot simply kill or harm our cousins. However, the *mauri* of the tree or plant can be seen as living on in the carving or cloak, provided that the artist proceeds with skill and care. The artist produces culturally significant artefacts, which have an important place in the life of their communities. Thus the artefacts have a *mauri* of their own, related to the *mauri* of the original plants from which the artefacts were produced and to the *mauri* of the artist and of the community in which they play their cultural part. Respect for the *mauri* of the material might be shown by working in harmony with its natural character – for example by following the grain of timber when carving – and this is significant, for at times the term *mauri* can mean something like ‘essence’.¹⁰ In all of this, what is of environmental importance is the idea that the use of natural materials stands in need of non-economic justification, that these materials cannot be seen simply as materials, as means to our ends. They are also seen as ends in themselves. And so any use to which they are put must be important enough to justify our treating them as ends at all. The artefact produced must be worthy of the material from which it is produced.

One of the difficulties of studying Maori philosophy from the outside is that important philosophical ideas do not translate straightforwardly into English. These are part of another culture, often expressing ideas that are foreign to English ears. So we should not be surprised that the meaning of *mauri* is rather elusive. Often it is well enough translated as ‘life force’ or ‘life principle’, but sometimes it is better to translate it as ‘character’, ‘essence’, ‘uniqueness’, ‘quality’ or even ‘value’. Sometimes the idea of *mauri* has a distinctly metaphysical flavour. Maori Marsden, who was both a Christian priest and a traditional Maori priest, says that it is *mauri* that makes all things cohere in nature.¹¹ And it is not only a unifying force; it is also a vivifying force, a life force. Now, scientifically-minded Westerners may not welcome this. Until recently, they might argue, such ideas were familiar in the West as in the East (Chinese *qi*, Japanese *ki*), but we have come to reject these ideas as unscientific. A scientific world-view does not easily accommodate the idea of spiritual entities such as *mauri*. There is no need, they might urge, to postulate any force over and above those known to science.

That is a question which we might be wise to leave open. On the one hand, it is arrogant to assume that science has discovered all there is to discover about the world. On the other hand, we can learn from the many superstitions we have rightly rejected over the years. And there is a straightforward way of leaving the question open which does at least some justice to both points of view. The technique is always to look for an *ethical* message when the word *mauri* is used.¹² In looking for ethical dimensions of *mauri* we do not have to dismiss the metaphysical dimensions, but we can at least maintain an open mind on the reality of spiritual entities while attending

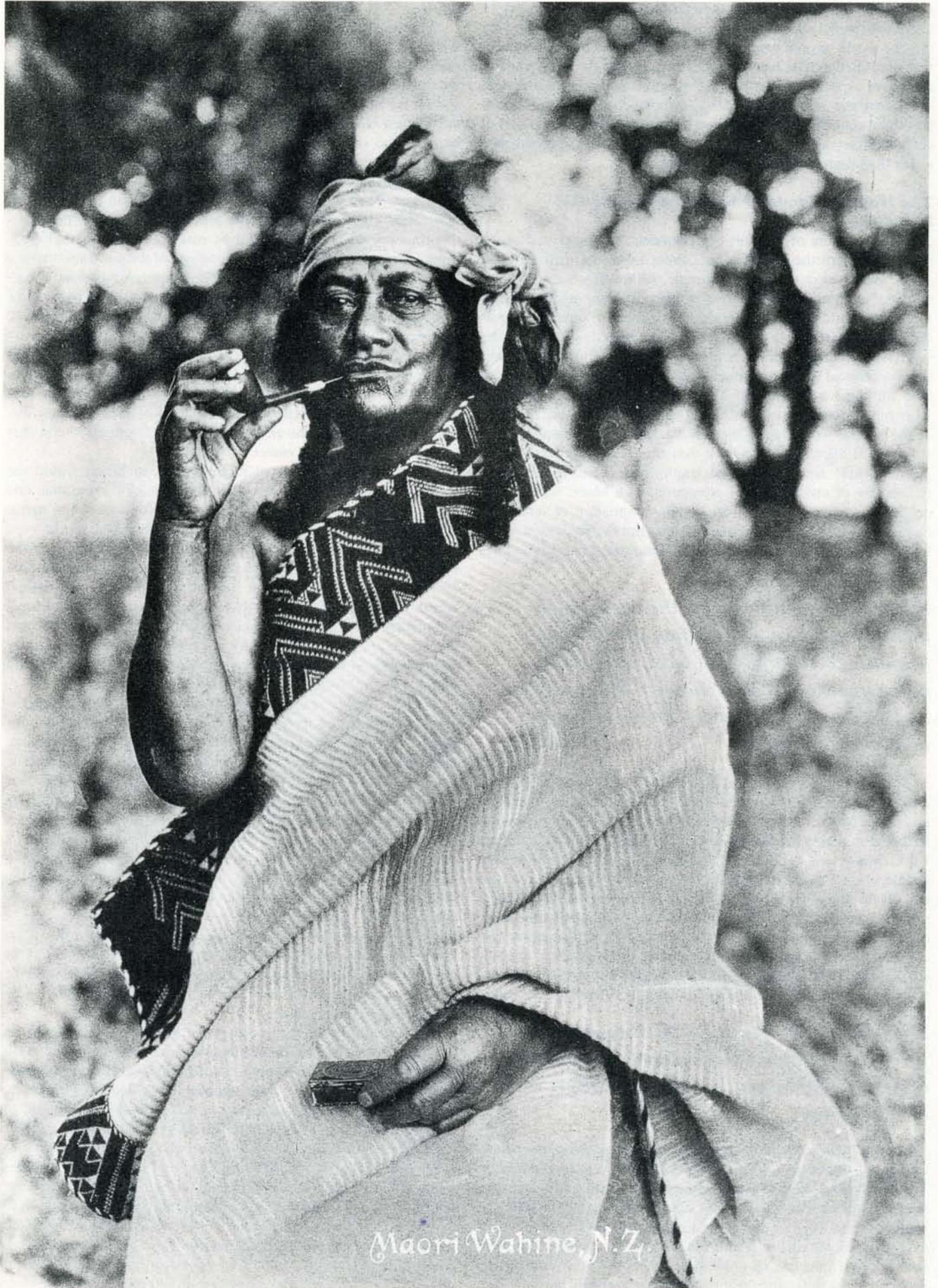
to another important aspect of *mauri*. So, when a formal speech begins with the words *Tihe mauri ora!* we can notice not only the metaphysical assumptions but also, as Timoti Sam Karetu points out, the fact that the speaker is claiming the *right* to be heard.¹³ When the weaver Erenora Puketapu-Hetet says that she tries to respect the *mauri* of her weaving materials by giving them another dimension such as beauty, we notice that she is advocating that we enhance the value of the natural materials we use.¹⁴ And when the carver Rangi Hetet says that he respects the *mauri* of the timber he carves by using raw slabs rather than milled ones, we might notice the implicit criticism of the unfeeling way that Europeans are thought to treat the natural world, we might notice the way Hetet tries to achieve vitality and energy in his carving by retaining what he can of the character or *mauri* of the timber.¹⁵

Mauri and Respect for Nature

If we apply this sort of principle to all of our interactions with the natural environment, the results are radical. The idea of respect for *mauri* fleshes out as the idea that we should respect the essence or character of each creature and of each habitat. This applies not only to the materials used by artists; it applies to the foods we eat, the timber, steel and concrete we use to make buildings and roads and cars, to the chemicals we extract to fuel those cars and to make plastics and pesticides. All of these involve interfering with the *mauri* of some natural item. A Maori philosophy of respect for *mauri* requires at least that the character of these items be damaged as little as possible. It can even require that it be enhanced. In practice that is a tall order, but it is not so tall as to be beyond our vision. It can at least stand as an ideal. It can at least encourage us to see each item in the world around us as being there in its own right, being an end in itself, not merely a means to our ends. And to do this requires understanding: understanding things ‘in themselves’, seeing them, say, from the point of view of their ecological position, not only from our own point of view. A philosophy of respect for *mauri* involves understanding the nature of all creatures and ecosystems, understanding their distinctive qualities, understanding what makes them of value to one another, and learning to respect them for what they are. If we manage to do all that, chances are we will have a good environmental philosophy.

On the other hand, the idea of mauri might relate more to a positive aspect, the idea that our relations and interactions with other creatures should be sensitive, sympathetic and creative.

Although there is more than one way of expressing in Maori the idea that the natural world must be respected, the concepts involved are not independent. The idea of life force or *mauri*, for example, might not on its own give a compelling reason for respecting other creatures. It may not be until we realize that our *mauri* are interconnected with the *mauri* of all other creatures that we see the importance, to us, of treating them with respect. That is, the ideas of *mauri* and kinship can be employed together, in a Maori environmental philosophy. There are links too between *mauri* and *tapu* (conventionally translated as ‘sacred’). Indeed, no less an authority than John Rangihau declares that these two words, as he understands them, may be interchangeable.¹⁶ One way of seeing or expressing a connection between *mauri* and *tapu* is in the idea that the *mauri* of humans is said to come from the *atua* or gods, initially when the breath of life was imparted to the first woman, and these same *atua* are also said to be the source of all *tapu*. However we understand the connections, within an environmental philosophy we are wise to consider the messages relating to or expressed in terms of *mauri* and *tapu* as a whole. The differences may be more a matter of emphasis than anything deep. To say that the natural



Maori Wahine, N.Z.

environment is *tapu* might be thought to focus on the negative or restrictive aspect of a Maori environmental philosophy, the idea that the world has not been put there for our benefit and our benefit alone. On the other hand, the idea of *mauri* might relate more to a positive aspect, the idea that our relations and interactions with other creatures should be sensitive, sympathetic and creative, sensitive and sympathetic to the nature or special character or *mauri* of each creature, and dealing with it in creative ways that enhance rather than destroy that special character.

The Holistic Focus of Maori Environmental Philosophy

A striking feature of a Maori environmental philosophy is that it does not ignore the fact that we cannot leave the natural world alone. We do have to eat, for example. Although we are urged to treat the environment with great respect, with the respect due to kin and to children of great gods, reasonable use of natural creatures and materials is allowed for. But the underlying philosophy is in sharp contrast with the familiar background to Western thinking, the biblical idea that humans are superior to the natural world, that we have a God-given sovereignty over other creatures.¹⁷ Although arguably compatible with the idea that we are stewards of the natural world rather than its masters, as commonly understood the Biblical view can have disastrous consequences, allowing at worst for unrestricted exploitation, and requiring a philosophy of environmental protection. In a Maori world-view, on the other hand, there is no inbuilt domination of nature by humans. To start with, at least, all species are members of a single family. There is thus no fundamental dichotomy between humans and other creatures.

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So, for example, the idea of a wilderness, so dear to many western environmentalists, makes little sense in Maori. That too involves a basic dichotomy between humans and the natural world. Rather than seeing a world of humans in conflict with a wilderness world, Maori tend to think even of the forests as a home, where the people of the land, the *tangata whenua*, can live well, in the land and off the land.¹⁸ Of course it is possible in such a world to create a wilderness and for the Maori this can be done locally and from time to time, perhaps by imposing a *rahui*, a form of temporary special *tapu*, for example when a species or place needs to recover from material, biological or spiritual damage, or when it has special spiritual or cultural significance. But apart from such special cases,

Much the same sort of justification has to be given for killing a fish or a bird or a plant as must, to a Westerner, be given for killing a human being.

it is not a 'hands off' philosophy. Human use of the natural environment is allowed, so long as it is reasonable and respectful use. There is no idea here of a battle between humans and the natural world. Nature does not have to be subdued or mastered. Rather, the idea is to find ways of living in harmony with all creatures, wherever possible. We do not set ourselves apart from nature; we accept our role within the natural order. And part of our role in the natural order involves sheltering ourselves from the elements, eating when

we need food, and defending ourselves against hostile creatures.

What is striking to the outsider is that Maori tradition recognizes that interfering in the lives of other creatures needs to be justified. To many Westerners, the familiar idea is that, cruelty apart, we can do what we like with the natural world so long as we do not spoil it for other humans, now or in the future. That is, the familiar Western view is human chauvinist. But in a Maori world-view, humans and other creatures are linked by ties of kinship, so a human chauvinist position is not possible. Much the same sort of justification has to be given for killing a fish or a bird or a plant as must, to a Westerner, be given for killing a human being. And in Maori life, such justifications are typically in terms of the traditional narratives. These start out by making it clear that all creatures are naturally *tapu*, being descendants of the god Tane-mahuta and his brothers, and the precedent for human exploitation of natural resources is encoded in the story of the battles between these brothers, in which Tu-mata-uenga, the warlike ancestor of humans, eventually kills and eats his brothers, thus symbolically removing their *tapu*. These actions can live on in the descendants of the great *atua*; when Maori wish to remove the *tapu* from a food resource, they can recite the appropriate incantations (*karakia*), thus performing a ritual re-enactment of the action of their ancestor Tu-mata-uenga in eating the ancestor of the food concerned and thus overcoming their godly *mana*, their *tapu*.¹⁹

Given these precedents, it might seem that Maori would see themselves as superior to the other creatures, and more than one eminent Maori scholar has interpreted the Tu-mata-uenga narratives this way.²⁰ Now in a sense, within the traditional world-view the Maori *are* Tu-mata-uenga, and the plants and animals *are* the brothers and sisters of the Maori, so in a sense the traditional Maori do place themselves in a position superior to the natural world. But an advantage of a system or ethics based upon ancestral precedent is that it can contain conflicting or even inconsistent precedents; in particular, any Maori tradition of human superiority over the natural world is balanced by a tradition of human kinship with the natural world, and all that that entails.

And on another reading of the Tu-mata-uenga story the apparent inconsistency disappears. The story can be read as taking it for granted that the whole natural world is *tapu*, each creature coming under the *mana* of one or other of the important *atua*. Thus the story takes it for granted that the natural world is not available for use by humans until the *tapu* is removed. This means that humans initially have no *mana* over the natural environment. This environmental *mana* has to be gained or earned, before food can be eaten and the like. The means presented for present-day humans to gain this *mana* is through ritual, more or less asking or telling the *atua* involved to hand over some of their *mana* to humans. Now, when we thus gain such *mana*, we humans may be tempted to think of ourselves as superior to the natural world, but this is no more than a temporary and partial superiority. Different creatures must be approached through different rituals, and ritual removal of the *tapu* of a creature is not a permanent matter but has to be renewed from time to time.

A Maori philosophy of respect for the natural world can be based upon an idea of kinship between humans and other creatures. It can also be based upon the idea that all creatures are naturally *tapu*. It can also be based upon an idea of *mauri* or life force. But what if we do not find it easy to accept the Maori account of the origins of humans? What if we do not find it easy to accept that creatures are naturally *tapu*? What if we do not find it easy to accept the idea of *mauri*? We might be very sympathetic with the thought that we should treat all creatures with respect, but uneasy with the reasons given within a Maori world-view. The solution to be proposed is that, if we have these worries, we should work out a Maori theory of respect for the environment based upon the fundamental idea of *mana* – authority, power and standing. It turns out that the resulting ideas about how we should relate to the environ-



ment are much the same as when we start from kinship or *mauri* or *tapu*. What is more, this approach makes it easy to ask important questions about our own place in the scheme of things, about our own environmental *mana*.

Given the close link between *mauri* and *tapu*,²¹ we can expect that if we can account for respect for *tapu* in terms of respect for *mana*, we should be able to do the same for respect for *mauri*. And there are direct links worth noting between respect for *mauri* and respect for *mana*. One commentator at least describes *mauri* as a concentrated form of *mana*.²² He is talking about what we might

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call physical *mauri*, ritually important stones or other objects in which the *mauri* of something important such as a crop is said to be concentrated. Here at least, he is not making any fundamental distinction between *mauri* and *mana*. And a second link can be made between *mauri* and *mana*: namely that the *mauri* of a creature would not be believed to matter unless that creature also had *mana*. We may agree that all creatures contain some life force, but until we accept that the creatures are important through their life force or in their own right, we have no good reason to respect them. So *mauri* on its own is not a good reason for respecting nature; the creatures that have the *mauri* need also to have *mana* if

they are to command our respect.

Another way of changing the focus from *mauri* to *mana* is to see that even within a traditional Maori context, respecting *mauri* is just one way in which *mana* may be respected. The general idea, of which respect for *mauri* is one aspect, relates to a conception of the unity of all things, plus the importance of each individual thing. And although the *mana* of a creature might be thought of as simply being its importance, that would be an over-simplification. *Mana* also relates to unity, to the connectedness of each thing with all other things. No creature has *mana* on its own. Its *mana* relates as much to its interrelations with other creatures as to its individual character and activities. Maori traditionally express these interrelations in terms of kinship, but there are other ways of saying much the same thing, one obvious way being in terms of modern ecology and evolutionary biology. A good way of coming to know about the *mana* of any creature, human or non-human, is to find out about its value in relation to other creatures, and part of this is its value to those other creatures. So, if we are not able to accept literally the idea that all creatures have and share a *mauri* or life force, we can turn to the more general idea that all creatures have *mana*, and that the *mana* of each creature is woven in with the *mana* of a host of other creatures. This way, we can respect the *mauri* of a creature by respecting its *mana*, and that of the other creatures whose lives and *mana* are interwoven with its own.

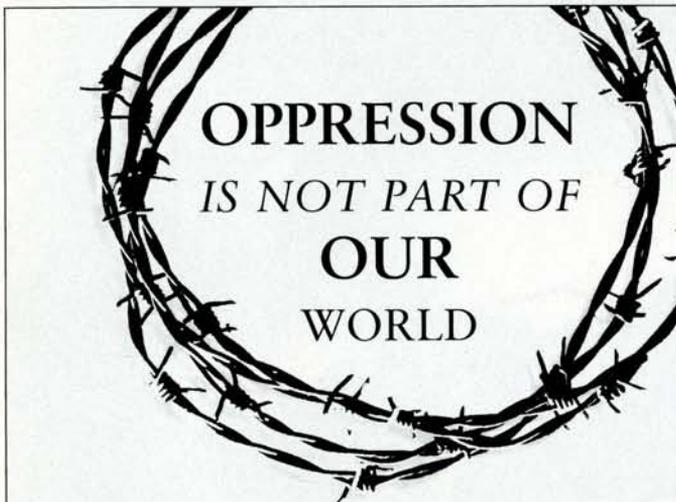
Conclusion

Through the idea of *mauri* or life force, the Maori are able to enunciate a sophisticated and powerful environmental philosophy. A philosophy which demands that we treat the natural world with respect, that we do this to the world as a whole and to each and every one of its constituent parts, that we acknowledge and care about the special character of every creature, and try to make sure that our interactions with the natural world leave it a better place. A Maori philosophy is on the one hand about unity, while making adequate allowance for reasonable human activities. □

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Water Fluoridation: the truth they don't want you to know

The government is preparing to introduce legislation intended to apply greater pressure to water companies to fluoridate the public water supply, supposedly to improve public health. In reality such legislation is merely a convenient excuse to dispose of a chemical that is highly toxic and dangerous, both to the environment and to human health. But this is the side of the debate that hasn't been discussed in the public arena, and will never be either, if the fluoridation lobby is allowed to dominate the argument. **By Robin Whitlock**

A RECENT ARTICLE IN *The Independent* revealed that the government is again looking at fluoridation of the public water supply as a possible means of achieving nationwide improvements in dental hygiene.¹ To the casual observer, given the highly erroneous impression that the presence of fluoride in toothpaste is beneficial in the treatment of dental caries, such a measure may understandably appear desirable and worthy of public support. However, many water authorities across the country have long understood the risks associated with fluoridation, risks that the government and the various official organizations that support such a measure continually deny. Consequently these water companies resolutely oppose fluoridation and it is for this reason that the Minister for Health, Tessa Jowell, is proposing to give Health Authorities the power to compel water companies to fluoridate – whether they wish to or not.

The proposed legislation, already working its way through the corridors of power in the form of a White Paper, does provide for a period of public consultation, but we have seen such public consultation before (the Conservative government's roads programme springs to mind), and it is possible that opportunities for public opposition to fluoridation will be merely cosmetic. With the prospect of enforced fluoridation becoming increasingly likely, it is important that as many people as possible understand the dangers fluoride presents to human health so that the fluoridation programme can be stopped before it is able to achieve any enduring harm. Here then are some uncomfortable facts, facts that the fluoridation lobby *doesn't* want you to know.

With the prospect of enforced fluoridation becoming increasingly likely, it is important that as many people as possible understand the dangers fluoride presents to human health.

There are two forms of fluoride. One of these is calcium fluoride, which is a natural substance occurring in water at very low levels of 0.01–1 parts per million and a substance which the various organizations involved in promoting fluoridation constantly draw attention to when attempting to justify their case. The other form of fluoride is sodium fluoride, which occurs alongside vari-



ous related substances such as fluosilicic acid as an extremely dangerous industrial by-product produced by such industries as aluminium, ceramics, phosphate fertilizers and nuclear power. This form of fluoride is an accumulative poison, even more toxic than lead and slightly less toxic than arsenic.² It is not biodegradable and therefore establishes itself in steadily increasing amounts within the organs of humans and animals and within the environ-

ment at large.

That this artificial form of fluoride is indeed poisonous to humans was acknowledged by a spokesman for Proctor and Gamble, the manufacturers of Colgate toothpaste, admitting in an edition of *Environmental Action* in 1984 that a small tube of toothpaste "theoretically, at least, contains enough fluoride to kill a small child".³ Furthermore, the Belgian chemical company Rhône-Poulenc maintains specific regulations for the treatment of fluosilicic acid and for prohibiting the release of the chemical, which it regards as hazardous waste, into the environment. It even advises contact with the supplier of the chemical "to see if he will take it back".⁴ Certain American organizations also recognize the dangers of fluoride. In 1971 the US National Research Council revealed that American industrial fluoride pollution had seriously damaged plants and livestock within an area of some 20 miles from the original point of production. In that same year the American Park Service discovered excessive levels of fluoride in pines, firs, grasses, shrubs and hay situated in close proximity to an aluminium smelter and phosphate plant.⁵ The Ministry of the Environment for the Province of Quebec in Canada and the Chief Toxicologist of the Virginia Department of Health have also both confirmed the hazardous effects of fluoride in two separate reports in 1979 and 1980.⁶

Adverse effects on human health from fluoride are many and varied. Perhaps the best known is dental fluorosis which appears as a mottled effect on the teeth and is in essence the first indication of wider fluoride poisoning which may include the bones, since teeth are generally regarded by medical experts as a reliable indicator of the condition of the bone structure. The risks of fluorosis are particularly relevant to children who are poorly nourished relying on water supplies containing up to 0.4 parts per million (ppm) of fluoride.⁷

The Physician's Desk Reference also lists a widespread number of other complaints, besides fluorosis, as prominent effects of fluoride poisoning and these include atopic dermatitis, eczema or urticaria, gastric distress, headaches and general fatigue.⁸ Fluoride is also known to attack the immune system, an effect confirmed by researchers during a court hearing in Scotland in 1981.⁹ Other studies have shown that fluoride is instrumental in the disintegration of collagen, a protein that is an essential structural component of skin, muscle, ligaments and bone.¹⁰ Such findings fluently explain reports of arthritis, torn ligaments and wrinkled skin in association with fluoride.¹¹ Researchers from several universities around the world have also confirmed the tendency of fluoride to induce genetic damage at a level of 1 ppm, almost exactly the level of concentration being considered by the government.¹² Further research examining the occurrence of birth defects has found that such defects are noticeably higher in fluoridated areas.¹³

Researchers from several universities around the world have confirmed the tendency of fluoride to induce genetic damage at a level of 1 ppm, almost exactly the level of concentration being considered by the UK government.

It is truly astounding that fluoridation continues to be recommended as an important public health measure in the light of such clear evidence to the contrary. Even more astounding is that several studies have shown fluoride to be totally useless in the treatment of tooth decay. Such evidence is supported by the 'decayed, missing or filled teeth' (DMFT) Index which consistently reveals no significant difference in occurrences of dental caries in fluoridated areas than those in non-fluoridated areas.¹⁴ According to the American anti-fluoridation expert John Yiamouyiannis, the British Chief Dental Officer even admitted, in a personal communication in 1980, that no British research has shown a level of 1 ppm of fluo-



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ride to be effective in dental treatment,¹⁵ whilst the US Center for Disease Control reached a similar conclusion and testified to the effect before a subcommittee of the Committee on Appropriations in this same year.¹⁶ Both organizations have also admitted that no epidemiological studies have reached the standards of objectivity required by scientific procedures to eliminate examiner-patient bias.¹⁷ Similarly, the currently accepted view of the Hastings Experiment which took place in New Zealand over the period 1954-1970 is that the reductions in dental caries claimed as a result of fluoridation were largely the results of changes in diagnostic procedure and are largely beyond the limits of statistical credibility.¹⁸

Nevertheless, those in favour of fluoridation often turn to specific epidemiological trials which they believe they are able to present to the public in order to justify their case. One such trial is the Grand Rapids-Muskegon study which after five years proved that incidence of tooth decay in the non-fluoridated Muskegon area had fallen at the same rate as those in the fluoridated Grant Rapids region, demonstrating clearly the irrelevance of fluoride in dental health. Muskegon was quickly dropped from the trial and subsequent references to the case mentioned only the decline of tooth decay in Grand Rapids, without any mention of Muskegon.¹⁹ Needless to say, studies in Britain, Denmark and Japan have reached similar conclusions.

Considering all the harmful effects, the reader may well ask who actually benefits from water fluoridation. Declassified documents obtained by two American researchers, Joel Griffiths and Chris Bryson, reveal that fluoride was an important ingredient in the manufacture of weapons grade uranium and plutonium during the race to produce the world's first atomic bomb, a programme known as the 'Manhattan Project'.²⁰ Many of the arguments suggested by the fluoride lobby, as evidence of the safety of the chemical, were initially presented to the public by A-bomb scientists anxious to safeguard the project against litigation by workers whose health had been damaged by the chemical. Naturally, the truth about fluoride was registered as 'Top Secret' and in essence these same scientists were instrumental in launching the cover-up that continues to this day. The research of Griffiths and Bryson also shows that the A-bomb scientists played an important part in studies performed on US citizens of Newburgh, New York, between 1945 and 1956, completely without their knowledge or permission, in order to obtain information on the effects of fluoride on human health.

Government agencies charged with the task of cleaning up fluoride pollution in the environment also have much to gain through water fluoridation. In 1983 the American Environmental Protection Agency made exactly this recommendation:

"In regard to the use of fluosilicic acid as a source of fluoride for fluoridation, this agency regards such use as an ideal environmental solution to a long-standing problem. By recovering by-product fluosilicic acid from fertilizer manufacturing, water and

air pollution are minimized, and water utilities have a low-cost source of fluoride available to them.⁷²¹

One of the most powerful and influential fluoridation lobbies in Britain is the British Fluoridation Society Ltd (BFS), which operates under the auspices of the British Dental Association and is funded by the government, through the Department of Health, to promote the cause of artificial fluoridation. The BFS also maintains close relations with various chemical companies involved in the supply of fluoride for water fluoridation. The BFS internal statement advises that the society should exert 'continuous pressure' on national and local government and mobilize similar pressure from dentists. It also recommends a continuous campaign of public and political pressure involving the rejection of all opposing arguments, the recruitment of influential persons and the persuasion of large organizations such as the TUC and the CBI. It also encourages and promotes the provision of information to a plethora of community groups, schools and colleges and advises the close monitoring of parliamentary debates. According to the National Pure Water Association (NPWA) this organization has received three quarters of a million pounds since 1991, not including money for expenses and other 'hidden costs'.²²

Fluoridation does not make medical or scientific sense, is extremely dangerous and is downright immoral. The fluoridation lobby knows this all too well and so it is in their interests to maintain a permanent cover-up of the facts.

The sheer amount of money the BFS receives is a graphic indication of the concern felt by the fluoridation lobby over the potential for common sense and sound scientific arguments to deprive them of the goal of nationally enforced fluoridation. Fluoridation does not make medical or scientific sense, is extremely dangerous and is downright immoral. The fluoridation lobby knows this all too well and so it is in their interests to maintain a permanent cover-up of the facts. One example of this arose in 1985 following the Scottish court hearing mentioned earlier. The presiding judge, Lord Jancy, having examined the evidence, ruled that fluoridation was essentially unlawful, a verdict that meant in effect that certain water authorities in the Midlands had been committing an illegal act for nearly 20 years. As a result of this case, the Conservative government had to move swiftly to legalize fluoridation. The

If fluoridation is forced upon the British public without their express consent, the government may very well stand accused of enforced medication. The danger presented to public health should not be underestimated; fluoridation has the potential to injure, maim and disable.

NPWA suggests in their literature that the government's bill only became law through the subtle coercion of anti-fluoridation MPs. In short, it was suggested to them that a vote against the bill would be detrimental to their long-term interests. Such pressure is distinctly undemocratic and, unfortunately, has resulted in a situation whereby the fluoridation lobby currently possesses a convenient legal platform from which to enforce fluoridation right across the nation, a policy that the present Labour government is even now on the verge of implementing.

It is completely outrageous that, given the long years of scientific and medical research on this issue and the knowledge

obtained as a result, the government is even contemplating such a widely damaging programme as water fluoridation. In essence, if fluoridation is forced upon the British public without their express consent, the government may very well stand accused of enforced medication and thus a breach of human rights over the individual's freedom to control his or her own bodily processes and standards of human health. The danger presented to public health should not be underestimated: fluoridation has the potential to injure, maim and disable. If the government remains intent on its introduction, the only other method of preventing such a disaster lies solely with the ordinary citizen drawing attention to the scientific data and being prepared to launch legal proceedings against authorities and the government itself wherever and whenever necessary.

There is still time to stop the fluoridation bandwagon. It has been stopped in its tracks before, and it can be stopped again.□

Robin Whitlock is a full-time researcher/writer. He lives in Somerset.

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Where Development will lead to Mass Suicide

By **Mónica del Pilar Uribe Marin**

“Our law is to take no more than is necessary; we are like the Earth that feeds itself from all living beings, but that never takes too much because, if it did, all would come to an end. We must care for, not maltreat, because for us it is forbidden to kill with knives, machetes or bullets. Our weapons are thought, the word, our power is wisdom. We prefer death before seeing our sacred ancestors profaned.” – *the U’wa people.*



ALL PHOTOGRAPHS: PAUL SMITH/PANOS PICTURES

The presence in Washington of Roberto Afanador Cobaría, President of the Association of Traditional U'wa Authorities, before different international bodies demonstrates yet another of his community's determined last-ditch efforts to fight for its rights to an independent existence. In Colombia, the U'wa have a culture that is one of the most deeply rooted in tradition. Today that culture is on the verge of extinction, and the U'wa people, unprepared to compromise their ways to accommodate a fundamentally destructive 'development' pattern, are threatening to commit collective tribal suicide.

Central to U'wa philosophy is the importance of accumulated ancestral environmental knowledge. With that knowledge, passed down through the generations, comes an understanding of and respect for the workings of nature, and a means not only of surviving, but of flourishing as a people. Thousands of years old, U'wa culture is rich in myths, chants and poetry, all of which form part of what they describe as the "permanent

ritual of life".

The U'wa oral tradition, which plays an elemental role in learning, has absorbed the changes that followed the Conquest, the colonial period and Colombia's republican life. An underlying theme has been the notion of the Riowa (the Whites) and their goals of possessing all the riches of the world. Nevertheless the U'wa have survived the passing of centuries on account of never having abandoned their chants and rituals, the two most important of which are the chanted myths of El Reowa – the ritual processes of purification – and El Aya, which is celebrated after El Reowa, for the purpose of maintaining the order of the cosmos and those beings that inhabit it.

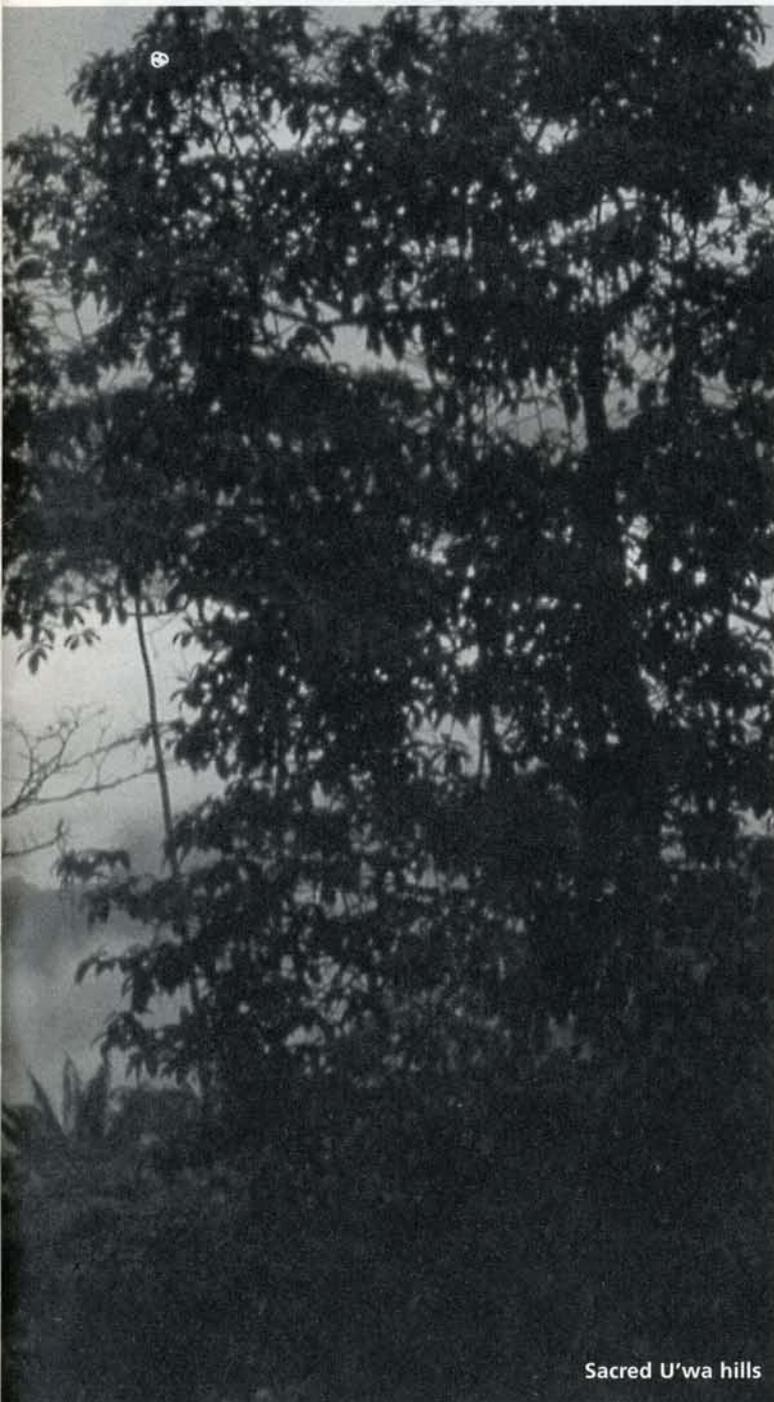
Residing in the mountains, the U'wa maintain communion with the different levels of the universe, the spiritual and the physical worlds, through their spiritual leaders, the Werjayáas, to whom the utmost respect is paid. It is they who read daily and cyclical events through the eyes of their ancestors, and it is they who act as guardians of ancestral knowledge. Their purpose is simply to maintain harmony between the forest, the garden, man and spirit. The world-view of the U'wa, like those of all traditional peoples, is tied intricately to the land of their ancestors, the environment of which they see themselves to be an inseparable part, and the spirits that they have come to know, and which govern the order of the cosmos. To be severed from their place, to be removed from the context of the stories which they have passed down from generation to generation, is to be killed as a people, and is, as they have made very clear, a fate worse than death.

To be severed from their place, to be removed from the context of the stories which they have passed down from generation to generation, is to be killed as a people, and is, as they have made very clear, a fate worse than death.

The cosmological beliefs of the U'wa, together with their religious, mythical and poetic knowledge has always kept them both immersed in the actual world and yet united firmly to that of the spirits. Anthropologist, Ann Osborn, explains that "the acts of the ancestors and the gods are recreated every instant through daily practice as well as in the very special temples with the celebration of principle rites ... The U'wa exist somewhere between the two ancestral divinities, Kaba-Yaya and Thira (Sira), which both represent and embody the delicate balance between the lower and upper extremes of the cosmos. Their role for the most part is to maintain that equilibrium and they must propitiate in the correct and timely unravelling of the processes that take place within the universe through mediating the celebration of the chanted myths and through ensuring that one's life is governed by the rules of balance and harmony. If that equilibrium is broken, the consequences are the very reverse of order: red moves upwards and invades the white, all of which signifies the end of the universe."

According to myth, Yagshowa handed over the newly created world to the U'wa, to the Werjayáas and chiefs. With the handing over of the world, the Werjayáas were charged also with the responsibility of ensuring that cosmic harmony be maintained. To that end, they were granted the unique ability to communicate with the gods, the different worlds and the spirits. It is they who carry the necessary knowledge of how to recite and chant the myths; it is they who understand the reasons for sickness and death, and it is they who must act to restore the natural order in the event that sickness arises.

Recent colonization has nevertheless brought with it a loss of lands and encroachment, with the result that after the demise of the Biribirá and the Rúba that once lived in Chiscas, Güicán, El Cocuy



Sacred U'wa hills



U'wa tribesman with bow and arrow

and Chita, just three clans survive to this day. They are the Kubaruwa (Cobaría), the Kaiboka (Bókota) and the Tagrinuwa (Tegría); the remainder are dispersed in families.

Loss of Land

Now numbering some 5,000, the U'wa, whose name means intelligent people that know how to speak – belong to the Chibcha linguistic macrofamily. They are one of the few peoples that have managed to survive in Colombia and yet have still maintained their ancestral culture in a living form. In effect, the majority of the U'wa live among the unreachable peaks of the Sierra Nevada del Cocuy-Guicán, from where they have seen their sacred lands disappear over the years, lands which once stretched to include the current (non-U'wa) populations that are now to be found in Chinacota, Málaga, Oiba, Chima, Bucaramanga, Chiscas, Chita, Salinas de Chita, Guicán and the piedmont plains of Tamara, Tame and Morcote. Their lands once embraced the Eastern Cordillera, from the Sierra Nevada del Cocuy to the Sierra Nevada de Mérida in Venezuela.

In previous times, before the arrival of the Spaniards in the sixteenth century, the U'wa territory covered 1.4 million hectares. The slow, inexorable loss of their lands began from the time of the Spanish Conquest. Today, not even their settlements on the eastern slopes of the Sierra Nevada del Cocuy-Guicán are contiguous one with the other: in the province of Boyacá, between the River Margua and the upper reaches of the Sierra Nevada del Cocuy, they are interrupted by the municipalities of Cubará and Guicán; in Arauca, between the Rivers Cusay and Bojabá, by those of Saravena, Fortul and Tame; in the North of Santander, by the municipalities of Toledo and Chitagá; in Santander, by the jurisdiction of Cerrito and Concepción and in Casanare, along the left bank of the river that bears the same name, by the municipality of Hato Corozal.

In reality, and also because of the processes of colonization, the U'wa are confined to the resguardos (territories over which the indigenous communities have inalienable rights, at least down to the subsoil) Cobaría, Tegría, Bokota, Rinconada (61,500 hectares)

and the reserve, Agua Blanca, Taburetes (8,000 hectares). Given the loss of land, the community requested the Colombian Institute of Agrarian Reform (Incora) to grant that the fragments be combined into a single U'wa Resguardo. Currently, the total land in their hands comes to nearly 201,000 hectares, which still only represents some fourteen per cent of the ancestral territory. But, such hopes were crushed when at the beginning of 1998, Incora told them that it would enlarge only the Agua Blanca reserve. The U'wa have rejected that offer on the grounds that they already have the right of occupation and why should they accept something when that which they have rightfully asked for is being denied them?

Some members of the community have crossed over the fragile frontier that separates them from the Western way. It is those people who have proven to be the weak link in the now threatened and delicate web that is the U'wa world, since it is they, and they alone who have granted access to some of the world's largest oil companies into what little remains of the U'wa lands.

More significantly in today's context is the fact that some members of the community have crossed over the fragile frontier that separates them from the Western way. They have removed themselves from the environment which their world-view enables them to understand, and have exposed themselves to the commodities offered in the world of the Riowa (Whites). Some have broken definitively with the threads that bind them to the U'wa community and instead seek to live the life of modern society, with the result that they in turn are abandoned by their own people. It is those people who have proven to be the weak link in the now threatened

and delicate web that is the U'wa world, since it is they, and they alone who have granted access to some of the world's largest oil companies into what little remains of the U'wa lands.

Chronicle of a Fight

The purpose of Cobaría's visits to Washington in 1997 was to ask the Inter-American Commission on Human Rights to persuade the Colombian government to suspend the environmental licence that it had granted to Occidental of Colombia for petroleum exploration and exploitation in the U'wa zone. His community, unwilling to compromise, has issued a warning that they will commit collective suicide — an act, which he has assured the commission, would be better for his people than being forced to live on profaned lands. Before doing so, however, they have decided to exhaust every possibility, since, after all, the danger they face today is just one more episode among many that, during the course

"We have not committed the insolence of violating the churches and temples of the Riowa [whites]: but they in turn have sullied and wiped out our lakes."

of history, have brought for them the gradual, though relentless, loss of their lands. In Los Angeles, he had sought an interview with the president of the Occidental Oil and Gas Corporation so as to explain the reasons why the indigenous community rejected 'Oxy's' intrusion into its territory. But, not surprisingly, his plea fell on deaf ears. For its part the Colombian government, ever seeking to avoid conflict, turned to the Organization of American States (OAS) to clarify the issue. Following a visit to the indigenous territory, the OAS produced a document which concluded that Oxy must suspend its explorations immediately, must make every effort to bring the two sides together, given their very different cultural backgrounds, and must obtain the U'wa's consent before any thought of proceeding.

The decisive happenings, that today have taken hold of public opinion and which have generated one of the strongest debates around indigenous territoriality, began on April 7th 1992, when Ecopetrol (the Nationalized Petroleum Company of Colombia) approved the partial fulfilling of a contract with Occidental of Colombia, which obliged it to carry out a programme for the acquisition of seismic information before June 23rd 1996. That aspect of the contract is known as the "Seismic exploration of the Samoré Block". It takes in the municipalities of Saravena, Tame and Fortul (Arauca), Cubará (Boyacá) and Toledo (North Santander) and would affect 208,934 hectares, of which 25 per cent is to be found in U'wa territory (Kajka).

In setting out to follow the correct procedures, on May 14th 1992, Oxy sought from the then National Institute of Natural Resources (Inderena) the necessary papers for obtaining an environmental licence that would permit it to enter the U'wa zone. First, however, it had to fulfil the requirement laid down by the Environment Ministry (that replaced Inderena) that it had carried out a preliminary consultation with the indigenous communities.

According to Oxy, more than thirty meetings were carried out to inform and consult with the U'wa between 1993 and 1994. The U'wa, however, claim that the petroleum company had simply interviewed isolated members of the community or those who lived outside the community, and who had lost most of their ties with the community. In any case, the company had never explained the project, say the U'wa, but had rather discussed problems of health and education.

As it happens, such encounters had not been approved by the Ministries of the Environment and the Interior, given that such consultation had to be carried out under the direction of both ministries and the participation of the legal representatives of the

U'wa. Consequently, to fulfil the requirement, the Ministry of the Interior notified the community that on January 10th and 11th 1995, they would have a meeting in Arauca and so initiate the consultation process. The result was a mass demonstration in which the U'wa indicated in no uncertain terms its utter rejection of any process that would lead to the profanation of their lands. In fact, they remain radically opposed to any petroleum exploration and exploitation on lands that legally have been recognized as their property. In addition, the U'wa demanded that the consulting process be adapted to the forms of participation generally used by the U'wa people, in which a consensus is reached between the Werjayáas (the traditional authorities) and the rest of the community.

They were ignored and on February 3rd 1995, the Environment Ministry granted Oxy its environmental licence.

From then on the tranquil life of the U'wa was shattered: their legitimate representatives found themselves forced to become radical in their rejection of the project. Meanwhile those within the community accepted the possibility that they would have to commit suicide, having been pushed into a fight not only to save their physical world, but also their sacred world, with its cosmology, customs, and their particular conception of life. Initially they were on their own, but with time their fight captured national and international interest.

On March 31st 1993, the U'wa of Sarare publicly accused Gran Tensor, an affiliate of Occidental, of failing to fulfil its promise to respect the limits of the U'wa's reserve. From then on, the U'wa of Sarare stated, they would reject all attempts to exploit petroleum on their lands. They had no wish, they said, to repeat the experiences of Occidental's operations at Caño Limón, or at the site of a massive open-cast coal-mining operation in Guajira, or the gold-mining operations in the Chocó, where so-called development had resulted in widespread environmental destruction as well as widespread violence.

As a last resort, after failing to get the Ministries of Government, of the Environment and the Presidency to revoke the licence, the U'wa turned to the office of Public Defense and on August 10th 1995, in the name of the community, placed a writ before the Superior Tribunal of Santafé de Bogotá in which it was stated that the decision of the government "violated the right to territory, to self-determination, to language, to life," and "threatened the indigenous community's survival, as well as its right of participation, its life and cultural integrity." The tribunal ruled in favour of the U'wa and demanded that their fundamental rights be respected, that the proper process of consultation should take place and that until such had been fulfilled, the licence should no longer have validity.

In response Ecopetrol and Occidental challenged the tribunal's decision before the Supreme Court of Justice which revoked the decision. The Public Defense in turn took the case to the Constitutional Court, which after deliberation pronounced on February 3 1997 that proper consultation had indeed not been carried out with



'My friend the oilpipeline' – an exercise book given to the U'wa tribal community by Ecopetrol who wish to drill for oil on U'wa lands with the foreign oil companies OXY & Shell.

the community and that the Ministry of the Environment and Oxy had thirty days to bring that about.

Simultaneously as the writ was issued, the Public Defender filed a lawsuit over the licence, in response to the State Council's judgement on March 4th that the licence was valid. The State Council claimed that the general interest of the Colombian peoples, as well as the dominion of the State over national territory, including the State's proprietary rights to the nation's subsoil, took precedence over any other consideration, including over the rights of indigenous peoples. Since indigenous rights are supposedly protected by the National Constitution, the ruling of the State Council makes a mockery of the legislation. In addition, the State Council validated the consultation process that had supposedly taken place and with it the right of Oxy to enter U'wa territory.

The U'wa were not intimidated and on April 28th (1997) they drafted a long letter to the Executive Secretary of the Inter-American Commission on Human Rights to request that the Colombian government suspend the licence and that it adopt the necessary means to avoid irreparable damage to the indigenous population.

A bloody fight

It has not been an easy fight, and the U'wa feel thoroughly deceived. What has become clear for them, is the meaninglessness of what is little more than cosmetic democracy. The notion of participatory democracy, and the various mechanisms employed to achieve it, has proved to be a subtle means of creating the semblance of community approval and indigenous rights. At the end of the day, government policy has always favoured the megaprojects, irrespective of local resistance and ecological consequences.

The State has routinely approved, promoted and defended projects like the Urrá hydroelectric project, the construction of treatment plants for the River Bogotá, roads that cut through regions of exquisite biodiversity, and the creation of industrial zones in indigenous resguardos. In all these instances the legal path has been pursued, together with collective struggles, demonstrations and protests. And in all these instances, the multinational corporation has been granted the jackpot, to the detriment of those they leave behind when the natural resources have been plundered.

History has predictably repeated itself with regard to the U'wa, but in this case, an astonishing solidarity has emerged. On one side stand the permanent actions of the "Colombia Committee for the U'wa", created by environmentalists and journalists and which has brought together various sectors of society that identify with the U'wa cause. And, on the other, stand the Public Defender, the organizations of human rights and of environmentalists, as well as the support of international ecological and indigenous groups.

Misinformation Tactics

But the Colombian government and Oxy remain unwilling to shift from their position, and have resorted lately to releasing false rumours and distorted information with the aim of confusing the public and weakening popular resistance to the scheme. On one occasion the president of Oxy, Stephen T. Newton, declared in a national newspaper that his company was surrounded by the guerrilla and that the traditional U'wa territory was the stomping ground of Father Pérez – head of the subversive ELN, the army of national liberation. The U'wa angrily reject such accusations: "It's not the first time that the company has argued that the U'wa people, in defending their rights, are being pressured by the guerrilla.

U'wa chief,
Roberto
Cobaría



In 1994, all the members of the Main Council and the assessors of our national organization were accused with the threat of prison for being tied to subversive activities." What's more, some of the key critics of the scheme have faced numerous death threats and public denunciations.

More unfortunate has been the strategic use by the oil company of those members of the indigenous community who have lost their cultural roots, abandoned the traditional ways, and who welcome the exploitation of oil as a way to bring 'development' into the region. Oxy has made great efforts to elicit support from these individuals as a means of gaining entry into the resguardo. Aware of such happenings, the U'wa Cabildo Mayor (Chief Councillor) insists that the only authorities allowed to represent the community are those legitimately associated with the ruling body for all the U'wa peoples – La Asociación

Mayor de Cabildos U'wa (The Association of U'wa Councillors).

Today, nothing is certain: one hope is that the environmental impact assessment will be considered null and void, given that it was carried out in a record five days, leading, according to lawyers, to inconsistencies. The U'wa are also waiting the outcome of a possible lawsuit in their favour from the United Nations International Labour Office, as well as a pronouncement from the international courts that may rule in their favour and who will act accordingly. Above all, it is the hope of the U'wa and their supporters, that the interests of their tribe be placed above those of large, corporations whose only interest is that of extracting short-term profit from the accumulated wealth of millions of years of evolution.

Petrol and the U'wa

Without doubt, the head-on opposition of the U'wa to those who would invade their territory emerges essentially from their cosmological beliefs and the way in which they regard petroleum. As explained in the document entitled U'wa Chita, prepared by the U'wa themselves: "One of our principal beliefs about the Earth is that it is a living being and is Mother. That belief has determined our agricultural practices, our cultural activities, such as hunting, fishing, gathering and our ritual behaviour. Under this concept, what is clear for us when we work, when we celebrate our fasts, our chants and traditional dances, is that we are taking care of this world, of the Earth, of our Mother... Petroleum Ruiría is the mother of all the sacred lakes ... it is working the emeralds, the gold, the coal ... All those resources should not be touched; they must be left alone; they are alive; they are working."

Precisely that idea that such resources "are working" arises out of the notion that they form part of a "tribute that should be handed over to the deities so that they will maintain equilibrium, such as it is, that neither will the Earth tremble nor dry out."

In that way nothing good can come out of an oil company, be it Oxy or another, entering or even being allowed to enter U'wa lands. The U'wa see their own struggle over the issue of oil as an opportunity to campaign for an entirely different model of development, something that is indeed essential, given the current environmental crisis in Colombia and elsewhere in the world.

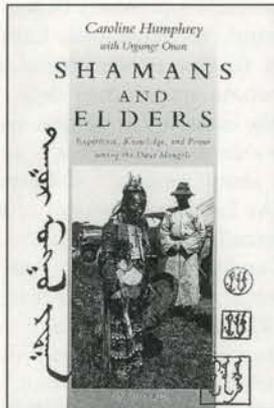
"We have not committed the insolence of violating the churches and temples of the Riowa: but they in turn have sullied and wiped out our lakes." Let us hope the U'wa's struggle for the sacred in nature is not in vain. □

Mónica del Pilar Uribe Marin is a journalist in Colombia



Reviews

Wisdom of The Elders



SHAMANS AND ELDERS: Experience, Knowledge and Power among the Daur Mongols

by Caroline Humphrey with Urgunge Onon, Clarendon Press, Oxford, 1996, 396pp, (pb), ISBN 0 198 28068 8

Urgunge Onon is a Daur Mongol who left China in 1948 and now lives in England. He was nearing his seventies when he approached Cambridge anthropologist Caroline Humphrey and asked her to write a book about his recollections of shamanism. They worked together holding conversations which formed the basis of the manuscript, and these were supplemented by her field trip to Mongolia in 1987, and his translations of Chinese and Japanese text.

The Daur Mongols live in northern Manchuria and have a mixed economy based on farming along the Naun River valley. They also fish, herd animals, hunt bears, tigers, antelope and foxes. They grow millet as a staple but also cultivate barley, oats and wheat; they keep horses, cattle and chickens. The practice of shamanism is still subject to repression today and, as in the past, the Daur fear both their ancestral spirits and the oppression of the State for engaging in the shamanic activities which acknowledge them.

Concepts of Nature

The Daur concept of 'nature' includes objects, beings and processes that were "uncreated, spontaneous, innate" (p.52). They contrast wild, non-human nature found in forests and mountains with that which is domestic and found in villages

(including humans). All things in nature are attributed with having "their own kinds of causal energy or force", and "the terms for ordinary and spiritualized entities are the same" (p.108). Mountains, rivers and winds have specific master-spirits which receive invocations from village elders.

Urgunge describes the physical landscape around his village, but at the same time mentions different sorts of spirit (master-spirits, ancestral spirits, demons) which reside there (p.76). Distinctions are made between the visible physical world and the unseen spirit beings: misfortunes are thought to be caused by angering a natural object. Humphrey writes: "the landscape ... is not a black background to human affairs, nor is it simply a cognitive ordering of space. It is the result of the land having been used in certain practical and value-laden ways, in our case the Daur's rough-and-ready farming, herding and hunting" (p.126). The landscape was like a map of events in shamans' lives, and their deaths were marked by stone cairns.

Spirits of nature

The earth is implicitly female, fertile and life-giving. Like the sky and stars it is considered to have invisible energy which includes its rivers, cliffs and forests, as well as birds, animals and fish. This energy is in addition to the 'spirit masters'. The idea is not that the spirit-master of a mountain dominates the mountain, but rather that it "exists as the permanent genius of the awesomeness of that mountain" (P.89). For example, if crops are attacked by a plague of insects, this is considered to have been 'intended' by the mountain. The Daur attribute emotions like anger and happiness to mountains.

The master-spirit of the forests controls its resources, animals and fruits. In the forest, hunters have to behave with respect towards the animals; violations are said to cause 'incalculable' harm elsewhere (p.91). Retribution follows if female animals are treated wrongly and the consequence for an irresponsible hunter could be the loss of his soul and even his life (p.92). The forest is said to be full of unseen spirits.

Many rivers in Mongolia have feminine names. They are both resources for fishing, and moving bodies of water, which have their own spirit-master who gives fish to fishermen, who in return offer fish to him.

Fish have to be respected: if a large one is caught, a man laments for it "as a formal acknowledgement of the animal's right to existence and sorrow at its death" (p.92). The river also has multiple levels of meaning: it is a boundary, among other things, between this world and the world of the dead (p.93).

People believe that souls can take either animal or human form in successive lives. Humans, birds and animals are seen to have individual immortal souls, which during dreams "had an existence separate from the body" (p.99).

Religious Practitioners

Daur people define specific differences between various specialists who each have their own kind of knowledge and ways of interacting with nature, though they do collaborate. The elders (always men) lead prayers to the sky, mountains, stars, rivers and trees. They accompany hunters into the

Shamans are buried in hollowed-out tree trunks and the bark replaced so that the tree continues to grow: in this way the ancestral shamans are linked to specific places in the landscape.

forest where they propitiate the master-spirit and entice him into giving them more animals. They can also talk to fish and attract them into being caught. Shamans never go hunting, because animals are their spirit kin: their shamanizing, it is believed, might confuse the hunt, whose purpose is to kill animals and not their spirits.

Landscape and Death

The Daur believe that "death transforms the souls of certain people into spirits, which are thereby freed from physical human bodies and able to reside in other objects in nature" (p.128). This is in addition to the energies that natural objects have of their own. Upon death a person will naturally metamorphose into an ancestral spirit (p.194). Shamans are buried in hollowed-out tree trunks and the bark replaced so that the tree continues to grow: in this

way the ancestral shamans are linked to specific places in the landscape. Or, after death, the shaman's body may be placed on a hilltop scaffold, the bones later collected to receive a second burial. In these cases the wooden containers holding the remains would be surrounded by a pile of stones (to form a cairn) and a nearby tree would be designated as the focus of future rituals. This becomes the location for the spirits of the ancestral shamans (*hojoor*).

The landscape therefore, is considered to be empowered by the graves of shamans and other ancestors. It may be that ancestral links with the landscape are grounded within the society, so that people do not feel rootless. (Shamanic ancestral spirits and tree roots are both defined by the Daur word *hojoor*.)

Ritual Ceremonies

Within the landscape the stone cairns indicating the burial site of shamans were still used as locations for ritual ceremonies this century, whereby those participating received "the blessing of the mountain spirit to make use of the land for the reproduction of life" (p.161). Political leaders used these ancient stone cairns to hold meetings to "invoke the blessings of the sky, mountains and land spirits on behalf of the whole community for the coming season" (p.349). At these sites secular leaders were "seen to be leaders" including Chinese Communist Party officials.

Humphrey explains the concepts surrounding beliefs about the environment in great detail and she expounds subtle levels of understanding. She is aware of the need to discriminate between 'European rationalizations' and the different beliefs and viewpoints of the Daur people about their understanding of the universe.

Surely one of the reasons shamanism was banned was precisely because it linked human beings to their cosmos, to the landscape? In effect, the stories which helped people make sense of their lives on Earth have become taboo. Humphrey's book suggests that the environment of the Daur consists of more than just the mineral, vegetable and animal resources of the land. Their ecology includes an entire spiritual cosmic context. Moreover, the Mongols 'inhabit' the landscape, they do not 'dominate' it.¹ Maiteny is convinced that humans need to understand the relationship between the outer ecological world and our inner worlds of meaning. He says an understanding of society's relationship with nature is critical for achieving sustainable ecology.² Although Daur beliefs may not resonate with all people in the West, Humphrey's book well illustrates their awareness of 'inner worlds' and how they relate with the Earth, both in life and in death. The book *Shamans and Elders* is

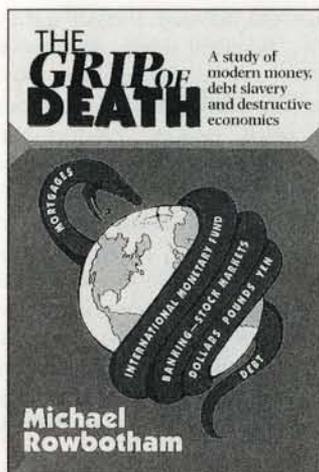
complex and it is not always written in a linear manner. This review has summarized certain types of information contained within it in a more linear fashion. The book itself is highly recommended since it offers a subtle level of insight and presents fine strands of complexity regarding shamanism in a historical context.

Natalie Tolber

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Grip of Debt



THE GRIP OF DEATH: A study of modern money, debt slavery and destructive economics.

by Michael Rowbotham

Jon Carpenter Publishing 1998, 337pp,
£15.00 (pb) ISBN 1 897766 40 8

I approached this book with a high degree of scepticism. Its sheer size and weight, coupled with the lurid cover, led me to suspect that, although 'magnifique', it was (to paraphrase Bosquet) certainly not economics. I soon recognized my mistake. Rowbotham is to be congratulated on his analysis of the current economic debacle through a synthesis of the theories of past monetary critics in the light of present trends. The glowing endorsements by David Korten, Herman Daly, Rt. Revd. Peter Selby, Bryan Gould and Richard Douthwaite are well justified. Although not formally trained in economics, Rowbotham's work places him on a par with the social reforming economists E. F. Schumacher and Henry George.

Aptly subtitled, the book addresses a general readership, posing the questions which need to be asked if monetary form is to secure community control over economic activity. Rowbotham poses some fundamental questions about the efficiency of the

market economy. There is nothing inevitable about the "techno-marvel, quick-turnover, rapid-change, junk-produce 'consumer' economy". As Rowbotham observes, "consumers are no more in control than are the autumn leaves in an October gale".

Throughout the book, the author's criticism of economics professionals simmers just below the surface. In his view, all economic agents, including workers, consumers, business and professional people, remain dependent upon a means of exchange which is presently beyond democratic control. Yet economists fail to relate studies of finance to the crucial areas of prices, income and modern debt. "At the heart of the economy is money, and at the heart of modern economics is a misunderstanding about money," observes Rowbotham. As far as professional economists are concerned, money might just as well originate under the gooseberry bush.

Rowbotham's statistics are detailed and startling. He charts the growth of the property-owning democracy. Until the early decades of this century the bulk of debt within the economy fell on agriculture and industry. The practice of creating a loan on the mortgage ('death-pledge' or 'death grip') of land or property was first undertaken by medieval goldsmiths employing usury in the hope of large profits and the chance of securing the property. The practice was condemned by the Christian church. By the mid-twentieth century debt ceased to be limited to agriculture and industry, as consumers came to borrow vast sums of money against their future incomes, throwing themselves into 'debt-slavery'.

Significantly, the desire to buy a house provided banks with a "secure bankable asset against which they could create

By the mid-twentieth century debt ceased to be limited to agriculture and industry, as consumers came to borrow vast sums of money against their future incomes, throwing themselves into 'debt-slavery'.

money". Simultaneously, the banks and other financial institutions have created loans and extended the money supply, creating the illusion of economic growth, while securing control over and increasing proportion of the nation's assets. Over the past 35 years the proportion of the UK housing stock that is mortgaged has risen from 19% to 37%. In effect, 37% of the nation's housing stock is currently owned

by the financial institutions. While mortgage repayments continue over longer periods of time, and represent greater proportions of the average annual income, they bear little relationship to the actual costs of housing, much of which has already been paid for, forming assets, not debts. Overall, an increasing proportion of the nation's assets, both public and private, is subject to secured debt by the financial system: £411 billion against the housing stock, £399 billion against industry, farming and the service sector, and £380 billion against the public assets of the nation through the national debt. Within the UK, as elsewhere, the legal title and ownership of these assets rests with privately owned financial institutions.

Rowbotham delineates the vital role of the World Bank and IMF in creating debt-driven economies in the Third World, demonstrating that the underdeveloped and indebted countries of the world are acting as part of the money supply to developed nations. The historical processes leading to the present dominance of the debt-financing system over local, national and international economies is presented in superb detail in three central chapters of the book. Given the political will, reform of the financial system can take many forms: "This is the beauty of money. As a mathematical entity it is infinitely subservient and capable of coping with a wide variety of policy variation and emphasis. Basically, money is capable of doing what we want it to do." It is difficult to fault the author's conclusion that "The true worth of money as an invention, frankly, has never been fully explored."

Although the book is an excellent extension of the work of C. H. Douglas, the author uses direct references to Douglas very sparingly. He may therefore avoid some of the time-wasting entered into by would-be intellectuals with nothing better to do than to engage in circular arguments as to whether the A+B theorem was right, or wrong. Douglas's basic thesis held that the way money is created and circulated within the economy determines policy in production, distribution and exchange. It therefore becomes necessary to review money mechanisms in order to make them work for the benefit of the community as a whole, rather than for a few powerful corporations and individuals.

Following Douglas, Rowbotham advocates a study of the operations of financial institutions in order to facilitate social justice and economic democracy. Douglas saw understanding of money and money mechanisms as a means to specific ends, predominantly the creation of an economics of sufficiency based on the elimination of wage-slavery so that spiritual and artistic values could once more flourish. Hence the

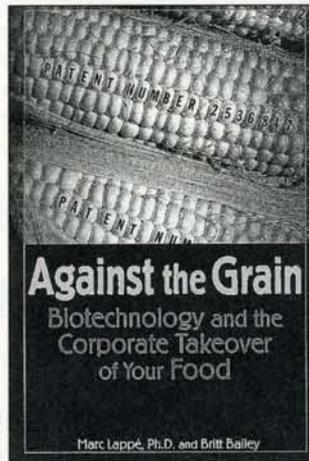
way forward cannot be based upon a single issue – money reform or land reform or basic income or good work or tax reform or reform of the educational system or organic farming or local economic systems. Rowbotham is to be congratulated on his skilful updating of the Douglas theories.

This work forms essential reading for social and environmental reformers. It fills a major gap in accepted theory, illustrating the reasons why demands for reform are continually thwarted by business-as-usual justifications on the basis of theoretical correctness. Although economically sound, this book does not require specialist knowledge of economics, and is packed with quotable quotes. Despite a few minor inaccuracies and repetitions it can be recommended as a good and worthwhile read.

Frances Hutchinson

Frances Hutchinson is the author of *What Everybody Really Wants to Know About Money*, and co-author of *The Political Economy of Social Credit and Guild Socialism*.

Genetic Engineering Debates



AGAINST THE GRAIN

by Marc Lappé and Britt Bailey
Common Courage Press, 1998, 163pp,
\$14.95 (pb), ISBN 1 56751 150 3

Industrial agriculture has spread its tentacles around the world – destroying ecological agriculture systems, poisoning our food, and undermining small farmers. Now, the next chapter in this horror story involves the genetic engineering of our food.

Biotechnology is rapidly transforming agriculture and transnational corporations are calling the shots. It is estimated that 50 per cent of processed foods contain genetically engineered products. By the year 2000, biotechnology giant Monsanto plans to have 100 per cent of US soybean crops planted with genetically engineered seeds.

Genetically modified food poses a threat to the environment, to public health, and to worldwide food security. Last December, a

British government report was suppressed because it warned of serious environmental risks from genetically engineered crops. Overall, there has been little public discussion or oversight of the emerging biotechnology industry. Either through legal intimidation or brilliant PR campaigns, biotechnology companies are successfully keeping the public uninformed of the risks of this fledgling science.

This year, Monsanto has been busy intimidating publishers and journalists, and has been sending out threatening legal letters left, right and centre. *Against the Grain* was temporarily suppressed in early 1998. Three days before the book was scheduled to go to print the original publisher pulled out due to a letter it received from Monsanto declaring that the book was "defamatory and potentially libellous". Hot off the press, the book is now available from the aptly-named Common Courage Press.

Against the Grain: Biotechnology and the Corporate Takeover of Your Food, by Britt Bailey and Marc Lappé, is a comprehensive report on the current issues related to genetically engineered food crops. It forms a general overview of the current state of the industry – discussing new prod-

Three days before the book was scheduled to go to print the original publisher pulled out due to a letter it received from Monsanto

ucts, dangers, regulation, resistance, and offering recommendations.

The book is accessible and well documented (it was legally vetted twice prior to the first printing attempt). Dissemination of information about agricultural biotechnology is long overdue, and this book provides exactly the sort of information needed if we are to halt what risks becoming another runaway industrial technology. If anything, my only complaint is that the book, in an attempt to appear reasonable and objective, is not critical enough of genetic engineering.

Bailey and Lappé highlight the direction that agricultural biotechnology is headed. According to the authors, "two-thirds of all transgenic food crops are being engineered for herbicide tolerance," and the purpose, or at least the effect of these crops can only be to increase sales of herbicides which the same corporations alone provide. The authors point out that these herbicides, mainly glyphosate and bromoxynil, are not as inert as their vendors assert. Toxicity, herbicide drift, ecosystem damage and increased phytoestrogens (which have been shown to impact reproductive health) are a few concerns which have been largely

overlooked. Another main focus of agricultural biotechnology includes crops modified to contain their own pesticide, Bt. But while Bt is a naturally occurring pesticide, its introduction into the genetic make-up of crops can have dramatic effects such as toxicity in foods, pest resistance, pests targeting other crops, and harmful impact on non-target species.

Genetically engineered products are appearing on supermarket shelves all over the world, on the whole without the knowledge of those who will consume them. According to Lappé and Bailey, "although few, if any, consumers are aware, products such as Crisco®, Kraft® salad dressings, Nestlé® chocolate, Green Giant® harvest burgers, Parkay® margarine, Isomil® and ProSobee® formula for infants, and Wesson® vegetable oils all incorporate genetically altered soybeans. Makers of McDonald's french fries, Fritos®, Doritos®, Tostitos® and Ruffles® chips have verified that they too are using oil from genetically engineered soybeans."

Against the Grain challenges, among other things, the biotech industry's assertion that genetically engineered crops are necessary to feed the world. First, as described above, most research is focussed on corporate profits and selling herbicides rather than increased yield or nutrition. But

more importantly, hunger is largely a problem of distribution and politics rather than lack of technology. On the contrary, as Andrew Kimbrell pointed out in *The Ecologist's* special issue on Monsanto, it is precisely high-tech agriculture that can be held responsible for much of the hunger experienced today. It is the use of this argument which led over 25 African delegates to the FAO negotiations on the International Undertaking for Plant Genetic Resources to stage a written protest against Monsanto.

A main concern of the authors is that consumers are not being informed of the risks and that there has been little public input or review of agricultural biotechnology. Consumers and farmers have a right to know what's in their food, that genetically modified foods may contain toxins or allergens, and that genetically engineered traits may cross-over into wild species. The invasion by exotic organisms has already become the second leading cause of species extinction and genetic engineering is introducing new organisms (which have never before wandered the Earth) at an unprecedented rate.

Biotechnology companies are staging a silent coup in agriculture and are responsible for trapping farmers into a cycle of debt while undermining their ability to save seed from year to year. These companies

are poisoning themselves to control all aspects of food production. Recent mergers have placed control of the world's seed supply in just a few hands, and the testing and regulation of genetically modified crops has largely been left to the companies themselves to conduct on a system of honour.

In Europe, wide-scale resistance to genetically modified foods is emerging, with countries like Luxembourg, Switzerland and Denmark at the forefront having taken steps to ban or limit the importation or use of genetically engineered crops. But resistance in the US has been slow to take form, possibly due to what can only be described as a media blackout on voices critical of biotechnology.

The authors are now following what will be seen as the "second wave" of bio-engineered products – including plants which will produce industrial oils and plastics, medicines and foods. Their primary concern regarding this "second wave" is the patenting and ownership of life. According to Bailey, "These developments, as we all know, are driven by profit and are not necessarily for the good of the planet, other life forms, or human health."

Miyoko Sakashita

Miyoko Sakashita is a researcher for the Foundation for Deep Ecology.

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