

This is the message the landowners of Britain have been giving working people throughout the centuries. The mass of the people remain not only excluded from the land but are also excluded from any decision-making about what is done with this land. Our exclusion from any say in what happens to the land is due to the expropriation of that land by an alien and hostile ruling class. First came the Norman barons who were awarded ownership of land that had largely been held in common or by right in return for military service and political support.



Some landowners such as the Grosvenor family (present Duke of Westminster) trace their ownership back to this time. William the Conqueror gave their ancestor, Hugh Le Gros Veneur, major land holdings. During the feudal period, much land was also taken by the Church, who used its political, spiritual and economic power to grab larger and larger areas of Britain. Heavy taxation to pay for wars of conquest against the Welsh, Scottish, Irish, French and periodic crusades led to further seizure of land and property. Ownership of the land then allowed the ruling class to begin whittling away at the rights to use the land people had enjoyed for centuries: rights to graze animals, collect wood, gather foods and medicinal plants and so on. This was driven by the desire to make profit, for profit bought safety and status for the political and military elites of the time. The oft-cited example is the enclosure of the common land for sheep grazing, fuelled by the ruling class granting itself

Ecology and Class

Where There's Brass, There's Muck

Anarchist Federation



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know nothing about because of the secrecy surrounding information on who owns what. There is no open public land registry, for instance. This secrecy gives enormous power. Rural landowners own many urban properties and have control over the major primary industries that form the basis of any economy. In addition, many landowners are also industrialists or financiers or both. This is not just a matter of high finance, with banks investing in land, media magnates buying up Highland estates etc, but because of the ideological and cultural role that the landowners play in maintaining the coherence of the ruling class.

Ideological Power

Since the Industrial Revolution those capitalists who made their money from industry and later finance have all aspired to be like the land owning aristocracy in terms of their way of life.

The industrialists may have had great wealth, but the landowners had 'cultural capital'. It is this image of a 'way of life' that props up the ruling class. 'Traditional Britain' is synonymous with rural Britain. Despite the Industrial Revolution and the fact that Britain has little of its economy devoted to agriculture or forestry, it is amazing that it is 'rural' Britain that is the symbol of the soul of the nation. It is a powerful message and gives the landowners a pivotal role within the ruling class that is much greater than their economic and overt political power would suggest. In addition, it is the landowners who through their activities and control of the land have the most impact on the environment. Awareness of this needs to be spread to the working class as a whole and the landowners must be made a focus of our struggles against capitalism.

Get Off My Land!

Derbyshire receives an estimated £1.8 million in royalties every year for the mining of Derbyshire limestone. Though landowners are associated with the countryside, they also own much of urban Britain. The most well-known is the Duke of Westminster who owns a large chunk of central London including Mayfair and Belgravia. Agriculture and forestry bring the greatest benefits, chiefly in the form of subsidies. Farmers are exempt from rates on agricultural land and buildings and are also exempt from paying VAT. It is estimated that the combined benefit from all subsidies comes to £20-£30,000 per year per farmer. Forestry is another good source of income (and handouts). There has been a great increase in forestation in recent years, of which 80% is in the private sector. But while planting conifers offers a quick return its causes many ecological problems.

Political Power

Along with economic power goes political power. Firstly, there is the power over working people. 70% of agricultural workers live in tied cottages. Landowners also play an important role in local politics, often having a totally disproportionate share of local council seats. Though they are less than 10% of MPs in the House of Commons, they dominate in the House of Lords. They also appear in a whole range of other capacities: National Park Boards, Countryside Commissions and Nature Conservancy. The political influence of landowners can be seen even more clearly in the farming and forestry lobbies. The main lobbies include the Country Landowners Association (CLA). Most of the CLA's work is done within 'the old boy's network'. To succeed, the CLA doesn't have to do anything but just stop anyone else from changing the status quo. Examples include removing of taxes on profit-taking, abolition of security for tenants as well as many features (e.g. trespass) of the Criminal Justice Act. There are whole aspects of land owning power that we

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the usual image of the ruling class is as industrialists and financiers; the land-owning aristocracy are not considered to be the main source of capitalist power. Our analysis firmly describes landowners as an integral part of the ruling class, both in the sense of holding real economic power and in the ideological role they play in keeping the working class in their place. The land-owning class and their lackeys are a fundamental part of the British ruling class and are immensely powerful and well organised. We ignore them at our peril.

Despite propaganda about impoverished aristos and the supposed increase in land ownership by the government and the National Trust, around 80% of Britain's land is in private hands. A hard core of titled families own almost one-third of Britain, with 60%-70% of these owning at least 5,000 acres. The Crown's holdings are enormous: 335,000 acres of farmland, 38,285 acres of commercial forest, the entire shoreline, half the foreshore! The Queen's private holdings are separate from this and include 50,000 at Balmoral, 20,000 acres at Sandringham and 50,000 acres of Lancaster. The Duke of Buccleuch owns 277,000 acres of Scotland and 11,000 acres of Northamptonshire. Despite the image of the struggling farmer promoted by the Countryside Alliance, the average farm size is 170 acres, much higher than the average in the rest of the EC. And consolidation of farm holdings is increasing: when a farm is sold it is other farmers that buy it. Owning land may not appear to confer economic power and wealth in an economy dominated by industry and commerce. Many landowners like to give the impression that it is a great burden. Looked at more carefully, land ownership brings enormous benefits. The value of the land itself is the first source of wealth. Since the Development Land Tax was abolished in 1985, increases in the value of land for development are subject only to a capital gains tax. Other ways of making money from the land include leasing it out to farmers, hunting and fishing rights and mining. For example, the Duke of

Whose Land is it Anyway?

“England is not a free people, till the poor that have no land, have a free allowance to dig and labour the commons...”
Gerrard Winstanley, 1649



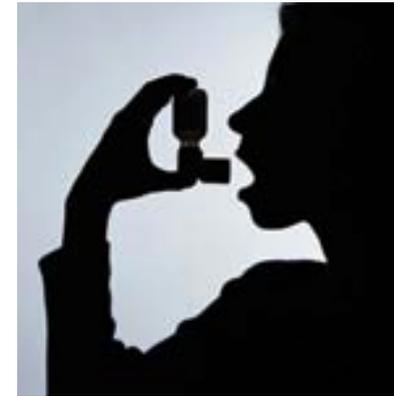
The Economic Power of Land

Class-struggle anarchists focus their activities on the conflict between the working class and the bosses. Nowadays

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in ways that meet our human needs without damaging others and destroying the environment.



There is beauty all around us if we choose to see it. There is something in every human face. There are places of interest and leisure within hundreds of miles, why travel thousands? If communities can be re-engineered to be self-sustaining – and they can be – will we need to travel thousands of miles to do business, to negotiate deals, exchange ideas, meet people? If we need

to work only a few hours a day and tasks get done when they can, not when someone says they must, will we need to travel at hundreds of miles an hour to do them? Did people invent the internet just so we could buy on-line? The massive amount of air travel today and in the future isn't good for people or the planet and isn't necessary for society to function or people to live rich lives of experience and pleasure. It is necessary for the airline industries and those who are running things: the politicians, bureaucrats, generals and businessmen who enjoy looking down on us.

basic facts. Our health, sanity, quality of life and future are all at risk. Governments say air travel is good and cannot be restricted or curbed. Business says demand for air travel – a demand created and fuelled by big business – means that airports must expand and the volume of flights must increase. We must build bigger planes that are more fuel efficient. Why? We shouldn't forget either the point where big business and the state truly meet: in the 1990s, military aircraft consumed one third of the fuel used by all planes and produce proportionately more emissions of climate-changing pollution. Who's going to regulate them?

There is no latent demand for more air travel and bigger airports, it is being stoked by hidden subsidies and government collusion with big business to do nothing to halt runaway growth. Government studies pointing to a 'need' for new airports and runways are always based on taxation regimes and subsidies remaining the same: one study found that if fuel were taxed at 46p a litre and VAT phased in, passenger numbers would rise so slowly that existing runways could cope till 2030 and beyond. At the same time, if we invested in high-speed rail links huge amounts of air travel across Europe could be avoided.

People often say that technological improvements will reduce environmental impacts. But air travel is increasing so much that no amount of technological advance will reduce damage, merely slow the rate of environmental destruction. By 2010, increased CO2 emissions by the aviation industry will totally negate all other climate-change protection policies and regimes: we are being asked to change our ways and tighten our belts just so the rich can go on flying. There is no technological fix, only a massive reduction in the amount of air travel will do. That will only come about by us choosing not to travel, by a massive change in culture and social relations. This is what an anarchist society of the future, a sustainable society for all to share and enjoy, is all about. Our society is on a truly human scale, where we live, travel and interact

Introduction – Ecological Crisis

Many people are aware of the worldwide problem of environmental pollution and destruction. Rainforests such as Amazonia are being decimated, large areas of land turned into desert. Droughts, floods and earthquakes affect millions; large-scale pollution is causing dangerous climatic change. Ecology (the science of living things and how they interact with each other), is therefore vital, literally a matter of life and death.

In Africa and Asia, deforestation and desertification reinforce the effects of grossly unfair land ownership, producing starvation and malnutrition for millions of people. In Europe and North America, cancers from the environmental degradation caused by mass industrial society affect tens of thousands; the death and injury toll from cars is huge and the resulting air pollution causes a worsening asthma problem. Drinking water is becoming more polluted due to pesticides from farming, pollution from industry and, in Britain, water suppliers may soon be compelled to add the harmful chemical fluoride to water because of its supposed benefits to children's teeth. Food is generally laden with chemicals (additives, pesticides, pollution, irradiation (to prolong shelf life), and is increasingly genetically modified.

Ecological analysis needs to be part of a wider class analysis. For too many environmentalists however, green issues and politics are "neither left nor right" or "beyond politics". This is dangerous nonsense. It leads to flirtations (or worse) with paganism, eastern religions and mysticism. It encourages people-hating ideologies. Let's

not forget the nationalism and racism of leading American Earth First! activists in the 1980s or links to neo-fascist ideas (David Icke, for instance, or the Third Stream groups in Britain and elsewhere). On the other side, class analysis cannot ignore ecology, for instance by treating all technology as neutral. If it does, it will be incapable of creating a future society that is free and equal (anarchist communism); such a society must be in harmony with the rest of nature.

This pamphlet is the result of the Anarchist Federation's commitment to developing a coherent ecological analysis and practice as a vital part of our politics. It does not claim to be the last word, merely the start of the process. Ecology is an important strand in anarchist communism through people who were both theorists and activists, such as Kropotkin, Mumford, and, in the present day, Murray Bookchin's description of ecologies of freedom.

airports will be serving over 1bn passengers a year by 2050. Air traffic worldwide is predicted to increase six times by 2050 and we will be burning at least three times as much fuel as at present. The problem is bad and is going to get a lot worse over the next 30–40 years.

During flight, aircraft engines emit carbon dioxide, oxides of nitrogen and sulphur, water vapour, hydrocarbons, sulphur particles and soot. Your share of a return flight to Florida pumps more carbon dioxide into the atmosphere than a whole year's driving. These emissions alter the chemical composition of the atmosphere in a variety of ways: they have a massive and widely-acknowledged impact on climate change. Air travel causes large-scale reduction in ozone levels in the stratosphere and increased UV radiation at ground level, i.e. increased risks of skin cancer. Activity at airports cause changes to the troposphere for hundreds of kilometres downwind and greatly reduces local air quality. When all planes in the USA were grounded after 9/11, the nights got warmer and the days colder, evidence that air travel causes global warming right now.

Air travel is big business, and getting bigger: airports expanding, regional hubs, new terminals, the associated sprawl of commercial development, government subsidies for each new generation of planes, the bidding wars for landing rights. Air travel is subsidised by £9bn a year in Britain alone, because there is no tax on kerosene or VAT charged on fares. In 1944, the great powers decided that to rebuild a shattered world and reward the aircraft companies building military aircraft to win the war, air travel would not be taxed. But who knew then what the environmental effects would be or just how big air travel would get? Sixty years have gone by and we are staring over the abyss.

The working class bears the brunt of the destructive effects of air travel and airport development, yet the poorest 10% of us never fly. The rise of charter flights to Ibiza and no-frills flights to Prague – which carry a surprising number of the comfortable middle class (75% or travellers are from the ABC social classes) cannot alter the

fear, retreat, isolation, ill health, injury and death. And it is the political power of the road lobby (large sections of the ruling class, the state, media, road safety lobby, oil/car/ construction companies etc). The road lobby causes the motorisation problem, then it defines how it is discussed through the “road safety” myth. Thus its ‘solutions’ prevail: keep pedestrians and cyclists out of the way, make ‘safer cars’ (safer for drivers, more dangerous for everyone else), and build more roads.

Air Travel – A Faster Car?

Like the automobile, air travel appears to offer humans benefits anarchists cherish: the freedom to travel widely, to experience new cultures and relate to more people, to develop culturally and spiritually, to walk a mile in other people’s shoes, to find a place for ourselves in a world going mad. But modern air travel, because of its huge volume and vast infrastructural needs, is one of the most uniquely polluting activities humans have ever invented. Acres of concrete. Vast areas taken up by terminals, facilities, access roads, warehouses, hotels and shopping malls. The noise of take-off and landing and the misery caused by the increasing number of night-time flights. The destruction of habitats as runways are extended and new terminals built. The unremitting damage to the atmosphere, especially the troposphere (where weather systems form), which is vital for human life on Earth. Greenhouse gas emissions from the world’s aircraft fleet currently account for 4% of all global warming from human activity. By 2050, emissions from air travel may be contributing 15% of predicted climate change if left unchecked.

The convenience of air travel and the rise of the no-frills carrier obscures the extent of the problem. Passenger-kilometres flown from the UK increased from 125 billion in 1990 to 260 billion in 2000. Government forecasts predict that, without controls, British

PART ONE: The Ecological Crisis We Face

Water

Water is essential for all life on Earth. But one-third of the world's population do not have access to a supply of safe drinking water (a situation that is worsening). A third of all deaths in the world are the results of water-borne diseases. Water is a limited but endlessly renewed resource; its pollution, mismanagement and overuse by corporations, governments and people (turned into 'consumers' in a world that is not of their making) threaten to turn a global crisis into a long-term planetary disaster. The Vice-President of the World Bank, Ismail Serageldin, stated in 1995 that "the wars of the next century will be over water... by the year 2025, the amount of water available to each person in the Middle East and North Africa will have dropped by 80% in a single lifetime".

Disputes and Wars

40% of the world's population depend on water from a neighbouring country. Over 200 large rivers are shared by two or more countries. In modern times the existence of vast cities, irrigated agriculture and the demand for hydro-electric power have led countries to claim or steal water resources once used by others. The cutting up of river systems by state boundaries has aggravated the problems of responding to floods. The political and engineering structures that bring economic power and political control to national and international elites also threaten lives and livelihoods. One reason for Turkey's refusal to grant autonomy to the Kurds

Safety: False Solutions

Government's approach to safety is not to address the root of the problem – heavy, fast-moving traffic – but to enforce the segregation of people and cars. This means footways and pedestrianization for walkers, bike paths and lanes for cyclists. Motorways in Britain started as a means of separating pedestrians from the motor danger posed by cars. Experience shows however that the only road-user groups to gain substantially from segregation are car and lorry drivers. Cars have an immense greed for space that expands as opportunity arises, nullifying all but the most radical (total) safety strategies for pedestrians and cyclists. Because 'solutions' are devised always with cars in mind, they often cause more problems. Pavements must be protected from cars so the solution is to build rails along them, not to slow the cars down. Subways are rightly hated for their real and perceived danger. Visibility and surveillance are usually poor, and they are often badly maintained. Their steps are a particular problem for children and their carers, the elderly and people with disabilities. Foot-bridges suffer similar disadvantages in the other direction. Pedestrianization may segregate cars and people in inner-city areas but it also causes problems of access for the disabled and generates additional traffic in adjoining areas. For cyclists there is often insufficient space for continuous cycle tracks or lanes. The post-war British new towns, such as Stevenage and Peterborough, have a segregated network of cycle and pedestrian paths but this is inappropriate to older towns. Off-road routes (e.g. the Bath-Bristol pedestrian and cycle path) have been built on old railway sites, canal towpaths, bridleway's and forest roads. But they are very limited in availability and prone to appropriation by more spacehungry and powerful forms of transport. Cycle routes using side streets are equally limited.

We have seen that "road safety" is a road lobby smokescreen to divert people from addressing the root of the problem – power. It is the power dynamic of motorisation, with its social effects of

ates and then creating an industry dedicated to reducing the number and severity of accidents.

Because of their pro-car bias, many 'road safety' measures in fact produce the opposite effect: "Everything that supposedly produces more danger in fact produces more safety... and everything that is supposed to produce more safety produces more danger... Better roads, better sight lines, fewer bends and blind corners, less traffic; better lighting, better weather conditions... make greater danger... because every "nonrestrictive" safety measure, however admirable by itself, is treated by drivers as an opportunity for more speeding, so that the net amount of danger is increased". The lobby's method is to use excessive detail to obscure the human and economic costs of motorisation. The real cost of motorisation is at least £30 billion more than motorists pay. While costs for congestion, accidents, road-building and maintenance are included, the loss of revenue to public transport, the business and health costs of stress, air pollution and noise are not. The health dis-benefits of mass car use dwarf the numbers injured and killed on roads; they are not included in road safety research and discussion. The rules of the game are biased in favour of the motorist and against the rest of society. Although speed is a major cause of accidents, the DoT regards speed reduction as bad because it creates frustrated motorists who act "aggressively and irresponsibly". Pedestrians "may take liberties with slow-moving traffic that they would not take with faster traffic. A mother who would never dream of wheeling her pushchair across an urban freeway may be tempted to do just that in a city street". What a cheek – a pedestrian trying to cross the road! The DoT's motor bias leads it to stand truth on its head. It says, "Travelling by car or bus is safer than walking". Safer for whom? In 1990, three other road users were killed in accidents involving pedestrians. Cars killed 1014 pedestrians.

is the importance of water resources in eastern Turkey. Attempts to divert the sources of the River Jordan in South Lebanon and the Golan Heights provoked the Israeli-Arab War of 1967. Following this, Israel began to appropriate water supplies to support new settlements and supply towns and industry in Israel proper: Israel annually pumps 600 million cubic metres of water (over 30% of its supply) from aquifers that lie wholly or partly under the West Bank. 115 million cubic metres are allocated to the 1.4m West Bank Palestinians and 30m to 130,000 Jewish settlers; the rest (455 million cubic metres) goes to Israel. West Bank Palestinians have been barred from digging new wells or renovating old ones since 1967. Egypt offered Israel 400m cubic metres of fresh water a year to settle its conflict and assist the Palestinians; but there is still no agreement over water for the West Bank. There is a continuous threat of water wars in South Asia between India, Bangladesh, Nepal and Bhutan. Large-scale deforestation upstream results in increasingly widespread flood disasters below. Punjab water was an important contributory factor to the 1965 Indo-Pakistan war. Hindu nationalism has been fuelled by the unfair distribution of India's water to the Sikh Punjab and led to the storming of the Sikh Golden Temple in Amritsar in 1984.

Modern wars depend on the destruction of the civilian population's means of life and livelihood. In 1991 in Iraq, for example, the deliberate destruction of power supplies by bombing and war created a huge health problem. Over 90% of sewage treatment plants were disabled with huge amounts of untreated domestic and industrial sewage being pumped into rivers, creating an increase in water-borne diseases. Agricultural production was slashed by the breakdown of the electrically powered irrigation network. Before the Gulf War Iraq produced 30% of its food. Prior to the US-UK assault on Iraq in 2003, the figure was 10–15%.

What Was Ours Is Now Theirs

The huge increase in the urban population of 19th Century Britain was accompanied by dysentery, typhoid and cholera.



The poor were blamed for cholera outbreaks, the result of their 'ignorance', lack of hygiene and general moral depravity. The prevailing orthodoxy was that laissez-faire capitalism and the management of water property for profit would provide solutions. It didn't, and both municipal and state solutions – public ownership and management of water resources – were needed to solve the problem. Eventually it was recognised that easy access to a clean water supply was a basic human need, via the Public Health Acts. But with the re-emergence of neo-liberal and neo-conservative ideas about the role of the state and the importance of market solutions to social problems, all this is changing.

Britain is water rich, with adequate rainfall and only occasional water shortages. Until recently, water was generally seen as a common good and water planners saw any form of supply restriction, even a hosepipe ban, as an admission of failure. Regional water authorities pooled access to water resources and made long term plans for a London ring main, recharging aquifers from winter river water. People and organisations cooperated to manage water resources relatively effectively and to save water when it was needed, such as during the drought of 1975/76. However, water was privatised by the Tories in 1989, despite defeat in The House of Lords and the threat of prosecution by the EU on water quality standards, attacks by environmental groups over standards and questions about the fate of water authorities' huge land holdings. As a result, the av-

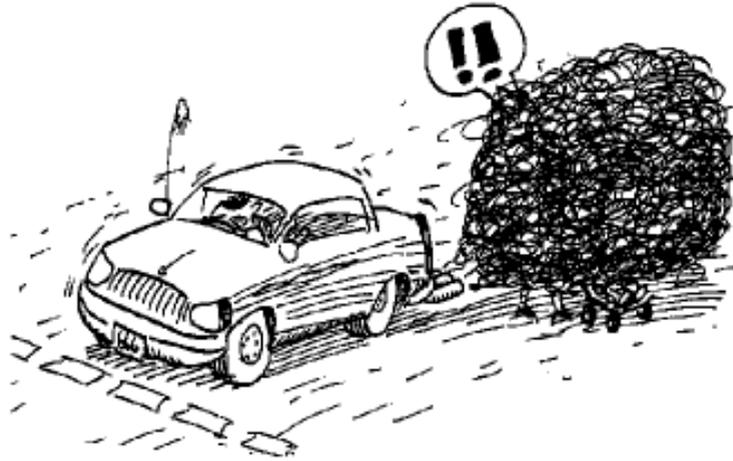
to themselves, leading to isolation and alienation. Motorists view pedestrians, cyclists and children playing in the street as intruding on their space. As the volume (and speed) of traffic increases, their attitude becomes more ruthless. People's use of the pavement is the next to go, due to the noise, air pollution and vibration caused. The street loses its attraction for people – children abandon their play space (and adults keep them inside), and adults drive rather than walk. With heavy traffic residents abandon their front gardens and front rooms in a retreat from vibration and noise. People abandon their homes, moving to quieter areas. Poorer people are left behind, trapped and condemned to blight. More poor people replace the refugees, those who can't afford to buy or rent elsewhere. The street is now deserted and alienation leads to greater anti-social crime. As thefts and assaults increase, people take refuge in cars, putting another twist on the downward spiral.

Cars & People: The Road Safety Myth



Until the 1930s road safety was not seen as a problem caused by motorists. But as traffic increased in volume and speed, people began to get concerned. Road safety ideas were brought in based on education, engineering and enforcement. Ever since, 'road safety' has been the territory of professionals such as road safety officers, road and vehicle engineers, traffic police, doctors, lawyers and the Department of Transport. The road safety lobby has succeeded in suppressing the earlier anger and hostility against motorisation by legitimising the danger it cre-

necessitated by the danger from traffic). In Britain women spend thousands of hours escorting children, at a cost of £10 billion a year (using Department of Transport cost benefit criteria).



The End of Community

Ordinary but diverse contact is important for people's well being. Traffic affects the number of friends and acquaintances that people have – the more the traffic, the less the contacts. Streets with light traffic (around 2000 vehicles a year) have close knit communities where residents make full use of the street – sitting and chatting on front steps, children using pavements for play and teenagers and adults hanging out and chatting on the street. With medium traffic flow (about 8000 vehicles a year) there is a decline in street use, though friendliness and involvement remain. With heavy traffic flow (over 16000 vehicles a year) the street is used solely as a corridor between the sanctuary of individual homes and the outside world. There is no feeling of community and residents keep

erage household experienced an increase in water costs of 67% between 1989 and 1995. Company profits rose by an average of 20% to 1993 and are still high. The highest charging area of Britain, South West Water, took 4.9% of income from a household of 2 adults and 2 children, 7.6% from a lone parent and child and 9.1% from single pensioners in 1994. The profits of the water supply companies are being subsidised by the poorest people in Britain, those least able to pay. Thousands of households now regularly have their water supply cut off. In the Sandwell Health Authority area (in the West Midlands), over 1,400 households were cut off in 1991/2 and cases of hepatitis and dysentery rose tenfold. In 1994 2m households fell into water arrears, with 12,500 disconnected. Half of the water companies in England and Wales have selectively introduced or are testing pre-payment meters. The increased use of metering, most often in poorer households, has either increased water bills or resulted in forced cuts in water use by those who need it most. Non-payers are automatically cut off and the supply is not restored until the debt is paid. 10,000 meters have been installed in Birmingham since 1992; there have been over 2,000 disconnections. The water companies have responded to increasing criticism of their disconnection policies by devoting a tiny proportion of their profits to charitable trusts that help the poorest customers. This is pure PR and gives the corporations tax advantages. In the 1980s and in 1994–96, community campaigns defeated attempts to introduce water taxes in Dublin; see Issue 3 of 'Red and Black Revolution' for an excellent analysis.

Encouraged by a surge of prosperity in the 1960s, the Spanish have ignored the fact that they live in a semi-arid country prone to periodic, lengthy droughts. Golf courses have been built for tourists, swimming pools for themselves and there are many lawns and gardens requiring daily watering. Farmers have diversified from their traditional drought resistant produce such as figs and olives into water-hungry crops like rice and strawberries. The result is that Spain is now the world's 4th highest per capita

consumer of water after the US, Canada and Russia. Now it has to build huge dams and pay the cost to divert rivers to over-developed areas, amid growing environmental and community opposition. Other factors (which apply elsewhere) are laws giving producers the right to squander resources so long as there is a consumer demand to be satisfied; and the role of the centralised State (largely controlled by business influences), with its control of revenue, command of resources, expertise and power to enforce policy on citizens, in arbitrating the management of resources.

Water – A New Colonialism

Abroad, British water companies are hunting for contracts for water supply and sewage disposal. A Thames Water spokesperson said, “We are being too soft, and that is why our disconnection levels will rise” (Guardian, 1992). The company was then part of a consortium re-organising the water supply of East Berlin. Both the Suffolk and Essex water companies are owned by the French *Lyonnaise des Eaux*, which along with the larger *Compagnie Generale des Eaux*, are the world’s largest water distributors. In 1994 Thames announced that it was teaming up with CGE to bid to maintain and expand the water and sewage system of Lima. Here the poor can’t have mains water, they must buy it by the drum. But the rich bribe the drivers of the tankers servicing the slums to divert the water to them so they can wash their cars. In 1993 Anglian Water was part of a consortium led by *Lyonnaise* to modernise and run the water and sewage operations of Buenos Aires. The chief executive of Thames Water explained its involvement in Latin America: “The aim remains to expand non-utility businesses to provide an earnings stream free of regulatory control”. Latin America has a long tradition of ‘client-populist’ politics resulting in the affluent areas of cities having a heavily subsidised and regularly maintained water supply. In most cities the poor do not have access to piped

has impeded the possibility of an adequate public transport system. The passenger revenue from buses in 1988 was £2.58bn and that from trains was £2.19bn. Of that, only 20% was government subsidy. Government subsidies for public transport have been cut back more and more by both Labour and Conservatives, resulting in fewer staff, and less spending on new equipment. This has serious implications for safety. For instance, John Prescott promised after the Clapham rail disaster to speed up introduction of the ATP automatic signalling system but New Labour later dumped it. Other effects include older stock (less efficient, more dangerous), fewer routes, overcrowding and higher fares. Privatisation and the perceived need to reduce public subsidy ensure that investment is focussed only on profitable parts of the public transport networks at the expense of the poor, rural regions and the environment. Consequently, there is a lack of imagination about what such a system could be. Ideas for improvements could include: locating more stops near homes, making the system cleaner, more regular and safer, and providing greater access for people with disabilities and children.

Dangerous Places

Those without cars (35% of the population in the UK) and those who do not have access to them during the day, must spend time searching for other facilities, waiting for buses, trains or friends who can give them lifts or walking. The working class, women, children and people with disabilities are particularly affected. For women travelling alone after dark there are the potential dangers of waiting at bus stops, for late trains (more dangerous after years of cuts resulting in lack of guards and conductors), or using underpasses that prioritise the motorist at the expense of the pedestrian. Women are also more likely to have the main responsibility for children in hostile urban environments (including escorting duties

Health

Exhaust fumes (carbon dioxide, sulphur dioxide, nitrogen dioxide, carbon monoxide, hydrocarbons) are a major contributor to global warming and acid rain, and cause much ill health and environmental damage. The average car pollutes more than two billion cubic metres of air in its life. In Britain emissions from car exhausts have increased by 73% since 1981; a 1993 government study found 19 million people in Britain were exposed to pollution exceeding EU guidelines. In 1965 there were 8 million cars in Britain; by 2025 36 million are predicted. Children and the elderly are particularly at risk from exhaust pollution, which causes asthma and bronchitis. Greenpeace International calculates 7.5 million elderly people are at risk and 9 million children. Asthma is one of the few treatable chronic diseases increasing in Western countries. Children are more vulnerable because they exercise more and so breathe in more air; 1.6m people die of air pollution each year, many children. The number of young children admitted to hospital with severe asthma attacks has increased 13 times since 1960. It is the greatest single cause of hospital admissions after heart disease and stroke.

Public Transport

The erosion of public transport in Britain (and elsewhere) is a basic consequence of mass car use. In the 1960s and 1970s, one third of the 17,000 miles of railways were axed and 40% of stations closed. Mass car use sabotages public transport through the allocation of funding, competition for space, and loss of ideological support. Cars compete with buses for space and slow them down. One bus or coach carries on average the passenger equivalent of 22 cars, taking up a seventh of the space. Of people going to work in central London by road, between twice as many travel by car than by bus: 130,000 cars rather than 3,000 buses. Mass car use

potable water, making them easy victims of the private water sellers; in Guayaquil for example, 400 tankers service 600,000 people (35% of the total urban population). Water customers who can afford large volumes get it at a heavily subsidised price from the public water utilities. Profiteers then sell it on to people living in the slums and shanties at 400 times what they paid. The cities have plenty of water but appalling hygiene and sanitation problems: average production and supply capacity would allow each inhabitant 220 litres a day; current consumption is an average of 307 litres in affluent areas but less than 25 litres for the poorest. Contemporary water imperialism is the result of the requirements of international water agencies that insist on international tender. Bilateral loans are usually subject to buying equipment and using engineering services from the lending country. These arrangements privilege infrastructure investment over institutional or organisational improvements and maintenance projects.

Where Water Does Not Flow

All over the world irrigation (especially for cash crops) has reached the point of diminishing returns, where mineral salts increase the salinity of water and decrease output: in 1990 30–40% of the world's irrigated cropland was estimated to be waterlogged or suffering from excessive salinisation. 63% of water used in 1991 was for irrigation, a figure projected to decline to 55% by 2000. It is now generally recognised that irrigation projects are most likely to succeed when fallow periods are observed and when managed by local communities. The reliance on large-scale irrigation has spread from luxury export crops in dry climates to the production of ordinary crops for supermarkets that account for most of British retail trade. Big farmers are encouraged by the National Rivers Authority (NRA) and the Ministry of Agriculture to build their

own reservoirs and are licensed to take water from rivers, despite the impacts on other users.

Because it is fixed and stable, land can be divided by hedges or walls and turned into private property, personal wealth and inheritance. But water should be a communal asset, because it will not stay still. For thousands of years legal and informal systems have accepted and insisted that there can be no ownership of running water. There is a long history of human societies that have developed elaborate systems to ensure fair access for all to water: the water communities on the Genil, Segura and Ebro rivers are examples of solidarity and social co-operation created by the Spanish on the foundations laid by the Phoenicians, the Roman Empire and the Moors. The modern technology of pipes, pumps and motive power makes such schemes easier. For irrigation, local control of water is all-important and can be achieved in many ways. In a centuries old system in Bali, all farmers taking water from the same stream or river are members of a *sebak* organisation, meeting every 35 days, with its own systems of law. It plans planting days, distributes water equitably and fines cheats. In the smallscale irrigation systems of eastern Spain under the Moors, water belonged to the community and was sold with the land. Continual disputes about its use in times of scarcity were regulated by a communal organisation, the *huerta* in places such as Aragon. Here water belongs to farmers and growers through whose land it passes, each water user belongs to a *comunidad de regantes* (association) that elects a *sindico*, the combination of *sindicos* from each zone constitutes the Water Tribunal. These meet to judge rations during scarcity; no lawyers or state laws are involved, fines are sometimes imposed and always paid.

Mega Schemes

by an urban motorway, its inhabitants gone. It is surrounded by a series of neighbourhoods hemmed in by fast-moving traffic on long arterial roads carrying commuters and freight back and forth. People can only enter or leave the city at controlled points. The city is fragmented, with no inter-connectivity between communities or people. Further out a series of scattered encampments – the outer suburbs – cluster the ring road. Cities devoid of life, with traffic endlessly circulating around ring roads. The poor from different areas never meet, leading totally separate existences. Thousands of people live in their own niche within neighbourhoods, isolated and atomised in their own homes.

The Struggle For Space

Forms of transport occupy space and the faster they are the more space they need. A car travelling 40 kilometres per hour (kph) requires more than 3 times as much space as one travelling at 10kph; a single person driving a car at 10kph needs 6 times as much space as a cyclist travelling at the same speed. Germany's cars (including driving and parking) commandeer 3700 square kilometres of space, 60% more than that occupied by housing. Each German car is responsible for 200 square kilometres of tarmac and concrete. The radius of activity of the well-off has expanded immeasurably over the last 30 years; that of the poor has changed very little. The emphasis on speed and "time saving" leads to transport and planning policies where basic facilities such as shops, schools, leisure and work are spaced widely apart. Most people feel that they have less time despite faster means of transport. Car ownership cannot be universal, even if we forget the large-scale (anti-) social effects of cars. There is insufficient space for the roads and parking that such a level of car ownership would mean. There are already extensive problems with cars, despite 35% of the population not even having a car for reasons of age, disability, poverty, or choice.

Freight Transport Association) and big business. They all believe economic growth and profit depends on having an efficient road network, a belief shared by government through the Department of Transport. It was a Labour government that started the demolition of the railway system. Some 46% of the track was torn up and much of the rest run down. The Tory Government of the 1990s continued the work. The road lobby was in the vanguard of rail privatisation, an asset-stripping bonanza to dwarf that of the buses. The strategy of the road lobby is to continually up their demands. If the road is a single lane, dual it. If dual lane already, give it three lanes or four. If somewhere doesn't have a by-pass, give it one. If there is one to the south, give it one to the north. If it has an orbital road build another, and so on. Additionally, no road can be built without grabbing huge acreages of land alongside for "infrastructure": supermarkets, industrial estates, commuter housing and so on. This in turn creates loads more traffic, requiring the road built a few years ago to be expanded; and so the cycle of 'development' goes on.

The Consequences of Motorisation

In the past, cities and towns were built to the scale of the walking person, and pedestrians, vehicle users, horse, cart, carriage, cycle, bus, car, lorry all had the same physical access to buildings. This equality has disappeared with the increasing speed (and volume) of motor traffic. Along main arterial roads barriers are put up to speed traffic flow; they also prevent pedestrians from crossing and motorists from parking so car users and bus passengers can no longer use local shops. The next stage is that a hypermarket opens elsewhere killing off small shops and forcing pedestrians and bus users to shop there or go to the more expensive shop on their estate (with its monopoly of local trade). Cities become compartmentalised, area by area. At the core is a hostile city centre defended



Huge hydraulic schemes are made possible by advanced modern civil engineering techniques. They require vast international contracts that are only possible at the level of central governments, international free floating capital and supranational government organisations. The financiers borrow money and lend it at commercial rates, so they favour largescale engineering projects that promise increasing production for export markets at the expense of local subsistence economies, with disastrous social and environmental effects. Cash crops destroy settled communities and cause pollution of soil and water. For instance, Ethiopia's Third Five-Year Plan brought 60% of cultivated land in the fertile Awash Valley under cotton, evicting Afar pastoralists onto fragile uplands which accelerated deforestation and contributed to the country's ecological crisis and famine. There's a vicious circle at work. Development needs money. Loans can only be repaid through cash crops that earn foreign currency. These need lots more water than subsistence farming. Large hydraulic schemes to provide this water are development. Development needs money. And so it goes.

Large-scale projects everywhere are the consequence and justification for authoritarian government: one of America's great dam-building organisations is the US Army Corps of Engineering. Stalin's secret police supervised the construction of dams and canals. Soldiers such as Nasser of Egypt and Gaddafi of Libya and military regimes in South America have been prominent in

promoting such projects. Nasser built the Anwar High dam in 1971. The long-term consequences have been to stop the annual flow of silt onto delta land, requiring a growing use of expensive chemical fertilisers, and increased vulnerability to erosion from the Mediterranean. Formerly the annual flooding washed away the build-up of natural salts; now they increase the salt content of irrigated land. The buildup of silt behind the dam is reducing its electricity generating capacity; the lake is also responsible for the dramatic increase in water-borne diseases. Nationalism leads to hydraulic projects without thought to what happens downstream in other countries. The 1992 floods of the Ganga-Brahmaputra-Barak system killed 10,000 people. 500m people live in the region, nearly 10% of the world's population, and they are constantly at risk from water exploitation and mismanagement. Technological imperialism has replaced the empire building of the past: large-scale hydro projects are exported to countries despite many inter-related problems – deforestation, intensive land use and disputes and so on. Large-scale water engineering projects foment international disputes and have become economic bargaining counters, for example the Pergau dam in Malaysia. The British Government agreed to spend £234m on it in 1989 in exchange for a £1.3bn arms deal. In 1994 the High Court ruled that the aid decision was unlawful but these kinds of corrupt deals continue.

In Sri Lanka the disruption caused by the Mahawelli dams and plantation projects resulted in the forcible eviction of 1 million people and helped maintain the insurgency of the Tamil Tigers that resulted in thousands of deaths as they fought government forces from the late 1980s onwards. In 1993 the Marsh Arabs of southern Iraq were threatened by Saddam Hussein's plans to drain the area – the most heavily populated part of the region. Many of the 100,000 inhabitants fled after being warned that any opposition risked death. Selincourt estimated that 3 million people would lose their homes, livelihoods, land and cultural identity by giant

agree to buy only new vehicles that used GM/Standard Oil products and Firestone tyres. In 1936 GM also set up a company with Standard Oil and Firestone Tyres that bought up US train companies and closed them down. By 1956 over 100 electric surface rail systems in 45 cities had been acquired and closed down. Before the motorisation of California by GM, Los Angeles was a beautiful city of lush palm trees, fragrant orange groves and ocean air.



Now it is a wasteland. Trees are dying in a petro-chemical smog. Orange groves, polluted by lead from petrol fumes, were paved over for 300 miles of freeways. The air is a cesspit into which four million cars daily pump 13,000 tons of pollutants. Fifty years after the American road lobby started work, the US transport system is a nightmare. Pedestrians and cyclists have been bullied off the streets, railways have al-

most vanished, and half the area of most cities consists of roads and parking lots. The road lobby bankrolls many politicians to vote against clean air and fuel efficiency, making American cars the most wasteful in the western world.

Motorisation In The UK

In Britain, the road lobby is represented by the British Road Federation, founded in the 1930s to “combat the sinister and distorted propaganda of the railways to enslave British Industry”. It is a coalition of car makers such as Ford, motor organisations such as the AA and RAC, road builders, oil companies, lorry operators (e.g. the

Two, Fordism — the transnational, oil-based economy of cars and motorways, super-tankers and aeroplanes — came into its own. These theories suggest that an economy expands until it reaches the limits of its distribution system. Slumps tend to be caused by glut: the inability to shift (rather than produce) goods. Economic growth and stability, then, can be safeguarded by investing in new transport systems that reach ever-larger markets. Whatever the validity of this theory, the ruling class is often ruthless in its elimination of old transport systems in order to introduce new ones. No sooner had the British canal system been developed, at great expense, than it was judged obsolete. The new rail companies, flush with investors' money, bought up canals and closed them down. Within a few decades the canal system was moribund and Britain was covered in railways.

Motorisation – The American Way

In 1925, the General Motors Corporation set about systematically destroying non-motor transport systems in America. They bought up the largest manufacturer of urban and interurban buses in the US. In 1926 they set up the Motor Transit Corporation (which became Greyhound), which agreed to purchase all its equipment from GM. General Motors then bought up all possible competitors, destroying the commuter services of Pennsylvania, New York and Connecticut. In cities, the only way that a new market for the buses could be created was for GM to finance the conversion of electrical tramway systems to motorbuses. Tramways were bought, converted to buses, then sold to local companies that were compelled to buy General Motors equipment. This continued until 1935, when the American Transit Association exposed GM's chicanery. Company executives and employees then "independently" set up another holding company with other car and oil companies, National City Lines, in 1936. Once more local companies were forced to

dam projects in the 1990s. The Kedung Ombo dam (Indonesia) displaced 25,000; the Akasombo dam (Ghana) 80,000; Caborra Bassa (South Africa) 25,000. Three dams in Laos alone will have displaced 142,000 people. The proposed Xiao Langdi dam in China would displace 140,000; the Three Gorges project 1.1 million people. Only war inflicts a similar level of human and environmental destruction, yet large dam projects have a chronic record in delivering water and power, or eliminating flooding in downstream valleys.

Safe Water

In the modern world it is possible for people to have access to cars, radio and television, but not (apparently) to a safe water supply – for example, Bangalore is the home of India's computer software industry but still has appalling sanitation and water supply. There are 4 categories of water-related diseases: water-borne such as typhoid and cholera; waterwashed, where lack of washing affects skin or eyes (for example scabies or trachoma); water-based, via parasitic worms; and water-related insect vectors e.g. malaria and yellow fever. There is a powerful economic argument for minimal public provision to counter these diseases. Public standpipes would provide free/cheap water to the poor; this would increase economic efficiency by reducing the time spent in collecting water (and the consequent ill health and injury) and health losses caused by polluted water. But rational planning and use often cuts across profit making, hence capitalism's hatred of public provision. As a result, the position of the urban poor has worsened: a UN survey of 58 'developing' countries in 1986 found that in 26 a lower proportion of the population had access to clean water in 1980 than in 1970. The World Health Organisation estimated in 1985 that 25% of the Third World's urban population lacked access to safe water, 100 million more than in 1975; the figures are likely to be a gross underestimate.

Dirty Water

Britain pumps over 300 million gallons of sewage into the sea every day and water companies spend millions of pounds on purifying water, 32% of which is then used to flush toilets. Water suppliers are unwilling to pay for pipes to separate high quality water used for washing and cooking from less treated water for other uses, meaning that costs remain high and recycling and re-use remain low. Inland cities, due to the threat of epidemic disease, developed elaborate systems of sewage processing and sought to link every household with the sewage system. Coastal and estuary towns frequently discharge untreated sewage into coastal water as the cheapest solution, assuming that the sea is big enough to absorb and dilute the faeces, industrial wastes and nuclear industry effluent. Since 1990, the activist group Surfers Against Sewage have been demonstrating to oppose and publicise this environmental vandalism. In 1995 an NRA report found that spending £300 per family for a new lower flush toilet could cut demand by 13%. A 1970 government report found that in some areas processed sewage sludge would be too contaminated by toxic metals to be used as agricultural fertiliser. British governments undertake to conform to EU water standards, but in practice do their level best to avoid them. For instance, in the 1990s standards on the acceptable quality of beaches were circumvented by the Tory Government's (re-) definition of beaches as places where 500 bathers were in the water at any one time; this definition excluded all Welsh beaches as well as Blackpool. The EU standard for discharges into rivers contained an exception for 'high natural dispersion areas' where the sea would quickly carry waste away. This led the 1994 Environment Secretary, John Gummer, to declare that more than 30 miles (48km) of the River Humber was open sea so that it could continue to receive raw sewage from Hull. The ruling saved the privatised Yorkshire Water Company £100m. He made a similar ruling for Bristol on

are pumping borrowed money into infrastructure schemes. Most are centred on roads. Amazonia (which has the most extensive national water transport network in the world)

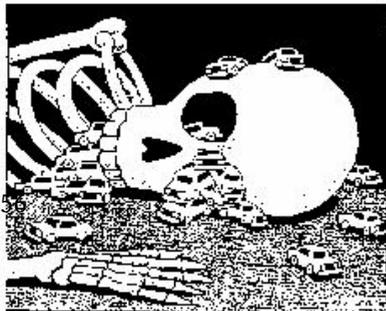
is being rapidly covered by roads, as is the Congo Basin. The Pan-American Highway is an engineering triumph we are told, but who talks of the environmental destruction from 'ribbon development' along its thousands of miles? Eventually the Earth will have become one continent., with motorists able to drive from Buenos Aires to Cape Town via New York and Moscow. For the South this will mean more colonisation, the displacement of people and disruption of local economies, the rape of the environment and the dubious benefits of consumerism. All over the world, goods are being moved ever faster over ever-greater distances. As transport costs decrease, competing firms seek to sell identical products in each other's territory. Manufacturers go farther to find the cheapest supplier of components. Workers commute ever further to work. The result is less an improvement in the quantity of commodities available and more an increase in travel and traffic. People will have to travel further to work or to shop, visit relatives or holiday in less spoilt resorts.

Origins of Traffic System

Nikolai Kondratiev, a Marxist writing in the 1920s, posited the Kondratiev cycle, which argued that industrial economies expand and contract in waves of about 50 years. Andrew Tylecote suggested that each boom period featured a "new technological style" associated with a form of transportation. The end of the 18th century in Britain saw the development of the canal system, the boom of 1844-70 the emerging rail network and so on. After World War

Carmaggedon – the politics of the car

Capitalism wants motor traffic for profit for the road lobby and for the rapid movement of goods and people (as either workers or consumers). Mobility madness also derives from the need of business people to commute within and between the zones of power in each city. Cars are important status and identity symbols. They also promise individuals the freedom to go where they want, when they want. This is a bourgeois freedom that is only achieved (if at all) at the expense of others, as part of the ‘war of all against all’. Other drivers are obstacles and restrictions to the individuals inalienable right of movement continually contested. In practice of course, the net result is more congestion and delays, increased pedestrian danger (particularly for the vulnerable, such as women and children), and further noise and air pollution. This ‘freedom’ is also empty because the effect of the accompanying tarmac, concrete and pollution is to make everywhere like everywhere else. The inalienable right to free (motor) movement is enforced and guaranteed by the State (through traffic laws and road construction) that others (us) must obey.



Roads-led development is not confined to the industrialised world. In order to meet the demands of international capital, many governments

the River Severn, although the High Court ruled in 1996 that both decisions were unlawful.

Global Warming & Climate Change

Since the 1970s there has been a steady increase in global temperatures as a result of the build-up of heat-trapping pollutant gases in the atmosphere. As evidence of the effects of global warming begins to accumulate, it is absolutely certain that the world is facing a dangerous acceleration of climate change and extremes of weather. These changes will be considerably worse than hotter summers and wetter winters for some and vice versa for others. Whole continents are going to be affected by severe and extended periods of changed climate. It's not just the Saharan region that is experiencing prolonged drought and disastrous fires. Even tropical and temperate regions are suffering, countries like Australia, Malaysia, Mexico, Nicaragua, Cyprus and East Africa. In one year forest fires consumed more than one million hectares of Sumatra and Kalimantan. Agriculture in many different regions of the world will become virtually impossible as desertification spreads in hot areas and rainfall drowns fields and paddocks in the world's monsoon belt. Storms and ocean swelling will inundate lowlying regions, drowning fishing ports and the hinterlands they feed. Global warming will expand ocean water and raise sea levels two feet by the year 2010: low-lying regions such as the delta portions of Bangladesh, Egypt and Southern China and low-lying islands in the Indian and Pacific oceans may be flooded or even submerged.

This may all seem very academic and the problem of distant peoples. But climate change doesn't just affect far-off countries we will never visit. Torrential rain and melting in 1998 combined to cause landslides and severe flooding in California, Idaho, Nevada and Oregon. Flash floods forced the evacuation of 125,000 people, and destroyed or badly damaged 24,000 houses and several hundred

square kilometres of farmland. Economic losses were estimated at \$2billion. Dermatologists in Australia and the United States are witnessing an explosion in cases of the deadly skin cancer, melanoma.

Rising sea levels will drown tourist beaches, coastal wetlands, cultural and heritage sites, fishing centres and other areas and require massive investment in coastal defences, new sewage systems and relocation costs – whole new towns – houses, schools, hospitals, factories – will have to be built as people are forced inland at massive cost. Who is to pay for all this, if not the working peoples of the world? These changes will have major consequences for food production and create many more refugees, with the poorest being most affected, as ever. Changes to the oceans will also drive fish from traditional grounds, making it dangerous or impossible to catch them without using factory vessels and the latest sonar technology. Think of the literally billions of people who live and work in the river and deltas of the great rivers of the world: the Amazon, Ganges, Indus, Mekon, Mississippi, Niger, Nile, Po, and Yangtze. These are hugely productive agricultural regions and are all at risk from rising sea levels and climate change.

Sustainable agriculture will become more difficult, leading to land being taken by Big Food and peasant farmers being forced into fetid slums beaten down by extremes of heat and rain where cholera, typhus and diphtheria are endemic. Across the world tropical insects are invading temperate zones where people and cattle have no immunity or the means to combat them while at the same time, up to 40% of all plant and animal species alive today are facing extinction. Crops are dying from water shortages and drought causes thousands of cattle to die of starvation or the heat. The coral reefs of the world are dying, unable to adapt to warming seas and the human diseases that enter the seas in sewage and thrive in warmer water. Don't think these are problems only affecting the Majority World, far away. In 2002 30% of the USA was officially declared drought-affected. The response of Big Money – government and business – is not to tax petrol, reduce carbon emissions or

or managerial activity, with policies assigned measurable 'performance targets' but which ignore other social consequences.

Appropriate Technology: In Whose Hands?

In the 1960s and '70s criticism of the dominant technological forms led to the limited development of 'alternative', and later 'appropriate', technology. Its characteristics are minimal use of non-renewable resources, minimal environmental interference, support for regional/local self-reliance and elimination of the alienation and exploitation of labour. Examples included energy production from "soft", renewable resources such as solar, wave, and wind power. However, a genuine appropriate technology can only be developed on a significant scale after a revolution. Vested interests (and the marginal status of most appropriate technology supporters) will not allow it before. This is illustrated by the British state's deliberate sabotage of pioneering soft energy technologies over the last two decades, particularly wave power. It is only recently that the large energy corporations and suppliers have begun to build wind farms and buy up solar technologies. Suddenly government subsidies are on the increase. We wonder why?

hundreds of individual tasks and each made more efficient through rigorous management and the use of controlling technology. A prime example is the assembly line and it is no coincidence that the great 'success' of Henry Ford was based on the application of Taylor's principles to mass automobile production. What is surprising is that during the Russian Revolution, the Bolsheviks enthusiastically took up Taylorism. Lenin described it as "a combination of the refined brutality of bourgeois exploitation and a number of the greatest scientific achievements in the field of analysing the mechanical motions of work; we must systematically try it out and adapt it to our own ends." A belief in the neutrality of technology, and that it could be controlled by the scientific and managerial elites of the 'workers' state, was one of the factors leading to the corruption and eventual destruction of the Russian Revolution. But Taylor's research has since been shown to be wholly unscientific. His timed study tasks were made on an atypical worker chosen for his large size, great strength, and general stupidity. Taylorism has largely been superseded by ideas about 'job enrichment' at work; unfortunately, such ideas are equally unscientific.

The objectivity of the scientific method is used to mask the problems created by advanced technology and to legitimise the policies of the ruling class. The Roskill Commission was set up in 1969 to look at the siting of a third London airport. The masses of 'expert evidence' showed that it was less socially damaging to fly loud aircraft over working class rather than middle class areas because of the different effects on property values. Technological programmes are presented as outside the area of political debate, so only technical objections are allowed. Official enquiries into the location of motorways and nuclear power stations can discuss where they will cause the least environmental and social disturbance but not whether they are needed in the first place or whose interests they serve. Similarly, the trend is to present politics as a purely technical

change patterns of consumption to conserve water but build more dams to line the pockets of the corporations responsible for the mess in the first place.

We are often told that climate change is produced by old-fashioned polluting technologies and that – if sufficient money is given to big business and the universities – they will produce the technological solutions that will save the planet. Yet, as this pamphlet shows elsewhere, the nature, speed and scope of technological change is not dictated by human need (or even humanity's actual survival on this planet) but by the corporations' ability to make profit from their development, introduction and control. They dictate when products and technologies enter the market, not us. It is the corporations that increasingly dictate what, how and how much we consume by their control of technology and product development. Patterns of consumption, the waste and excess created by capitalism, dictate our methods of production. And it is the total mass of production – which is bound to go on increasing as western patterns of consumption are spread to the developing world by globalisation – that is the problem. What is also being spread – unfortunately – are the grotesquely unfair and destructive inequalities that capitalism creates and fosters. These are not just inequalities of wealth, status or power, though these are scandalous enough in a world that pretends to human equality and rights (and how hollow these must ring as dust sweeps across the farm of your ancestors or floods drown crop, cattle and kin). They are also inequalities in the one of the fundamentals that defines humanity: the kind and quality of our lives and the ways in which we die.

For it is the poor, the marginalized and the weak, who already die in their tens of millions every year who will bear the brunt of global warming and climate change. If the price of flour goes up a few cents a kilo as a result of bad weather or failed crops bread in America will be a little bit more expensive. But if you live on \$1 a day in Ethiopia or Brazil then a drought in the maize fields can be a

matter of life and death. If the vaccines and antibiotics that helped control endemic disease no longer work and you can't afford the new drugs from the West, how do you choose who will get them? If the upland peoples have been driven from their land by drought and come armed to your village, will you fight or flee? And where will you go the slums are already full? When the privatised water company turns off the neighbourhood's water supply to preserve it for the rich who can afford to pay, how will you wash (to avoid disease), find clean water (to cook with) or flush that already stinking toilet where infection is breeding? The inevitable result of global warming is not an 'English Riviera' that the media and some scientists like to popularise, it is war, civil war, intercommunal violence, mass poverty, starvation and disease, man-made catastrophe and millions of blighted lives. Even though the consumption-obsessed western economies are the engine of global warming, its effects are largely not felt there. We are content to let international aid agencies provide sticking plaster solutions to the environmental disasters that business has created. Capitalism is blighting the planet; only the free society of the future, made here today, will restore it to health.

Conclusion

If the price mechanism continues to determine the allocation of water, the poor will die of thirst. If it decides which crops are irrigated for market, they will starve. If it determines the availability of water for personal hygiene, vast numbers of children will die before the age of five from illnesses such as diarrhoea. But there are numerous examples from around the world that show that people can co-operate to share water resources sensibly and fairly but only where there is common ownership and control of water.

This section is based on Colin Ward's 'Reflected in Water: A Crisis of Social Responsibility' (Cassell, 1997)

technology itself. The solution is a "technical fix" — more of the same. The ideology of industrialisation is that modernisation, technological development and social development are the same. It is used to justify the pursuit of economic growth, with the emphasis on wealth generation rather than its distribution.

This ideology is used to suppress the potential for individual-social emancipation offered by particular machines such as wind power technology (i.e. small scale, for local use, and community controlled), and to legitimise their use in ways that are socially and environmentally exploitative (large scale wind farms under state/private control supplying the National Grid). Technological innovation is used politically, but presented in neutral technical/scientific terms such as "increased efficiency". A modern example might be the introduction of assembly line production techniques into the construction industry; or a 'technical solution' to social needs such as the development of a new transport system; or as the economic 'rationalisation' of out of date technologies, for instance the introduction of new print technology by Rupert Murdoch at Wapping which led to the printers' strike of 1986/7. 'Work improvement' schemes such as job enrichment allow workers a say in minor decisions to divert them from key areas such as pay and productivity. Innovation is used as a threat to blackmail sections of the workforce into particular tasks: employers often threaten female machine workers that if their demands for equal pay with men are met, they will be replaced by machines.

Science has prostituted itself to its paymaster, big business, and is a dangerous partner in change. In the 1880's Frederick Winslow Taylor invented 'scientific management' (now known as Taylorism). He believed all productive processes could be broken down into



both the new machines and the new social relations of production they created. Machines threatened employment and the relative freedom, dignity and kinship of the craft worker. There was also widespread support from other classes, such as farmers, who were threatened by the new agricultural machinery. Between 1811 and 1813 the government was forced to deploy over 12,000 troops to tackle the Luddites: a larger force than Wellington's army in Spain. The Lancashire machine wreckers of 1778 and 1780 spared spinning jennies of 24 spindles or less (suitable for domestic production), and destroyed larger ones that could be used in factories. Machine breakers won many local conflicts: in Norfolk they succeeded in keeping up wages for a number of years. Wrecking destroyed John Kay's house in 1753, Hargreave's spinning jennies in 1768, Arkwright's mills in 1776. During the widespread spinning strikes of 1818, shuttles were locked in chapels and workshops in Manchester, Barnsley, Bolton and other towns. The Luddites were eventually defeated by the gathering political momentum of industrial capitalism, supported by strong military force and technological advance, which changed the composition of the labour force. For instance, the length of spinning mules was increased to reduce the number of workers required, displacing adult spinners and increasing the number of assistants, especially children; these changes were made despite being very costly. "A new generation had (now) grown up which was inured to the discipline and precision of the mill".

Technology Today

The neutrality of science and technology is a myth. Science is used to legitimate power, technology to justify social control. The myth is wheeled out when technology comes under fire e.g. for causing industrial pollution or traffic congestion. Inadequate policies or under-developed technology are blamed rather than the

People

Scientific fact proclaims the existence of an ecology of which we are a part. No system of ethics or morality, except the diseased mythologies of fascism, can justify human existence in the present if humanity fails to exist in the future. Capitalism will either destroy humanity by destroying its ecological niche or it will destroy humanity by changing it. From these three statements comes an inescapable conclusion: that the class war is also a war of ecological survival.

Are We The Problem?

Of course working class cultures created or maintained by capitalism are part of the problem. Consumer culture encourages environmental destruction, whether by recreational hunters, forest resort developers, trail-bikers or off-road drivers. We consume our environment in the same way and for the same reasons we consume everything else capitalism has appropriated and turned into products to be remade, repackaged and sold. The home improvement craze has led to disused quarries in national parks being reopened or expanded to feed our hunger for stone and gravel. Forests are planted and felled to feed our craving for newsprint, furniture and packaging. We grub up hedges, spray pesticides or let useful land lie fallow because someone pays us to do it. How we live is *not* natural and *not* necessary but an entirely artificial thing, created by capitalism to suit *its* needs, not ours. But this situation is not normal, not permanent and can be challenged.

Capitalism is not a solution it is a predicament. Its point of no return has already been reached; it will die or be radically changed in the life of many people alive today. How many of us will die in the process is the question.

The Myth of Overpopulation

Human population has skyrocketed in the last few centuries – in the nineteenth century, the world population more than doubled. But population growth is a result of a decline in the death rate, rather than a boom in the birth rate. Humans have always produced a lot of children; it is a useful survival technique. But we are also getting better at keeping ourselves alive. At the same time, while some areas maintain historically high rates of birth, other areas – notably the ‘developed’ countries of the West – have declining birth rates. So what’s the truth about ‘over-population’?

Malthus

Are there too many people for the earth to support? Thomas Malthus (a 19th Century clergyman), was the originator and populist of “overpopulation” theories. He maintained that food supplies could only increase arithmetically while human population increases exponentially. War, disease and starvation for the poor are the inevitable result: “Man cannot live in the midst of plenty. All cannot share alike the bounties of nature”. These disasters were also the ‘natural’ solution to the problem. He opposed contraception or feeding people who would otherwise starve, as this would only lead them to procreate more, worsening the general misery.

Overpopulation ideology emerged with the beginning of industrialisation. People were driven from their lands and dispossessed of the commons (a traditional source of food in hard times) by wealthy landowners and crowded into factories and slum housing.

bosses over workers (both in and outside the workplace). Where profit and control come into conflict, control is usually prioritised, as a loss of control puts profit – and ultimately the boss class itself – at risk. Today’s technological society dates from the Industrial Revolution and the new sciences of the 17th Century. The old idea of the world as animistic (alive) and organic was discarded. A new abstract science and a model for ruling class order replaced it: the Machine. Order was the predictable behaviour of each part within a rationally determined system of laws. Power came from active human intervention. Order and power came together to make up control: rational control over nature, society and self.

Machines were rarely the reason for setting up the new factories, which were a managerial, not a technical necessity. Those invented in the early years of the Industrial Revolution to replace hand labour did accelerate the development of factories: Arkwright’s Water Frame (1768), Crompton’s Mule (1774), Cartwright’s Power Loom (1784), Watt’s Steam Engine (1785). But most manufacturers did not adopt the ‘most potent’ self-acting tools and machines until they were forced to do so: strikes in Midlands factories led the owners to commission a firm of machinists to construct a self-acting mule at a cost of £13,000, to avoid conceding higher wages. Machinists christened the dreaded new machine patented in 1830 “The Iron Man”. The factory-based organisation of the weaving industry did not develop simply because it was more efficient. Many of the new machines were expensive, and were only developed and introduced after the weavers had been concentrated into the factories, following great resistance.

Much worker resistance took the form of machine breaking. The wrecking of coalmines during widespread rioting in Northumberland in 1740 and frame breaking in the East Midlands hosiery trade are examples. Other workers, particularly the Luddites, opposed

to working class struggles. Containerisation (enabling goods to be equally transferable between ship, rail, and roads) was developed in response to the power and organisation of dockworkers. Technologies that are potentially more liberating are suppressed. For instance, successive British governments have put massive funds into nuclear power and tiny amounts into the research and development of renewable energy resources such as wind, solar, tidal and geothermal energy. To compound this strategy of sabotage, this paltry funding has been deliberately chopped about, so that research into each energy source never progresses too far, or until the large corporations are ready to buy up the patents. This means they will continue to dominate the energy and transportation industries of the future. Large-scale industry necessitates large-scale centralised energy production from fossil fuels (coal, oil, and gas), and nuclear power, with the consequent waste, acid rain, radiation and global warming. We need to develop a technology that extends human capabilities, can be controlled by the community, and is also friendly to the environment, as part of the struggle for a free anarchist communist society. Such a genuine alternative technology can only be developed on a significant scale in a new society. Workers and the community will have to weigh up the pros and cons of different technologies. People will have to decide – through new post-revolutionary organisations such as worker-neighbourhood assemblies etc. – which technologies to use, which to adapt or limit, and which to discard.

From Science, The Machine

Technological innovation has been used to increase efficiency and maximise profits, yes, but also to maintain and optimise the control of



Disease, brutality and immorality were caused by overcrowding which was itself the product of there being too many people – or so it was thought. Malthus’ theories began to be used selectively by political and business leaders as the Industrial Revolution progressed. A surplus of workers kept wages down, which was good for business, and good business made good politics. But society was also a “war of all against all” (Hobbes). In order to survive and conquer, states required a lot of people (soldiers, workers) but only the ‘right’ ones. Social Darwinism, combined with eugenics (the genetic control and ‘improvement’ of breeds), was used to justify colonial conquest and legitimised reactionary immigration policies at the turn of the 20th Century. Ultimately it provided the necessary ideology for the extermination of ‘inferior’ people by the Nazis in their death camps: the disabled, mentally or physically ‘deficient’, psychiatric inmates, Jews, Gypsies, homosexuals etc.



Overpopulation theories are currently used by the Development Bank to justify the industrial development of sensitive wilderness areas such as Western Brazil. Media images of crowded refugee camps suggest an Africa teeming with people that the land cannot support and conveniently ignore

the wars and economic oppression that have driven them there. Since the Cold War, US strategy to control political developments and resources has involved population control to prevent nationalist revolt in Africa and Asia. The American corporate and military state collaborates with local elites through the establishment of state-dominated institutions for population control. The US Agency for International Development (USAID) is the biggest single funder of population control activities in the majority world. The anti-abortion stance of the Reagan and Bush administrations

was a sop to the Right and only for domestic consumption. The focus of the present population control establishment is authoritarian and technocratic. Sterilisation, interuterine devices, the Pill, and other risky forms of fertility control are preferred to traditional methods and barrier techniques.

This ideology is based on three tenets:

1. Rapid population growth is the main cause of the South's development problems, particularly hunger, environmental destruction and political instability.
2. People must be persuaded/forced to have fewer children (in Indonesia the Army has forced IUDs on villagers at gunpoint), without fundamentally improving their impoverished conditions.
3. With the right combination of finance, personnel, technology and Western management techniques, birth control can be delivered from the top down, without basic health care systems.

Hunger Has Natural Causes, Right?

Despite the fact that the world produces 1.5 times as much food as is needed to feed the human population, starvation and famine are endemic to modern capitalism. 900 million people die from starvation each year, but there is no global shortage of land to grow food. The UN estimates that there is enough land to feed a world population of 14 billion people. But what is it being used for? As in the 'developed' North, large landowners control the vast majority of land. In 83 countries, 3% of farmers control 79% of farmland, much of it left unused in order to maintain profits. Big Food made over \$7bn profit from the South in 1990, and probably far more through transfer payments. It uses its economic power to force

Technology

It is important to examine technology (the machines and tools used by society, and the relations between them implied by their use). Existing technology is rarely neutral — it has been developed under and by capitalism for profit (exploitation) and social-economic control. Technology alone — science, research, innovation, invention — is therefore not just a question of who owns or controls it but how it is used: a nuclear power station controlled by the workers and community would still be unhealthy and oppressive.

Is Technology Neutral?

This is a vital question for revolutionaries. If technology is neutral, then a successful revolution will solve our current problems — the oppressiveness of workplaces, the danger, pollution and social dislocation of traffic, and the environmental destruction of industry and agriculture can be ended by using technology in different ways. But technology is a *social* institution, that can either enhance or limit human life, expanding or damaging human abilities and health (and the natural environment). The social relations of production (boss vs. worker) are reflected in the machines and tools we use, technics that interact with and reinforce social patterns, such as mass car use, and class society. Similarly, the hierarchical regimentation of workers, although appearing to be a 'neutral' necessity arising out of production techniques, is a reflection of the social division of labour. The ruling class is constantly modifying technology, developing new machines, tools and techniques in response



down the prices of rice, coffee, sugar, cocoa and cotton. Average prices in 1989 were 20% down on those of 1980. This led to an increase in foreign debt for Southern countries, with consequent increased economic hardship for the poor majority (higher taxes, inflation, etc.). Brazil has an area of farmland the size of India left uncultivated while 20 million rural poor are landless; the richest 1% owns 15 times as much land as the poorest 56% of Brazilian farmers. In Guatemala, 2% of landowners own 66% of the land. In the Philippines agribusiness producing sugar, cotton and pineapples for export has pushed 12 million peasants into the lowland forests.

Drought in Africa is part of a millennia-long cycle that human societies adapted to. It is cash crop exploitation, the market economy and taxation that produce starvation, not drought. During the 1970s, when famines first began to be reported regularly, ships that brought relief supplies to the port of Dakar left carrying peanuts, cotton, vegetables, and meat. In Bangladesh, often cited as the model for the Malthusian argument, 90% of the land is worked by sharecroppers and labourers. Many starved after the 1974 floods, while hoarders held on to four million tons of rice. In the mid-80's severe famines occurred in the Sahel countries of Burkina Faso, Mali, Niger, Senegal and Chad yet during the same period record harvests of cotton were exported to the industrial centres of the world.

Cash crops go to feed the global supermarket, yielding higher profits for international capital and accelerating global industrialisation. Mexican soil and labour supplies almost 70% of the US market for much winter and early spring vegetables. The result is that agriculture for local consumption is squeezed out and the prices of staple foods rise. Up to 50% of total meat production in Central America is exported, mainly to North America. The "Green Revolution" of the 1970s and 1980s, that the ruling class said would feed the hungry, has in fact only supplied the global supermarket. The same will certainly be true of the 'wonder crops' of the GM revolution. The corporate claims that GM and industrial food production

in general will ‘feed the world’ are straightforward lies. The maize/soya/ animal product system they are pushing so heavily is not a rational way to produce food – an acre of cereal is estimated to produce 5 times as much protein as one devoted to meat production, an acre of legumes (beans, peas, lentils) 10 times as much and an acre of leafy vegetables 15 times as much.

Where Does Poverty Come From?



The imposition of free market economics on colonial territories in the 19th Century massively increased death tolls from drought and monsoon: as many as 18m died in India and China alone in two years in the 1870s. Famine in China sparked the Boxer Uprising. ‘Modernization’ caused village stocks of grain to be centralized in the Indian Empire and then exported to England whenever there were bad harvests. When famine struck, the colonial administration raised prices beyond the reach of the peasants who starved, fled the land or turned to banditry and even cannibalism. Money sent by European governments for relief often ended up funding increases in local military establishments and ‘bush wars’ against colonial rivals or were pocketed by the colonial merchant and ruling classes – the very crime that Saddam’s Iraq was accused of throughout the 1990s. Despite a decades-long effort to ‘civilize’ and ‘develop’ India, there was no increase in the per capita income of people between 1757 and 1947. Wealth flowed in both directions but did not pass out of the hands of the ruling classes into that of ordinary Indians. In Africa and Asia the rural population live on the poorest land. They are forced to grow cash crops for ex-

food; today agriculture uses 150. But these monocultures, working against the basic ecological principle of diversity, are prone to pests and diseases. Farmers then have to treat these crops with chemical pesticides and herbicides.

A Common Treasury?

An essential facet of industrial capitalism from its very beginnings up to the present day is the destruction of subsistence in order to force people into the world of wage labour and the market. Its origin is to be found in an intensification and marketisation of agriculture. In order for industrial capitalism to develop and come to dominate the whole of society subsistence had to be broken. Access to land and the ability to directly satisfy needs and desires from the natural environment had to be denied to the majority not just in order to force people to engage in wage labour but also to create an outlet for manufactured and traded goods. Biotechnology under capitalism goes further and takes life into its own hands, using the logic of profitability as its guide. It makes life equivalent to property, threatening the stability, diversity and spontaneity of the ecology of our planet that has evolved over millions of years. It erodes the rich variety of species available to us, and our freedom to decide how we interact with them. It forces millions into dependence, poverty, and starvation through the use of their land for cash crops for export, land that they could use to feed themselves. We anarchist communists see through the green veneer capitalism is busy giving itself. We see that capitalism is the enemy of our environment, our autonomy, our freedom. We work for its downfall.

You poor take courage

You rich take care

This land was made a common treasury

For everyone to share

The World Turned Upside Down, Leon Rosselson

one of the origins of industrial capitalism. The use of biotechnology as an instrument of domination and exploitation has its historical roots in the West's great plunder of the rest of the world in the period of colonialism. The colonialists regarded all in their path – land, plants, animals and humans – as their property: commodities and tools for the accumulation of wealth and power. Plant species, such as tea and cotton, were sought out, transported around the world and grown as vast monocultures on plantations. The native communities were decimated – cleared from the land, slaughtered or traded as slaves to work the plantations. All this forced the colonised world into a position of dependence and caused ecological imbalances in which numerous plant and animal species were lost forever.

Genetics

Biotechnology is the manipulation of living matter by humans to satisfy their needs for food and medicine. It is an ancient practice including crop rotation, crossbreeding and the use of yeasts in brewing and baking, for example. However, biotechnology under technically advanced capitalism has become a method of creating and exploiting under-developed countries, causing immeasurable and irreversible damage to the ecology of the planet and making vast profits for multi-national companies. In the current period of neo-colonialism, where domination is maintained indirectly with the connivance of Westfriendly local elites and the threat of sanctions, biotechnology is used as a means of perfecting and extending the domination of western capitalism. Biotechnology enables the global corporations that control the cash-crop monocultures of the majority world to scientifically manipulate species. Big Food is genetically engineering 'super breeds' to be grown in vast monocultures, further endangering the diversity of ancient natural varieties and species. Only a few centuries ago 5000 plants were used as

port, although their primary need is to feed themselves: 15 million children die every year from malnutrition. In Brazil the IMF (International Monetary Fund) typically insisted that the huge \$120 billion debt was paid by reducing imports and maximising exports. This has inevitably led to the worsening rape of Amazonia through increasing the output of primary products such as minerals, meat, coffee, cocoa and hardwoods. Living on the worst land and burdened by debt, is it any wonder people over-cultivate, deforest and overuse the land, becoming more prone to 'natural' disasters such as floods and droughts. This land is also the most dangerous: the poor live in shanty towns of flood-prone river basins or foreshores, or in huts of heavy mud brick, on steep hills, that are washed away when the rains come.

Maybe Its Just A Lack Of Resources?

One justification for population control is the pressure on resources shown by deforestation, desertification, water pollution etc. We need fewer people to stop environmental destruction, yes? But fewer people do not necessarily consume fewer resources. The industrialised North with about 20% of world population (1.2bn people) consumes over 80% of its resources, 70% of energy, 75% of metals, 85% of wood, 60% of food. These figures obscure vast disparities of wealth within both the South and the North. The worlds largest companies control 70% of world trade, 80% of foreign investment, and 30% of global GDP. Militarism is the most environmentally destructive modern institution. Its cumulative effects far outweigh the effects of population pressure. In the last 50 years there have been over 125 wars fought in the South (many of them proxy wars for the superpowers), leaving 22 million dead. Over 60% of global arms sales go to Africa and Asia; this military spending kills and damages many more through the waste of resources. The American Pentagon produces more toxic waste than the five largest

multi-national chemical companies combined: a ton of toxic chemicals a minute. A B52 bomber consumes over 13,000 litres of fuel an hour; an armoured division (348 tanks) over 2 million litres of fuel a day. War also damages the environment through destabilising traditional communities, creating refugees who flee and settle on fragile soils that cannot support them. In Africa, between 1955 and 1985, there were over 200 attempted coups creating over 8 million peasant refugees who fled their villages to escape terror in Ethiopia, Mozambique, Angola, the Sudan and Uganda.

human inhabitants of Planet Earth, if only by reducing prices? Is even that to be believed? Well, there are plenty of indications that claims of huge increases in yield are somewhat exaggerated. In 1997 30,000 acres of Monsanto's GM Roundup Ready cotton failed in Mississippi. Growers faced \$100,000 in losses each. In 1996 Monsanto's 'New Leaf' GM potatoes (containing the Bt gene) were planted in Georgia in the ex-Soviet Union. Yield loss was up to 67% of the entire crop. Many farmers were forced into debt. Also in 1996 2 million acres of Monsanto's GM cotton were planted in the southern US. This contained the Bt gene that is supposed to make it immune to the bollworm, a major pest of cotton. However nearly 50% of the acreage planted suffered a severe infestation: just a few teething troubles before the corporations save us all from hunger and environmental degradation? Or could it be clear evidence that talk of 'feeding the world' with GM technology is pure lies and only increased sales and profits matter? While this system, by its irrationality, plunges many into poverty it elevates others to great wealth, power and privilege and these elites will do all in their power to maintain and extend it regardless of the cost to humans, other species or life in general. It is for this reason that when we come to consider our response to GM technology, the latest stage in the industrialisation of food production, we must aim to build an autonomous, collective, revolutionary response rather than being dragged onto the terrain of reformism.

Stealing The World

In Great Britain in the century leading up to the 'Industrial Revolution, (1650–1750) the 'peasantry' (small farmers practising subsistence agriculture and handicrafts, producing significant amounts of their own wants) was more or less destroyed and replaced by a small number of large landowners who rented out farms to tenants who employed wage labour and produced for the market. This is

A US company called Biocyte holds a patent on (owns) all umbilical cord cells. Systemix Inc has a patent on (owns) all human bone marrow stem cells, these being the progenitors of all cells in the blood. The worldwide market for cell lines and tissue cultures was estimated to be worth \$426.7 million to the corporations in 1996. Not only cells but also fragments of DNA can be patented (owned) in this way. Incyte, for example, has applied for patents on 1.2 million fragments of human DNA. The logic of this is that 'genes for' particular diseases such as cystic fibrosis, diabetes, various cancers etc could become the property of pharmaceutical companies who could then make huge profits on tests for such genes and genebased therapies. There is no space here to get into a lengthy criticism of the reductionist idea that individual genes simply map onto well-defined physical traits underlying the whole theory and practice of GM. It's enough to say that research into patenting (owning), for example, a supposed 'breast cancer gene' is of little benefit to humanity if it is true, as some scientists have estimated, that 90% of breast cancers are unrelated to genetics but are triggered by environmental pollution, diet and lifestyle factors. So what's new? Capitalism, indeed class-society in general, always seizes the living and turns it into profit and power, declares ownership where previously there was only life: from the enclosure of the commons to the seizing of millions of human beings from Africa to be slaves to the current looting of tropical biodiversity for use in the biotech labs.

Cornucopia?

But to return to the issue of the production of agricultural goods using GM technology, although we know that poverty is not caused either by an actual scarcity of physical necessities or any inability to produce them, what about the claim of the corporations that GM will increase yields and hence be of benefit to us

Biotechnology and the future of humanity

The development of the technology of Genetic Modification (GM) stretches back decades but most people have started to become aware of its implications only during the 90s. First Monsanto introduced rBST, a GM growth hormone designed to increase milk yields in the US. After some controversy the EU decided to ban its import into Europe, a decision that is likely to be overturned by the World Trade Organisation (WTO) soon. Then in 1996 shipments of soya beans genetically modified to be resistant to Monsanto's herbicide Roundup started to arrive in this country, prompting public disquiet. The sacking of Dr Puzstai from the Rowett Institute for claiming that consuming GM potatoes harmed rats provoked quite a food scare frenzy in the capitalist media. But the "Frankenstein Foods" paranoia also tended to obscure the environmental and social disasters that will follow if the corporations carry out their plans to introduce GM on a large scale. To quote Vandana Shiva "It seems that the Western powers are still driven by the colonising impulse to discover, conquer, own, and possess everything, every society, every culture. The colonies have now been extended to the interior spaces, the 'genetic codes' of life forms from microbes and plants to animals, including humans."

Let Them Eat Oil

GM is only the latest stage in the industrialisation of food production under the control of the petro-chemicalpharmaceutical

multinationals that have come to dominate the global economy (Big Food, Big Pharm and Big Oil). They are more powerful than many nation states: in 1995, of the 100 most powerful 'economies' in the world 48 were global corporations. Along with international financial institutions like the IMF, World Bank and WTO, they constitute the economic side of the New World Order. The process of industrialising food production, which they have been imposing on us over the last few decades, consists of destroying subsistence and organic farming and replacing it with a system based on:

- Massive inputs of petro-chemicals in the form of fuel for machinery, artificial fertilisers and biocides (herbicides and pesticides).
- Production for a global market rather than for direct consumption (subsistence) or local markets.
- More dependence on animal products and the intensification of animal exploitation (factory farming).
- The concentration of land ownership into fewer hands.
- Dependence on multinational corporations for seed. Major chemical, pharmaceutical and oil multinationals have taken over more than 120 seed companies since the 1960s. The top 5 seed producers now control 75% of the world market. Hybrid, so-called 'High Yielding Varieties', have yields 20–40% lower in the second generation if replanted and are hence economically sterile.
- The replacement of mixed cropping systems suitable to local conditions by monoculture.

The results of this process (once known as the 'Green Revolution') have been landlessness, poverty & starvation for millions as well as massive degradation of the natural world through chemical pollution and loss of biodiversity.

labour/time/creativity because capitalists own everything (land, the means of production, transport and communication etc) that would enable people to live outside of wage labour and the market place. Now, instead of individuals owning non-human animals as part of their subsistence, corporations are claiming the right to 'own' whole species of animals. This process of patenting life can be traced back to the 1980 US Supreme Court ruling, which stated that a GM bacterium (modified to digest oil) could be patented. Not just that one bacterium of course but the whole, created species. In 1985 the US Patent and Trademark Office ruled that GM plants, seeds and plant tissues could be patented. Now the corporations can demand royalties and licence payments every time farmers use those plants or seeds. Monsanto holds a patent on (i.e. owns and rents out) all GM cotton and soya. Patents have been granted on biological characteristics of plants as well. For example, a patent has been issued to Sungene for a variety of sunflower that has a high oleic acid content. But the patent covers the *characteristic* as well as the genes that code for it, so any plant breeder who achieves the same result by traditional methods could be sued.

In 1987 animals joined the biotech market place when a Harvard biologist patented 'oncomouse', a GM organism (mouse) predisposed to develop cancer for use in medical 'research'. By 1997 40 GM 'species' of animal had been patented, including turkey, nematodes, mice and rabbits. Hundreds of other patents are pending on pigs, cows, fish, sheep and monkeys among others. In 1976 a leukaemia patient named John Moore had his cancerous spleen removed under surgery at the University of California. Without his knowledge or consent some of the cells from his spleen were cultured and found to produce a protein which could be used in the manufacture of anti-cancer drugs. The estimated value of this cell-line to the pharmaceutical industry is \$3 billion. In 1984 the California Supreme Court ruled that he was not entitled to any of these profits.

to marine and aquatic invertebrates. This last is particularly worrying since glufosinate is water-soluble and readily leached from soil to groundwater. As for Monsanto's 'environment friendly' biocide Roundup, it can kill fish in concentrations as low as 10ppm, stunts and kills earthworms, is toxic to many beneficial mycorrhizal fungi which help plants take up nutrients and is the third most common cause of pesticide-related illness among agricultural workers in California; symptoms include eye and skin irritation, cardiac depression and vomiting.

Crops have also been genetically modified to produce their own pesticide, most notably by inserting genes from a naturally occurring bacterium *Bacillus thuringiensis* (Bt). This produces a toxin that kills some insects and their larvae by destroying their digestive tracts. The substances produced by the GM crops are toxic and persist in the soil longer, killing a wider range of insects and soil organisms. It is also inevitable that some of the target organisms will develop immunity and farmers will return to chemical sprays or whatever the next technical fix the corporations come up with happens to be. It is also likely that either through cross-pollination or through the action of bacteria and/or viruses the Bt gene will end up in other plants with unpredictable effects on food production and ecosystems. This shows that the corporate justification of GM technology, that it is only an extension of traditional breeding methods, is utterly false. Human beings can alter the characteristics of plants and animals by crossing closely related individuals. We cannot cross a bacteria with a plant, a fish with a strawberry or a human with a pig, yet GM potentially makes possible any juxtaposition of genes from anywhere in the web of life.

Animals Are Commodities Too

Under slavery human individuals are owned, are property. Under capitalism workers aren't owned but they have to sell their

Down On The Farm

The foot and mouth 'epidemic' in Britain was a massive abuse of animals and the land, caused by the pursuit of profit. Infected swill from schools, probably arising from the cheap imported meat schools use (cost-cutting before children's health), was fed to pigs. Infected and disease-free animals were taken to large agri-business holding stations. The weak or unwanted were sold in local markets, spreading infection. The rest were transported hundreds of miles to fattening stations and mixed with other animals even though it is well known that livestock transported long distances are very susceptible to disease. Some were exported to Europe (after being infected), others sold after fattening to the abattoirs and then into the food chain. This industrial agriculture is forced upon farmers by a capitalism that must offer ever-cheaper goods to survive and the greed of the supermarkets for profit and market share. What is truly amazing is that foot and mouth disease cannot infect humans and does no more harm to animals than minor sores and milk that can't be used. It wears off after a few weeks. In the 19th Century and abroad farmers simply let the disease burn itself out after killing very few animals. Why is it different in these islands? Because the supermarkets will not buy infected meat and farmers will not pay to feed a cow that even temporarily produces no milk. Foot and mouth was not a natural disaster, it was an economic disease, killing profits but of no harm to animals or humans. One million healthy, disease-free sheep were killed to protect the profits of the supermarkets and large agribusinesses, the ultimate indictment of capitalist profit motive and methods of organization. Globalisation and free trade are forcing intensive farming methods on farmers with disastrous consequences. In 1999 200,000 farmers in Europe gave up the unequal struggle and big business moved in. 10 companies worldwide control 60% of the international food chain. Four of them control the world supply of corn, wheat, tea, rice and timber. Massive subsidies, paid for by taxes on wages and non-agricultural

businesses, swell the profits of the biggest farms and agricultural businesses, usually owned by large multi-national corporations – in the US, a total of \$22bn. While western capitalism demands subsidy worth \$362bn per year, the farmers of the rest of the world share just \$18bn – if they can't compete, they are accused of inefficiency by western 'experts' and legislated out of existence or driven to the wall by 'free and fair' competition.



Farmers are made more dependent on the multinationals by the fact that seed varieties (along with all forms of life) can now be patented and by being patented turned into private property. If farmers buy Monsanto's Roundup Ready soya beans they have to sign a contract committing themselves to use only Mon-

santo chemicals, not to save any seed for replanting (one of the basics of sustainable agriculture) and be prepared to allow representatives of the company on to their farms for up to 3 years after the purchase to check this. In order to enforce these 'Technology Use Agreements' in the US, Monsanto have employed the Pinkerton private detective agency (famous for their violent strike breaking activities on behalf of US capital), they have named and shamed 'guilty' farmers in local radio station adverts and even opened a telephone hotline for people to dob in offenders. The fact that 475 farmers in the US and Canada broke their Technology Use Agreements and were sued by Monsanto is probably one of the reasons it developed 'terminator' technology, a technique where genes are inserted into a plant which render its seed non-viable; from the corporations point of view a great improvement – from 'economic sterility' to biological sterility. Monsanto is suing one farmer from Canada for growing seed without a license, when what actually

From 'Green Revolution' to 'Gene revolution'

The latest stage in this process is the use of GM organisms in the production of food (although, of course, food production is only one aspect of the GM world the corporations are preparing for us). Despite the claims of the corporations that this technology is 'green' and desperately needed to 'feed the world', it will in fact continue and accelerate the degradation of the natural world and the immiseration of the human species characteristic of previous phases in the industrialisation of food production.

The claim that the introduction of GM crops will lessen the use of agro-chemicals is a simple lie. Of the 27.8 million hectares of GM crops planted world wide in 1998, 71% had been modified to be resistant to particular herbicides. This represents a major intensification of chemical agriculture since usually crops can't be sprayed with broad-spectrum herbicides (such as Roundup) for obvious reasons. Monsanto have applied for and received permits for a three-fold increase in chemical residues on GM soya beans in the US and Europe from 6 parts per million (ppm) to 20ppm. Two biotech companies, Astra Zeneca and Novartis, have actually patented techniques to genetically modify crop plants so that they are physically *dependent* on the application of certain chemicals; so much for claims that GM will lessen the use of agro-chemicals.

Companies involved in this field are also planning major investment in new facilities to increase the production of biocides. Monsanto have announced plans to invest \$500 million in new production plants for Roundup in Brazil. This is on top of \$380 million on expanding production in the rest of the world. AgrEvo have increased production facilities for their herbicide glufosinate in the US and Germany and expect to see sales increase by \$560 million in the next 5–7 years with the introduction of glufosinate-resistant GM crops. Like Roundup, glufosinate is hailed as being 'environment friendly' but is in fact highly toxic to mammals (particularly affecting the nervous system) and, even in very low concentrations,

those 70,000 families? Well, the corporations could buy up the land and employ 10% of them growing GM cotton or tobacco or some such crap and the rest can go rot in some shantytown. This is what the corporations call 'feeding the world'.

Poisoning the earth and its inhabitants brings in big money for the multinationals, large landowners and the whole of the industrial food production system. Traditional forms of organic, small-scale farming using a wide variety of local crops and wild plants (so-called 'weeds') have been relatively successful at supporting many communities in relative self-sufficiency for centuries. In total contrast to industrial capitalisms chemical soaked monocultures, Mexico's Huastec indians have highly developed forms of forest management in which they cultivate over 300 different plants in a mixture of gardens, fields and forest plots. The industrial food production system is destroying the huge variety of crops that have been bred by generations of peasant farmers to suit local conditions and needs. A few decades ago Indian farmers were growing some 50,000 different varieties of rice. Today the majority grow just a few dozen. In Indonesia 1,500 varieties have been lost in the last 15 years. Although a plot growing rice using modern so-called 'High Yielding Varieties' with massive inputs of artificial fertilisers and biocides produces more rice for the market than a plot being cultivated by traditional organic methods, the latter will be of more use to a family since many other species of plant and animal can be collected from it. In West Bengal up to 124 'weed' species can be collected from traditional rice fields that are of use to farmers. The sort of knowledge contained in these traditional forms of land use will be of great use to us in creating a sustainable future on this planet; it is the sort of knowledge the corporations are destroying to trap us all in their nightmare world of wage labour, state and market.

happened was that his oilseed rape crop had been contaminated by pollen from GM crops on nearby farms. Of course the real aim of terminator technology is the untold sums of money to be made from stopping 'Third World' farmers from saving and sharing their seeds and making them dependent on high tech seed from the multinationals.

Nothing in the preceding paragraph should be taken to mean that we see large capitalist farmers in the US and Canada as being somehow victims of the corporations. Like large scale industrial farmers everywhere they are part of the corporate food production system of which GM is the latest stage: they exploit wage labour (although labour on farms is drastically reduced by the industrialisation process large scale industrial farming exploits wage labour massively in the chemical industry, machine production, transportation etc) and happily produce for the global market and act as a market for every new agro-chemical or GM seed produced. But already complaints of crop damage due to herbicide drift are starting to increase as the sprays farmers growing Roundup Ready GM use drifts onto the crops of farmers growing ordinary plants.

Biocide or Genocide?



The high cost of chemical and mechanical inputs and expensive new seed varieties favours large farmers over small; they are bankrupted, lose their land and end up either in the huge and squalid shanty towns and slums that surround so many majority world cities or as agricultural labourers on big farms or

plantations. Here they may be one of the over 40,000 'Third World' farm workers killed each year as a result of contact with agro-chemicals. A 1994 UN report estimated 1,000,000 people a year are made ill as a result of over-exposure to agro-chemicals. The increasing use of animal products as well as leading to the misery, waste and pollution of factory farming is also responsible for the erosion of biodiversity and peoples livelihoods in the majority world. For example almost all of Central America's lowland and lower *montane* rainforest has been cleared or severely degraded mainly in order to raise cattle for export. The crops most grown under 'Green Revolution' and GM regimes of industrial food production are maize and soya, not for human consumption but for animal feed. Small scale organic farming systems based around plants and supporting the producers directly are being destroyed in favour of chemical soaked monocultures to feed the farm animals necessary to feed the animal product heavy global food economy.

Because 'pests' and 'weeds' can rapidly become immune to herbicides and biocides chemicals don't even do what they say they do; pesticide use in the US increased by 500% between 1950-1986 yet estimated crop loss due to pests was 20%, exactly the same as in 1950. The damage done by the production and use of biocides and artificial fertilisers is almost unimaginable. Pesticide pollution of the natural world (air, water & soil) is one of the major reasons for the staggering loss of biodiversity (estimated at a loss of 30,000 species a year) we are witnessing as the world is slowly turned into a huge agro-chemical-industrial facility. Pesticide and artificial fertiliser pollution, along with other petro-chemical forms of pollution and increased exposure to radiation, are responsible for massive rates of cancer and birth abnormalities. Then there are the 'accidents' which show the system's inhumanity even more clearly: such as the 1984 explosion at Union Carbide's insecticide factory in Bhopal, India which left 3,000 dead and 20,000 perma-

nently disabled. Or the less well-publicised events in Iraq in 1971-1972 when large quantities of wheat seed that had been treated with anti-fungus compounds containing mercury were 'accidentally' baked into bread. 6,000 neurologically deranged people were admitted to hospital and at least 452 died. Corporate propagandists would have us believe that these are unfortunate side effects of a beneficial technology we desperately need to 'feed the world. Yet, as anyone who takes the trouble to find out the facts must be aware, the world produces more food than is necessary to feed the human population and the reasons people go hungry are landlessness, poverty, and social dislocation caused by capitalist oppression and war.

The End Of Diversity

GM technology is also set to plunge countless thousands of people into poverty by using GM plants or tissue cultures to produce certain products which have up until now only been available from agricultural sources in the majority world. For example, lauric acid is widely used in soap and cosmetics and has always been derived from coconuts. Now oilseed rape has been genetically modified to produce it and Proctor & Gamble, one of the largest buyers of lauric acid, have opted for the GM source. This is bound to have a negative effect on the 21 million people employed in the coconut trade in the Philippines and the 10 million people in Kerala, India, who are dependent on coconuts for their livelihood. Millions of smallscale cocoa farmers in West Africa are now under threat from the development of GM cocoa butter substitutes. In Madagascar some 70,000 vanilla farmers face ruin because vanilla can now be produced from GM tissue cultures. Great isn't it? 70,000 farming families will be bankrupted and thrown off the land and instead we'll have half a dozen factories full of some horrible biotech gloop employing a couple of hundred people. And what will happen to

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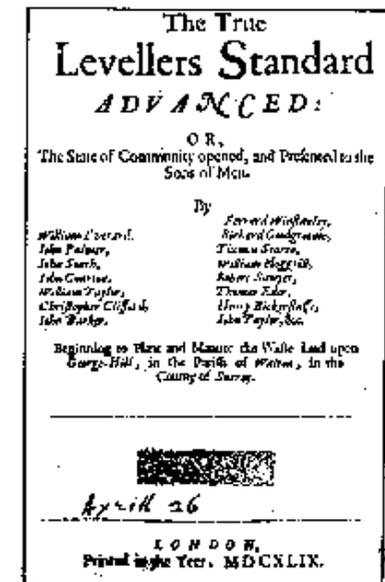
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economic incentives for the production of wool and waging war to open up markets abroad to wool and other products. Over hundreds of years, the land was taken from the peasants and put firmly in the hands of a land-owning class whose sole aim was to manage the land for the benefit of themselves. The gathering pace of the Industrial Revolution and imperial conquest abroad greatly enriched the landowning classes who now regarded 'their' land as an arena to flaunt their ill-gotten wealth. Huge acreages were turned over to hunting and other blood sports. Villages were torn down because they spoiled the view of landscaped estates. Gardens and romantic woodlands were planted where once people had earned a living. The countryside of today, that its owners and their supporters are trying to protect, is entirely an artificial creation, serving the interests of big business, whether in agriculture, tourism or housing. That it is also a battlefield long lost by the working class and in which our history has been deliberately obscured are facts that need to be remembered.

Struggle

Peasants did not succumb passively to the exploitation of the landowners. The Black Death caused a great shortage of labour, giving the peasants bargaining power and weakening the hold of the feudal overlords. Laws had to be passed to prevent people leaving their villages to offer their labour elsewhere and outlaw people from combining to press



for higher wages. The enforced relaxation of the Forest Laws in the mid 1300s allowed people to enter previously closed parts of England. People began to squat in the forests and clear areas for agriculture. The woods became a refuge for more than just romantic outlaws, with free squatter communities existing everywhere. When a poll tax (!) was introduced in 1381 to pay for the Hundred Years War with France, it lit the fire of rural unrest. 5,000 people armed themselves and marched on London from Kent and Essex. On the way they opened prisons and burnt records, some particularly hated lords and officials being killed. The rebellion began to escalate into an idea that the whole land owning class could be toppled. Unfortunately, through trickery the uprising was crushed and its leaders were slaughtered. The promises of the King (to abolish serfdom, all feudal duties, the removal of all restrictions on freedom of labour and trade and a general amnesty for the rebels) were revoked. The last of the rebels were hunted down in East Anglia. During the Jack Cade revolt against Henry VI in 1450, levelling elements met in woods outside Hastings demanding that all goods and the land be held in common. Throughout the 16th and 17th centuries there were hundreds of revolts against enclosure. The landowners, as lord lieutenants of the counties, raised their own armies to put down rebellion and many insurgents were executed. Despite this, disturbances continued on a guerrilla level, wildcat and uncoordinated for many decades and periodically flared into riot and rebellion.

The First Stirrings of Communism

The development of agrarian capitalism in the 15th-17th centuries created new forms of exploitation. The so-called English Revolution of the 17th Century strengthened the position of the landowners. The Civil War brought a 'new aristocracy' of yeomen landowners to power. The rate of enclosure, sanctioned by Parliament in their own interest, increased and a 'war within a war' of landowners against the rural poor and landless intensified. The power and ideology of the land owning class fused with and influenced the development of capitalism. Accumulation of wealth and the protection of private property became virtually the sole purpose of government and the state. At the same time, this period of ferment also threw up new radical ideas. A small group of unemployed labourers and landless farm workers gathered at St. George's Hill near Walton-on-Thames in Surrey in 1649 and began to cultivate the common land. This group, known as the Diggers or True Levellers, issued a call for the people to have access to the forests and common lands. Harassment from the local landlords and continued attacks resulted in their settlement being destroyed. The Diggers thought they could bring about a revolution and communism of the land through example and reason. The Levellers were brutally crushed and radical publications were banned. The war of the landowners against the

rural poor continued into the next century. As capitalism became the dominant economic system, landowners were forced to look for ways of increasing income from their land such as keeping sheep for wool, growing grain, raising livestock, forestry and land leasing.

Riot, Rebellion and Repression

In the 1720s gangs of men with their faces blackened invaded deer parks in the Home Counties, in particular the Royal forests. The Black Act created 50 new offences that were punishable by death and 16 people were hanged in the next 2 years. Common rights were also attacked more vigorously. During the 18th and 19th centuries 7 million acres of land were enclosed. The enclosed land was used for sheep, mining and cattle rearing. The rural depression following the end of the Napoleonic Wars, the misery of urban squalor, the extremely harsh conditions in the factories and the rigours of what passed for justice in Britain had an inevitable result: riot, revolt and insurrection. In 1830, country labourers rose in revolt throughout southern and eastern England. Under the cover of darkness, the hated threshing machines were smashed, ricks and barns burnt down. Many threatening letters were sent to landowners, all signed by "Captain Swing", who gave his name to the movement. The revolt

We have not fully referenced this text but all the factual information on GM etc can be found, fully referenced, in:

'Genetic Engineering, Food and Our Environment' Luke Anderson
1999 Green Books.

'Biopiracy' Vandana Shiva 1998 Green Books.

'No Patents on Life!' and 'Food? Health? Hope? Genetic Engineering and World Hunger', two Cornerhouse briefings. The Corner House, P.O.Box 3137, Station Road, Sturminster Newton, Dorset DT10 1YJ www.icaap.org

Other sources include

'Refashioning Nature', David Goodman and Michael Redcliff.
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'We All Live In Bhopal' George Bradford. 'Fifth Estate' Winter 1985.
Reprinted in 'Questioning Technology' 1988, Freedom Books.

'Down to Earth: Environment and Human Needs' Erik P.Eckholm.
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'Do or Die', c/o P.O. Box 2971, Brighton, E.Sussex, BN2 2TT

centred around low pay, piece work and the new technology of the threshing machines, which threw many out of work. In the following repression, 19 were executed and 552 transported to Australia, many others receiving prison sentences. Solidarity between rural and urban workers was common; after all, urban workers were rural workers or their descendants who had been driven from the land. In Wales there was widespread destruction of enclosure fences as well as bread and corn riots. The most important of these were the Rebecca Riots. From 1839 to 1844 hundreds of actions took place. Many tollgates along the roads were smashed, salmon weirs were destroyed because the game laws stopped the poor taking fish from the rivers, haystacks were burnt and poorhouses attacked. 150 police and 1800 troops were sent to quell this uprising. The heavy repression after Captain Swing and Rebecca meant that never again was there to be violent uprising on a mass scale although new disturbances erupted in the 1880s in Wales caused by tenant farmers and labourers being charged high rents by the landowners.

Reform and Reaction

This step back from insurrection resulted in a turn towards the creation of unions. Even these attempts were met with persecution. The attempt by farm workers to organise in Tolpuddle in Dorset in 1834 resulted in the transportation of six of them. Defeat brought pessimism and pragmatism. The rural poor and their liberal

supporters concentrated on gaining some concessions, but were not very successful. Instead of seizing the land they were granted allotments – in 1906, after 50 years of campaigning. Access to land was increasingly curtailed. Traditional recreation activities of the peasants such as fairs and football couldn't take place because there was no available land. Capitalists campaigned tirelessly against fairs, itinerant working and the traditional festivals of rural life because such activities prevented the creation of a more disciplined workforce. The result was the end of the free peasantry and its transformation into an urban working class or emigrant labour.

During the 19th century, the idea that city dwellers should enjoy the countryside spread from the professional and artisan classes to the working classes. Open countryside and clean air were a solace to many used to crowded conditions and foul air. By the 1930s this had become a massive movement, with an estimated 15,000 people from Sheffield and 15,000 from Manchester visiting the Peak District on an average Sunday.

However, large tracts of land were cut off from the ramblers. In 1935, there were only 12 footpaths in the Peak District. The best walking land, including Kinder Scout

BIBLIOGRAPHY

- without borders or checkpoints to hinder the movement of people.
- with human-scale communities organising social reproduction in such a way that everyone has the opportunity to develop their creativity; where “the free development of each is the condition for the free development of all”.
- yet also maintaining a real, conscious, global unity to ensure that people can travel and communicate as they please, that knowledge, ideas, insights and pleasures can be widely shared and that problems of a global nature can be discussed and resolved.

At this point in history the degradation of the natural world caused by the action of class-society has gone so far and caused so much human misery that the communist project and the project of creating a sustainable way of life for our species on this planet are one and the same. We won't get one without the other. It is for this reason that anti-capitalists should take the eco-catastrophe facing us very seriously and to try and shift things in a revolutionary direction.

and Bleaklow Ridge, were fenced off. Ramblers started to organise annual rallies in the Peak District. In 1932 a new organisation, the British Workers Sports Federation began to organise rambles for young people in the north. It began to organise mass trespasses. In 1932, 400 ramblers organised a mass trespass of Kinder Scout. 5 ramblers were imprisoned and in response thousands joined two more mass trespasses.

The history of the British “countryside” is a history of struggle. It describes a pattern of events common throughout the world: the expropriation of free land by political and economic elites, usually following military conquest; the introduction of new agricultural methods to generate profit; the ‘legal’ and forceful expulsion of the people occupying the land; resistance and repression; the creation of a myth of rights held by the new owners which is seen as vital to the preservation of the nation; the alienation of urban and rural and with it the insulation of rural power from democratic scrutiny and control. The study of land and its ownership is necessary to understand one element of the power-relations that govern all people. Seizing back the land and socialising it so that it once more becomes the common wealth of all will be a fundamental part of the world revolution to come.

The Role of Progress

It is important to recognise that capitalism is *able* to function because it uses *ideas* within our culture that are shared throughout the social structure. Like racism and sexism, ideas of nature as a threat to be controlled and exploited are deeply ingrained in our attitudes and culture, often unconsciously. These ideas need to be challenged and changed if we are not to reproduce the same antagonisms and power relations in a post-capitalist society. So we need to look at how these ideas have developed historically, whose interests they serve and how we can move beyond them.

Ideas: Ecology and The Enlightenment

Although the antagonistic relationship between culture and nature can be traced back at least as far as the establishment of patriarchal Christianity in Western Europe, it was rationalised by the philosophy of the 18th Century Enlightenment. The ideas of the Enlightenment, which were crucial for the development of modern capitalist society, focus on the importance of rational, scientific endeavour as a means of liberating “man” from superstition, irrationality and nature. Enlightenment thought held that a strange and dangerous world should be analysed, classified and brought within the control of rational, Western man. For instance, this is the era that saw the first encyclopaedia compiled, in which nature was described as “red in tooth and claw”.

Europe and China, we still feel

t is the best word to describe

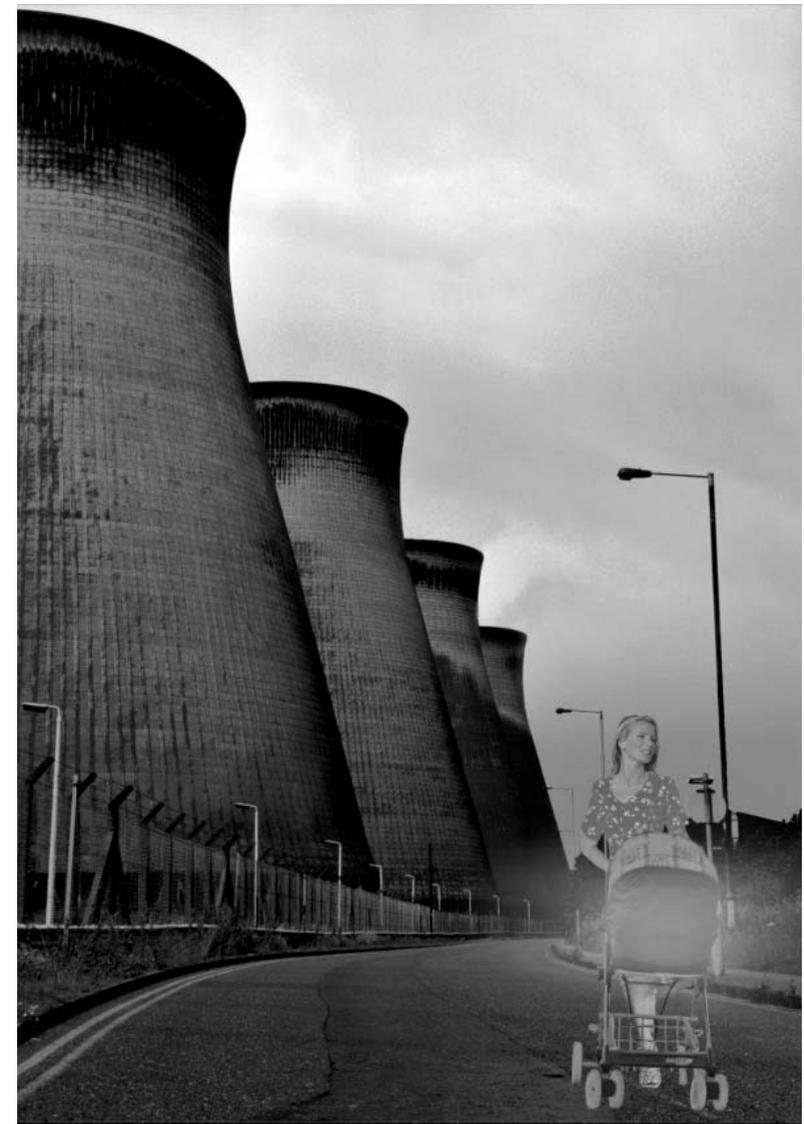
both our vision of a future society based on equality, freedom and cooperation and the real movement amongst humanity to finally abolish class-society and create a truly human community.

Capitalism is the current stage in the evolution of class-society, of society divided into rulers and ruled, owners and owned, elite and mass and into competing elites who struggle against each other for the spoils of exploitation. The origins of class-society stretch back 10,000 years or more to the ‘Neolithic Revolution’ and the establishment of agriculture and urban centres. The ‘progress’ from then to our modern world system of industrial capitalism is our ‘history’, with its unending horrors of war, slavery, genocide, empire and conquest. And yet class-society has also faced bitter resistance from within. Where there is exploitation there is always struggle against exploitation: slave revolts, peasant uprisings, riots, machine breaking, strikes, armed insurrections. And within these natural, human responses to life in class-society there have always been organised, conscious minorities who put forward the call for a different sort of society, one based on equality, freedom and co-operation. This is what is meant here by communism: a future society of equality, freedom and co-operation and the real movement towards it. Our anarchist communism aims at the overthrow of global industrial capitalism and the creation of a world human community:

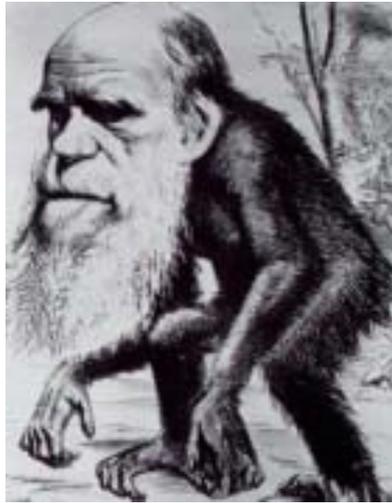
- without wage labour, money or the market, based around the principal “from each according to their abilities, to each according to their needs”.
- without the state as an instrument of coercion, a human society based on social self-organisation and genuine planning to meet human needs and desires.

culture, smaller scale, largely or wholly organic, with, for example, crop rotation to restore and maintain the soil. These changes would, for practical reasons, stimulate a move to a far less meat-dominated diet. The global trend is currently in the opposite direction, as the 'under-developed world' seeks (with the help of the advertising industry) to emulate the diseased, fat and additive-sodden West. Not only is this diet fundamentally detrimental to human health, it is unsustainable (and possibly unachievable) due to the vast amounts of resources (energy, land etc.) that are consumed by animals, as compared to arable (plant) production: larger areas of land are required to grow plants which feed animals to feed people. It seems obvious that the vast majority of animal experiments will end with the abolition of the profit motive (e.g. those connected with cosmetics, arms production etc). A new ethics arising from the future society's desire to achieve a sustainable relationship in and with the rest of nature will also surely lead to a desire to minimise/abolish the exploitation of animals wherever possible.

To most people outside the small anarchist/communist milieu this will sound utopian, quixotic, old fashioned, mad. Communism? What are they talking about? Didn't the Berlin Wall fall years ago? Aren't we all capitalists now? Isn't life wonderful? Of course our enemies want you to believe there is no alternative to capitalism; that the only choice is between 'free market democracy' and dictatorship. Despite the misuse of the word 'communism' by the state capitalist regimes of Eastern



Within the world-view of bourgeois, educated, western man, oppositions were established between his own internal world of *culture* and the menacing 'other' of a *nature* that must be tamed and brought within the comprehension and service of his interests. The colonised people of Africa, America and Asia were described as "others", savages, closer to nature, less evolved, irrational and thus incapable of running their own affairs. This



served to justify their exploitation by the rational, cultured man of the West. The working and peasant classes at home were also seen to be "other" and their behaviour and customs a threat and hindrance to their use by capital. Football, originally played by huge numbers in the streets, was removed to a specified rectangle of grass surrounded by stands and seats at which huge numbers of working class people could now only *watch* and *pay* to see just 22 men playing the game. The production of alcohol was concentrated in the hands of profit-making concerns and its sale limited to licensed premises at particular hours. Measures such as these were intended to make a wild, hedonistic and irresponsible class into a controlled, sober, consumerist workforce. Women, who had been "other" for centuries, found this view strongly reinforced by the new bourgeois ideology. Victorian values portrayed women as evil and irrational, needing to be locked up within the prison of the bourgeois family. Their purpose was to reproduce a willing happy-to-be-exploited workforce. The great "other" to Western culture, Nature, was similarly seen as a force to be tamed, reined in and

Take Back The World!

We are absolutely clear that it is the whole rotten capitalist system that has to be destroyed. Capitalism has nothing to offer humanity except more war, more poverty and starvation, more oppression and alienation, more pollution and degradation of the natural world. If we are to have any sort of decent life for the majority of people on this planet, if we are to establish an equitable and sustainable relationship between our species and the rest of the natural world then the capitalist system must be overthrown in order to build the world human community, anarchist communism.

The transformation of social relations between people — the Revolution — must be accompanied by a change in how humans relate to other life: other animals, plants and the ecosystem. All life (excepting humans at present) exists in a certain dynamic equilibrium with other life, since plant and animal populations interact and adjust to changes between themselves and their environment in order to maintain a stable, though changing, system. Post-revolutionary society will therefore need to establish a way of life in a similar equilibrium with the rest of nature, rather than the present relationship of domination and destruction that has resulted from industrial capitalism and class society. Practically, this would mean an end to the industrial methods of agribusiness, such as large scale monoculture that poisons the land with chemical fertilisers and pesticides, the abolition of factory farming which is harmful to both animals and people (e.g. foot and mouth disease, salmonella, BSE), and the end to the industrial fishing that is decimating fish populations and harming the environment. In place of such dangerous techniques there will have to be a system of sustainable agri-

continue with environmental destruction, driving agri-business off the land and occupying and squatting empty buildings, rural *and* urban, together with a revival and radicalization of the commune movement needs to be undertaken far more often. A movement to occupy empty rural and small village buildings, especially second and holiday homes, coupled with squats of urban housing (both new *and* old) and occupations of planning and developer offices would link rural and urban homeless and be a powerful challenge to the state's defense of property. There are hundreds of thousands of acres of unused or misused land and tens of thousands of unused buildings across the country. We should make room within this movement for those who want to build within capitalism as well as destroy it. We must learn how to make society work, practically; 'green gatherings' with a revolutionary intent and without the pacifism and mysticism; radical communes that teach as well as shelter. We shouldn't regard it as reformism so long as we do not get trapped within capitalism's property relations and all understand that the places we create now will be socialized in the future.

subjugated in the service of the developing urban and industrial needs to a commodity-based society.

Ideas: Darwin and Natural Selection



Charles Darwin is famous for his theory of evolution first set out in 1859 in his book on the *Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life*. He had two ideas. Firstly, all life on this planet has evolved by a process of evolution over a period of many millions of years.

Secondly, all individual life forms and species are in a ruthless competition to survive, a competition in which superior beings would always dispossess and supplant inferior ones. This 'law of survival of the fittest' was the process by which evolution occurred. His first idea attracted a lot of hostility because it directly challenged the religious view of creation. The second idea, however, was fully in line with the dominant capitalist ideology of the time and provided a scientific justification for it. Andrew Carnegie, a leading capitalist of the time, wrote "... the law of competition, be it benign or not, is here; we cannot evade it; no substitutes for it have been found; and while the law may sometimes be hard for the individual, it is best for the race because it ensures survival of the fittest in every department". Was Darwin correct? Is survival of the fittest a 'natural' law? Or is it an ideological fantasy? We now know that Darwin's view of common descent is correct. With the discovery of both genetics and DNA, we see a commonality to all life forms now existing, as well as to all those that have ever existed on this planet.

The chemical language of life is identical in all organisms. The same work has also confirmed that genetic variation through genes being combined and recombined is how evolution takes place. But is it as competitive as Darwin claimed?

Co-Evolution

In order for Darwin's theory of 'survival of the fittest' to be correct, it must show that any new species develops out of the old one through competition between them. The extinct species must lose a battle of survival with its superior descendant. The example of co-evolution of plants and animals – whereby some evolve together, or species differentiate without one being driven to extinction – proves that the idea of the survival of the fittest being the sole basis of evolution is false. Why then has Darwinism been so uncritically accepted?

The ideological direction of Darwin's theories is clear. Humanity has differentiated itself into superior and inferior races through a process of natural selection. Humans have clearly 'won' the struggle of life and within human society, certain groups have achieved higher status than others. This ideology provided the scientific 'justification' for the hierarchical world-view that the ruling classes had always pushed. With the onset of modern capitalism, the religious basis to justify social hierarchies became a scientific one. This then is why capitalist society has always touted Darwinism and ignored any evidence contradicting it.

Modern scientific knowledge enables us critically to examine the history of life on this planet and see how it 'fits' Darwinist logic. It soon becomes clear that it doesn't fit at all! The basis for evolution, if it followed Darwinist 'laws', would be a Malthusian pattern of population growth and check. If the world were following Darwin's logic we would expect to see an increase in number of species, increased struggle for survival between these species, fol-

Fighting The Environmental Class War

We must first target the means by which environmental degradation occurs. Whatever the label, whether irrationalism, neoLudism or propaganda by the deed, direct action against the means of environmental destruction and degradation is an act of resistance and ultimately is one of the means by which revolution is realised. The first industrial working class wrecked mines and broke weaving frames in the 1740s, spinning machines in the 1770s, agricultural machinery in the 1810s, forms of resistance that continued all through the 19th and 20th Centuries and which the working class of the developing world are using every day. It is a form of resistance embraced by the direct action movement. But we need to go further, much further. Isolated actions are no good, we need a program and the means to achieve it. Since ownership always creates owners, *masters*, we must *socialize* the land. Use of land and resources cannot be based on singular or personal 'rights' but on the utility and social benefits such use creates. We have to stimulate and support movements for radical land reform (i.e. changes to both ownership and use) which have expropriation and socialisation as both their end and their tactic: squatting must become a rural as well as an urban phenomenon. Our aim should be to drive farmers who are abusing the land *off* the land, leaving it for us to reclaim. We must tie popular boycotts of retailers who sell non-organic/ GM food to occupations, squats and mass trespasses, to drive those who refuse to change off the land. If we wish to *change* land use, as a challenge to capitalism now, then making it economically difficult to

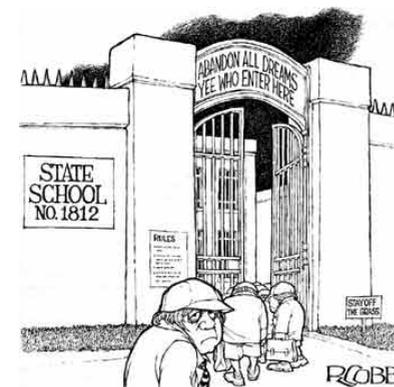
tion capable of and actively involved in producing much of its own food outside of the money economy will be in a stronger position in the event of large scale struggles against capitalism involving strikes, lockouts, occupations and campaigns of non-payment etc. Many thousands of people are being forced by the government to take low-paid, shitty jobs or mickey mouse workfare schemes and threatened with loss of benefit if they refuse. We could support that refusal by offering surplus food from allotments and gardens to those suffering the state's oppression. There is also the possibility of people developing similar independence from the money economy in other spheres as well – housing, energy production, waste management, health care etc which would also be highly beneficial but which is beyond the scope of this text. So to summarise our practical response should consist of: 1) a massive campaign of direct action; 2) a consumer boycott and propaganda campaign against corporate injustice, focussing on issues of sustainability and social justice; and 3) attempts at collective withdrawal from the industrialised food production system.

lowed by extinction of the “weaker” species. However most major events in world evolution show the exact opposite: extinction and then speciation. The bestknown example is what happened after the mass dinosaur extinctions. Despite the increasing amount of scientific evidence in fields such as geology, the ‘survival of the fittest’ dogma goes unchallenged because of the ideological link between Darwinism and the capitalist façade that dominates our lives. Here is a section of an essay entitled “Spontaneity and Organisation” by Murray Bookchin that gives a different approach to the idea of evolution.

“Ecology denies that nature can be interpreted from a hierarchical viewpoint. Moreover, it affirms that diversity and spontaneous development are ends in themselves, to be respected in their own right. Formulated in terms of ecology’s “ecosystem approach”, this means that each form of life has a unique place in the balance of nature and its removal from the ecosystem could imperil the stability of the whole. The natural world, left largely to itself, evolves by colonising the planet with ever more diversified life forms and increasingly complex interrelationships between species in the form of food chains and food webs. Ecology knows no “king of beasts”; all life forms have their place in a biosphere that becomes more and more

diversified in the course of biological evolution....”

Progress In The 21st Century



A permanent feature of capitalism is its need to grow in order to overcome the limitations that force it into periodic crises. This growth takes the form of the creation of new products, new markets, and an ever-

increasing rate of turnover and geographical extension. Technological advances have increased the speed of both transportation (commodities to consumers, consumers to commodities), and communications (global finance markets). Corporations use planned obsolescence to achieve an ever-increasing turnover rate. Commodities (take mobile phones, for example) are made to break down quickly, or become unfashionable through the promotion of ever newer and 'improved' products. This has enabled international capitalism to establish a degree of independence from even the most powerful nation states. Its increasing wealth and power is concentrated in around 500 corporations who account for 80% of all world trade and investment, and whose individual budgets are often bigger than those of whole nations. Nation states, particularly the rich and militarised states of the West, remain powerful, but they do not run or control capitalism. The function of the state today is to create and maintain conditions in which capitalism can thrive. This can be seen in the push towards free trade and market liberalisation, privatisation, cuts in public spending, high unemployment and attacks on the power of organised labour in all parts of the world.

The New World Order

This mode of late capitalism, the New World Order, is responsible for the most savage destruction of the environment and the ruthless exploitation of millions of human lives, all expendable in the pursuit of



workers, communities and communes will collectively agree that land will be used in particular ways according to a plan or program of beneficial change. This will not always be in the direction of development or 'efficiency' (which will have different definitions and parameters anyway); if people need more gardens or wilderness, small-holdings instead of sheep stations, they will create them.

To many people this will sound utopian. However we believe that if this approach was developed widely – and applied to our other vital needs – it could subtly undermine the credibility and power of the global economy (as well as having obvious personal benefits in terms of health etc). It is an important part of building social solidarity and a community of resistance in majority world communities. It would be a way of showing our solidarity with these majority world movements based around issues of land use, access to resources and so on: communities of small farmers are organising seed banks to preserve crop diversity as well as launching more militant attacks on the multinationals such as trashing fields of GM cotton and destroying a Cargill seed factory. In the longer term as (hopefully) numbers and confidence increase, large long-term squats will become a possibility on land threatened by capitalist development either for roads, supermarkets, airports etc or for industrialised food production being taken back for subsistence food production and as havens of biodiversity. We should take inspiration from the *Movimento Sem Terra* in Brazil where in the face of severe state repression and violence hundreds of thousands of landless peasants/rural proletarians have occupied large tracts of unused land.

Although it is clear that food prices are so low that they are not a major factor in tying people into the capitalist system (rents, mortgages and bills do so far more effectively) it seems to us that a popula-



Dig For Victory!

Most people have a garden or could take on an allotment fairly near to where they live. Organising garden sharing schemes where people with gardens they can't use team up with people who want to garden but don't have gardens is a worthwhile step. We need to investigate ways of producing and distributing organic food in our localities in ways that maintain biodiversity and as far as possible outside the money economy. Think organic, low-impact farming won't work? A recent study of sustainable agriculture using low-tech methods introduced on farms supporting 4m people in majority world countries revealed that food production increased 73%, crops like cassava and potato showed a 150% increase and even large 'modern' farms could increase production 46%. The future occupation and use of land will depend on the extent to which all who wish to do so have discussed and consented to such use, that those occupying or using the land continue to work in solidarity with the whole of society within broad principles of co-operation, sharing freely both the means of production *and* what is produced. No individual or group of individuals will have any 'right' to say "the land *must* be used in the way we decide" nor can what is on or under the land or produced upon it be their property, whether plant or animal. The number of people involved in agriculture (in its widest sense) will probably expand greatly, with vast estates and agri-corp holdings broken up and shared out but also urban farms created in and near towns. The aim of agriculture (and associated activities like food processing) will be self-sufficiency for the localities and specialization or growing for 'export' only where there is surplus land or productive forces. It is likely that neighbours, co-

profit. Capitalism is not a system based around the satisfaction of human needs and desires or care and respect for the rest of the natural world, it is a system based around the production of profit, an abstraction called value and its monetary measure. It is based on the constant looting of nature (animal, vegetable, mineral or human) for 'raw materials' for transformation into commodities for sale on the market to those who have earned their keep by engaging in wage labour.

In the debt-ridden nations of the majority world, the International Monetary Fund and World Bank offer help in the form of structural adjustment programmes. These programmes force countries to open their markets to corporations and adopt export-based economies where self-sufficiency in food, housing, and education is sacrificed to the production of goods for export to bring in the hard currency to repay debts. Cash crops must be produced, requiring the use of imported and environmentally harmful chemical fertilisers and pesticides. Precious forests are cut down to produce timber products and land is cleared for cattle grazing to deliver burgers to every high street in the western world. This deforestation leads to further global warming, and the loss of plant and animal species.

The rich and militarised states respond to any perceived challenge to this order from "upstart" regimes through the use of sanctions, the support of "rebels" or direct military intervention. But this should not blind us to the fact that it is the corporations who call the shots. It is they who have the capacity, regardless of the needs of any individual state, to move a manufacturing base from one part of the world to another where production costs may be cheaper or environmental restrictions evaded.

The 9/11 attack on the World Trade Centre has given the US Government a justification for policies that it had already planned (see the document 'Rebuilding Americas Defences', written in September 2000). The US has now adopted the policy of pre-emptive defence, allowing it to attack countries before it is attacked (or even threatened). Afghanistan was subjected to the terrorism of mass bombing and invasion under the pretext of attacking the Muslim terror group AlQaeda. Under this logic, the British government should have bombed Catholic parts of Northern Ireland to defeat the IRA or the Irish Republic or America, where much of the funding for the IRAs arms came from. The overall US aim is to increase and consolidate its position as the world's only superpower. The war against Afghanistan enabled a crucial gas pipeline to be built, the war against Iraq gave it control of major oil reserves, not forgetting the markets created for US capital in reconstructing all that the bombing has destroyed. Underlying all this is a message to the global working class and peasants – behave, don't rebel, or we'll come and bomb you. In the New World Order, the ruling class work to provide a global stomping ground for a capitalism that is not simply the enemy of ecology, but an enemy that is in the process of becoming more dangerous and deadly than ever before.

piled high with GM products selling like hot cakes, to have had no labelling system at all in Europe as in the US. In fact the supermarkets over here have had to agree to label more rigorously than the legal requirement and have largely backed-off from putting it in their own label products. So simply not buying the stuff and encouraging others not to buy it is very worthwhile.

Thirdly, we need to lessen our dependence on the global industrial system. This is something that can start with the simplest, most easy, non-confrontational steps that anyone can take today and yet end as a significant part of the revolution we need to make to overthrow capitalism and build a sustainable, joyful future for our species on this planet.

Survival is not enough

So what should be our practical response to corporate plans to impose ever more destructive forms of ‘civilization’ and ‘progress’ upon us?

Firstly we need to start drawing some lines in the sand, laying boundaries to scientific ‘advances’ that capitalism and the state will not be allowed to cross. It is vital that we extend direct action across the full range of innovation and product development. GM test sites need to be trashed again and again and as effectively as possible to cause maximum disruption and financial loss. To the extent that it is possible a campaign of ‘economic sabotage’ should be carried out against all companies involved in developing, producing, transporting, advertising or marketing GM products. Shareholder meetings/ AGMs need to be disrupted, offices need to be occupied and many other inventive and effective tactics need to be developed. Obviously the vast majority of people do not feel able to get involved with illegal direct action but the determined minority who are prepared for this level of activity is already organised into groups and networks and there are plenty of contact points for new people to get involved so there is no need to say much here about that side of things.

Secondly, we need to increase the social and economic costs of capitalist development. For all the obvious limitations of consumer boycotts it goes without saying that not buying products capitalism wants us to buy is the easiest way to oppose their imposition. For instance, consumer resistance to GM food is proving to be a significant hindrance to the plans of Big Food. There is no doubt that by this point they would like to have seen the supermarket shelves

PART TWO: Responses to Eco-Catastrophe



the captains of industry, the corporate giants, the corrupted politicians.

cess and at risk from the many pesticides, fertilisers and dangerous machinery most farmers use. In cities and towns, in addition to pollution, there is dumping – some of it toxic – and the constant threat of development of these ‘wasted’ (i.e. non-profit making) brownfield sites for industry, roads and housing.



Our response is not to stop using the 8000+ chemicals known to be damaging to our health – chemicals that capitalists swear are either not dangerous or necessary to our prosperity (sic, their profits!) – it is to increasingly restrict and protect our children from the environment: indoor play, antiseptic schools, air filters

blowing during the school run every day, holidays abroad because we suppose the environment cleaner and safer. Children are told “don’t touch!”, “put it down”, “stay away”. They are forbidden to wander off, to explore and experience the world on their own terms because it has become so dangerous both in fact and in the minds of neurotic parents. We can do this because we have choices. But poor and marginalized people – and they exist in millions in the developed world as well – do not. They live by polluted rivers, must slog through toxic mud, drink pesticide-flavoured water, work in asbestos-ridden factories, labour in herbicide-drenched fields for the agricultural corporations. And often their children are beside them, if they are not already sick or dying. And why? Because children most of all have no power and no chance to escape the visible and invisible enemy – environmental pollution and degradation – that is damaging their health and development, stultifying their lives and prospects, and killing them slowly and eventually and all for money, and the pampered lives of

Survivalism

The term “survivalism” usually refers to people going out into the wilds and living through a nuclear war or similar catastrophe by using their survival skills. However “survivalism” is also capitalism’s response to the growth in concern and awareness of environmental issues. Ecology, once seen as a marginal concern, has, at the level of appearances, been taken to the heart of capitalism. Why is this?

The Threat To Capitalism

The present ecological crisis is the inheritance of centuries of tyranny and exploitation in which the mass of humanity, as workers, peasants, slaves and soldiers, have been used by a small elite as mere tools in the accumulation of wealth. In the process the ecosystems of the planet have been torn apart to meet the demands of a system based on the endless pursuit of profit and power, where natural resources are simply there to be exploited. Used as commodities they are bought, sold and used up. From this perspective, a growing awareness of ecology has the potential to undermine our acceptance of this society. Capitalism pretends to embrace ecological ideas, in order to redefine ecological problems in terms that pose no threat to its existence, and actually increase its strength. Survivalism masks social differences in an attempt to create a false social unity in the pursuit of ‘shared’ interests. Through the media, consumerism, and politics, the ecological problem is phrased as one of survival within the system, rather than capitalism being

transcended by a new society. We must all “do our bit” to save the planet, without bothering to ask ourselves who will benefit most from our actions, us or them. We all have a role to play to ensure the survival of the planet. And what is that role for the working class? The same old shit – work, consume and vote.

Capitalism’s Response

Ecology itself has been turned into a commodity to be bought from the supermarket shelf. As a marketing tool, offers like “10% More!” or “Buy 2 get 1 free!” pale in comparison to the prospect of saving the planet by buying “Ozone Friendly” hairspray. All the major parties now maintain that they are green, the environment is safe only in their hands. They promise more wealth for all through increased productivity (though it brings more environmental exploitation, pollution and destruction) while pretending the environment is safe in their hands.

Supporters of the Green Party delude themselves that this window-dressing is a mark of their success, that mainstream parties are adopting environmental policies. Leaving the environment to governments and multi-national corporations is like leaving a child abuser to look after a nursery. Voting for green policies to be carried out by the state is totally disempowering; it may do a lot to bolster the strength of the state but little, if anything, to protect the environment. The basic purpose of survivalism, then, is to hide the social, political and historical causes of the ecological problem, and to incorporate environmental awareness into its own economic logic.

Children therefore have substantially heavier exposures to any toxins that are present in water, food, or air. Children taste everything and are much closer to the earth than we are, putting them at risk from toxins in dust, soil and carpets as well as toxins that from low-lying layers in the air, such as some pesticide vapours. Children undergo rapid growth and their development is uniquely at risk from toxins. The nervous system is not well able to repair any structural damage caused by environmental toxins: if cells in the developing brain are destroyed by chemicals such as lead, mercury, or solvents, or if vital connections between nerve cells fail to form, there is high risk that the resulting neurobehavioral dysfunction will be permanent and irreversible. Even if damage is not apparent, we are storing up disaster for the future. Many diseases that are triggered by toxins in the environment require decades to develop. Examples include mesothelioma caused by exposure to asbestos, leukaemia caused by benzene, breast cancer caused by DDT and some chronic neurological diseases such as Parkinson’s may be caused by exposure to environmental neurotoxins. Many of those diseases are more likely in later life if the toxin was ingested when young – cancers of all kinds, for instance.

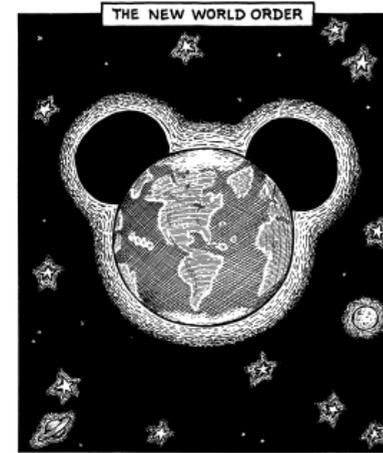
The natural environment is important to children because it represents a place where they can interact with nature and play, relatively safely: away from traffic and also, temporarily, away from the control of adults. The primary place for play and socialising is ‘waste’ or rough ground, precisely because it is ignored by most adults. The value of such an environment is that, unlike an artificial one, such as concrete, tarmac or an artificial sports surface, children can interact with and change it. This happens in many ways, from obvious things like dens, tree houses and water play to more subtle things such as bike tracks which vary with the weather and which are constantly modified by the wear and tear resulting from the children’s use of them. The natural environment is constantly being polluted, threatened, damaged and destroyed; the ‘countryside’ is largely agribusiness farmland where children are denied ac-

Children, Play And The Environment

The future of the human race – our children – are the people who most need a safe and diverse environment of experience but are most at risk from it. Children are also at risk from the war, starvation and water-borne diseases crippling the Majority World. But not here? Blood tests reveal that nearly every person on Earth is harbouring detectable levels of dozens of persistent organic pollutants, including the worst: PCBs and dioxins. These chemicals cause liver damage and in the womb and in breast milk have measurable damaging effects on the brains of children. Currently, we are all involuntary subjects in a vast worldwide experiment on which each day we are exposed to hundreds of chemicals, many of which have been shown to cause harm, and many of which have never been tested. These toxins are endocrine disruptors that have major effects on reproductive health. The alarming decline in sperm counts is almost entirely restricted to the industrialised world. Reproductive defects in men have doubled. Female infertility and miscarriages are on the increase in the industrialised world and are directly linked to environmental causes, such as eating fish with high levels of industrial toxins – industrial New England is one infertility hot spot. They also damage the immune system and increase mortality rates from diseases we had thought treatable.

Children are uniquely vulnerable to environmental toxins. They have greater exposures to environmental toxins than adults. Pound for pound, children drink more, eat more and breathe more air than do adults due to their more rapid metabolism.

Rio And The New World Order



“Money is at the root of all progress” John Major

“...environmental protection and a growing economy are inseparable” George Bush senior

“...there is a great awareness about the importance of a new contract between man and nature” UN Secretary General, Boutros Ghali

The above quotations demonstrate how the participants of the United Nations Conference on the Environment and Development, the 1991 Earth Summit, responded to the problems of global ecological crisis within the perspective and language of capitalism. What was achieved ?

Agenda 21 – This 800-page “agenda” was agreed as a series of guidelines for governments covering a range of issues including waste emissions, recycling, and population. There was no legal obligation, and implementing the guidelines depended on financial investment.

Biodiversity – The US refused to sign this agreement to protect plant and animal diversity, as it threatened the practices of Transnational Corporations (corporations) involved in biotechnol-

ogy and “intellectual property”. Again implementation depended on finance and further ratification.

Global Warming – this agreement was signed by 110 countries and enshrined in law but its recommendations were limited by economic rationality. For instance, although scientists recommended an immediate 60% reduction in atmospheric pollution, the signatories would only fund action that would reduce levels back to 1990 by the year 2000 – effectively allowing years of increased emissions.

Other proposals and agreements were made concerning aid, deforestation and desertification but these, like the others, fell within the overall pattern where corporations kept themselves and their activities beyond the reach of any regulatory controls. Yet again, the needs of capitalism triumphed over those of the environment, the poor, and the starving. Ten years on, in 2001, there was another Earth Summit, which saw more of the same, with global corporations even more obviously setting the agenda (they made up at least half of many of the ‘government’ delegations at the Summit, including that of the UK). Is it at all surprising that what the Earth Summits produced was not worth the energy and resources poured into them (the first Summit took 20 years to organise and produced 30 million pieces of paper)? Environmental protection and a growing economy are not “inseparable”; they are entirely incompatible.

Unlike green pressure groups or the Left, we do not ask or expect global capitalism to act against its own interests or reform itself. The farce of the Earth Summit should signal to all those seriously committed to protecting the environment the futility of attempting to encourage any government to adopt a green agenda. Such activity is not only naïve but dangerous since it encourages the illusion that, even if a green government were elected, it would be in a position to oppose the forces of international capitalism.

children/family) and is a primary cause of pelvic distortion that can lead to death in childbirth. In Thailand, miscarriages are higher in dry villages, resulting from women falling on slippery paths or steep slopes while carrying food, water and a baby; in Bangladesh half of a clinics’ cases of broken backs were the results of falls with heavy loads. Women’s reproductive choice depends on their role in society. Their lack of choice is a direct result of their lack of autonomy, personhood and economic subservience. If women have fewer children, they suffer for lack of labour power; if more, they are over-burdened, and their health undermined. Freedom for women from male domination must be combined with an agrarian social revolution, which reunites agriculture and nutrition, renews self-reliance and subsistence and creates equality.

Women

An agrarian revolution is required, as part of a social revolution, which must liberate women. Women are the poorest of the poor, the largest group of landless labourers in the world. The reformist 'solutions' of establishing co-operatives or redistributing land still frequently leave them



excluded and dependent on others. Women produce almost half of the food crops in the world. In Africa they contribute 66% of all the time spent in traditional agriculture. In Asia they are over half of the agricultural labour force, in Latin America over 40%. They are also often responsible for horticulture and animal management. Commercial farming has favoured men at every level and industrialisation and urbanisation also hurt women most, destroying the markets for their handicrafts and worsening the unjust division of labour with the double day of wage labour and household work. Up to 90% of low-skilled assembly work in Africa and Asia is done by women. Everywhere in the world women are the water managers, and usually carriers, for every household purpose. But they are frequently excluded from decision-making about water management; most societies have a tradition that the technology of water supply is too complex for women. Where there is no pump or standpipe nearby, water collection is both time-consuming and bad for health: it saps energy (and affects

The Environmental Movement

One strand of environmental action involves accepting the legitimacy of the State. The flip-side of the 'democratic rights' of environmental protesters is the 'duty' of citizens to obey the laws made by 'democratically-elected' governments and to respect private property. But government is not a government of the people and that it, and the laws it passes, represent the interests of the ruling class against us. The private property they are concerned about is the property of the ruling class. Therefore it is a mistake to speak about 'rights' in a system that is not ours in any sense. The green policies and promises of the mainstream political parties are so much populist window-dressing.

Green parties are superficially more attractive. They have some radical policies such as decentralism, federalism, and opposition to leaders. But if they achieve power, they will, like the mainstream parties, be running the state. They will also – inevitably – be corrupted by power, as illustrated by the German Green Party once it got into power. In Britain the Green Party refused to support the mass non-payment of the Poll Tax because it doesn't support illegal action. Similarly, in Ireland the Green Party supported the attempts by councils to bring in bin charges (people would have been paying twice over), despite its unfairness and a popular (and effective) grassroots campaign of direct action. Calling for a 5 year moratorium on GM is pointless, even campaigning for a total ban is pointless since the sovereign national state is no longer (if indeed it ever was) the most powerful player in the game; at the end of the day the multinationals call the shots. They are busily striking

down attempts by individual countries to ban their products and technology by recourse to the WTO and various international 'free trade agreements'. Besides which the most powerful political/military force in the world, the US/ NATO axis (in effect an emerging world state), is right behind them. What is the point in appealing directly to the corporations to back down over the implementation of a technology that will enable them to monopolise food production on a global scale and rake in unimaginable profits?

Will environmental action save us?

Green pressure groups such as Friends of the Earth and Greenpeace International do some good practical work (particularly the local groups), but are flawed by their "apolitical" stance (which means that they accept the state and capitalism), and their single-issue politics. Where they do undertake direct action (e.g. Greenpeace Limited) it is carried out by an elite of activists on *behalf* of the green movement; it is representational rather radical (grass-roots empowering) politics.

Social problems do not exist as single issues, so they can't be tackled by single-issue campaigns. Greenpeace International's anti-fur-trapping campaign in the 1980s brought them into conflict with native peoples because it failed to distinguish between subsistence activity and big business trapping by major fur companies. For years the Campaign for Nuclear Disarmament (CND) refused to oppose nuclear power, even though it is inextricably linked to nuclear weapons. These examples teach us that radical policies and genuine change cannot come from above, as the gift of political leaders and parties, they must come from below. They will only be carried through by ordinary people collectively taking power for themselves through direct action and collective organisation (e.g. workplace and neighbourhood assemblies, street committees etc), outside of, and against, political parties.

This section is indebted to *How Deep is Deep Ecology?*, "Women's Freedom: Key to the Population Question" by George Bradford. Times Change Press pamphlet.

must continue to call for resistance and ultimately a class uprising to overthrow capitalism, and then to create a free communist society. But how can we ensure that the same dangerous values and power relationships are not carried over into the new society? How can we persuade others that things won't turn out just the same or worse than before?

We believe the answer lies in listening to the voices of those “others” that have been marginalised and suppressed by Western civilization. One of the most useful critiques for this purpose is that developed by some elements of feminism, which has developed a critique of the exploitation of women and nature since both are treated in our society as irrational, threatening, in need of taming and objects of exploitation. As Ynestra King has written, “The hatred of women and the hatred of nature are intimately connected and mutually reinforcing.” Peggy Kornegger, in *Anarchism: the Feminist Connection* says, “What feminists are dealing with is a mind-fucking process – the male domineering attitude towards the external world, allowing only subject/object relationships..... Women [] are working to expand our empathy and understanding of living things and to identify with entities outside ourselves, rather than objectifying and manipulating them. At this point, a respect for all life is a prerequisite for our survival”. King, in *Toward an Ecological Feminism and a Feminist Ecology* explains how the lack of diversity in a patriarchal capitalist society is mirrored in the threat to diversity in nature. She writes “A healthy balanced ecosystem, including human and nonhuman inhabitants, must maintain diversity... wiping out whole species corresponds to reducing human diversity into faceless workers, or to homogenisation of tastes and culture through mass consumer markets. Social life and natural life are literally simplified to the inorganic for the convenience of the market society. Therefore we need a decentralised global movement founded on common interests, but celebrating diversity and opposing all forms of domination and violence”.



Primitivism

Primitivism is a set of views and perspectives based on the idea of a natural and spiritual humanity in harmony with nature that began to disappear as civilization developed from Neolithic times, to the extent that today humanity is alienated, de-sensitised and increasingly in thrall to modern industrial society's conditioning and control. Its more extreme proponents (like John Zerzan) propose a radical regression of social organization and technology to the level of the hunter/gatherer. A radical reduction in human population is a fundamental principle and aim of all primitivists. Some green activists believe humanity has become so corrupted by modern 'civilization' that it is humanity itself (all humans equally, whether they are road sweepers or the heads of corporations) that is responsible for the ecological crisis. They argue the planet would be better off with fewer people living on it, and this view has led to homophobia, racism and support for terrorism by some primitivists.

Extreme primitivists believe that the total destruction of civilization is a necessity and the inevitable rapid reduction in human population appears to be a price worth paying. We would agree that we would not like to live in the urban dystopia of 20 billion ravaged souls that primitivists portray but nor would we want to live in a rural arcadia of only fifty million sturdy individualists. With primitivists we agree that "Never has civilization manufactured so many means for its own disappearance. To stop this path to suicide, change the world order and invent a new way of organizing social

Other Voices, Other Lives

There are voices, including those of the marginalised "others" in society, who argue that we live in an era in which there is a fundamental crisis in this world-view. How sane and rational is a society that produced the genocide of the Holocaust and the bombing of Hiroshima and Nagasaki or that tolerated the mutually assured destruction of the arms race during the Cold War while millions starved? What about the continuing world recession, homelessness and poverty which is provoking social unrest? Most significantly, doesn't the ecological threats of deforestation, acid rain, depletion of the ozone layer and the poisoning of our air and water call into question the whole idea of growth and 'progress'? All these things symbolise a society that is ill at ease with itself, whose claims to have tamed nature for the benefit of all and whose vision of the never-ending march of progress of Western civilization have been seriously undermined. Symptoms of the loss of confidence in a bright future are in evidence throughout our culture. The *Terminator* films show a vision of the future in which the world and its population have been half-destroyed in a war between humanity and a military technology which has taken on a life of its own, believing itself to be superior to humanity. While the future looks bleak, people turn to the past and the countryside for comfort and reassurance. Home-owners "personalise" their '60s council flats with plastic 'oak beams' and leaded windows. Museums and heritage culture have mushroomed in the last 30 years.

How do we, as anarchists, respond to this situation? Obviously proclaiming "the end is nigh!" and encouraging people's pessimism and cynicism about the possibility of real change won't help. We

abandon Enlightenment ideas of the desirability of active human struggle, based upon the criticism and analysis of existing conditions, to bring about change.

However, what this analysis of Enlightenment thought and its use by capitalism helps us to do is to focus on how various hierarchical exploitations of class, gender, race and nature are related in the concept of “other” in Western bourgeois ideology. Consequently, we can see that the idea of exploiting nature is not a neutral concept that can be employed by capitalists and revolutionaries alike. It is an idea that has and will always be used as a model for the exploitation of others by ruling elites, their claims to rationality and science helping to maintain and universalise their dominance and power.

life becomes each day more urgent because at the end of that road lies, perhaps, the end of humanity”. We also agree with those who say, “Only widespread refusal of this system and its various forms of control, revolt against power itself, can abolish civilization and pose a radical alternative”.

Primitivists believe that humanity has a natural condition but now exists in an unnatural state that is rapidly heading towards spiritual and possibly physical extinction. Most blame the development of civilization which, by inventing certain processes (for instance mathematics) and systems (for instance trade), objectified and commodified Nature and alienated humankind from it. Civilization domesticates individuals from an early age. It alienates and creates ‘alien’ emotions (longing, greed, selflove) that express themselves in conflict, possessiveness, the desire to accumulate and defeat. Most illness and disease, including mental illness, are said to be direct products of civilization. Modern medicine offers only palliatives or a further alienating and controlling hi-tech solution. Hierarchy, division of labour, the subjugation of women, states, priests, kings and armies are all products of a civilization primitivists would like to unbuild. We profoundly disagree with primitivists on the question of humanity and spirituality. Firstly, we reject the notions of a ‘natural humanity’ that can be rediscovered and its more subtle idea that a ‘good’ humanity can only be achieved by regression to either a hunter-gatherer existence or an extremely purified and simplified individualism. Modern humanity is a social construct, something that can be uncreated and redefined in the direction of autonomy, mutual aid and solidarity without any need to bow to the unreal. As revolutionaries, we accept that no future society can be built without the ethical development of millions of people, the development of awareness and understanding, their free and conscious adherence to its principles and modes of action via a social-organic conscience or ethic shared by all humanity. We disagree with primitivism’s desire to randomly unbuild society and the sometimes fervent approval of irrational-

ist and chaotic attacks on civilization – this is not the revolution which must contain within it the seeds of a sustainable, fulfilling social ecology, a free society, anarchist communism.

Anarchist communists certainly agree with the problems but we are often accused of only wanting to reform society. This is nonsense. The abolition of money, wage relations, the socialization of production and consumption with all goods free to use, an end to all forms of ownership and hierarchy, the end of democracy and all other changes needed to bring about an anarchist communist society are not ‘reforms’ but truly revolutionary. If production and consumption are to be brought into harmony on the basis of human need and ecological sustainability, then all things involved in satisfying human need – knowledge, science, technology, production, distribution and propagation, exchange, communication and so on – will need to be deconstructed and changed in truly revolutionary ways.

Primitivists hate technology and seek a regression to levels of technology which would not be able to support current world levels of population nor give access to many things beneficial to humans. Anarchist communists agree that the extent to which our essential humanity can develop is important and that not all technologies are neutral. Where we disagree is that a society with a high level of technology is *necessarily* evil and self-destructive, viewing this as a consequence of capitalism’s misuse of technology. Some primitivists see all forms of organization and collective action as alienating and advocate a reversion to a ‘society’ of self-sufficient, self-realising individuals, a ‘natural’ humanity. Anarchist communists in contrast, see *society* as the truly liberating and liberatory environment in which humanity may find its greatest expression. While agreeing with many that ‘technology’ is not neutral and that civilization must be radically-reformed in ways that are sustainable and maximize both human individuality and sociability (freedom *and* society), we are completely neutral in our approach to *what* technology, *which* tools, used *how* and *when*. Technology is not a

The End of Power As A Basis of Society

Mass pollution and environmental destruction are the inevitable consequence of a system based on dominating the rest of nature (and therefore exploiting and destroying it). This domination has its roots in the domination of people – class society, where power and wealth is in the hands of a few, the ruling class, who oppress and exploit the working class majority, and the related oppressions of racism and sexism. Production is for profit, not need. It is the ruling class who decide **what** is produced and how – peasants don’t choose to live on the worst land or grow cash crops, individual consumers can’t stop pollution through buying, boycotting or voting.

This analysis is a critique of all power relations and of the urge to control and dominate. It celebrates the importance of diversity and of a harmonious relationship between culture and nature. These ideas, as well as those other marginalized and suppressed voices, such as those of native peoples, tell us there is no single unproblematic way of comprehending the world and that a post-revolutionary society would need to respect difference and diversity in culture and nature, encountering and relating, not dominating and exploiting. This is not simplistically to dismiss every single aspect of Enlightenment thought, or to romanticise non-Western cultures and ‘woman’ as having special access to wisdom and being ‘closer to nature’. A critical awareness of Enlightenment thought enables us to see how capitalism makes use of its emphasis on rationality and science to oppress and exploit. We must not, consequently, leap in an *anti-rational* or *anti-science* direction. Nor would we wish to

we can change conditions of existence. We have been predators but in the main do not kill as often as we did. We defend the means of our existence (the land, the crops, waterways) but can limit the impact of our actions radically. While we will continue to defend our existence (for instance by limiting the impact of insects on crops), we will do it from necessity, humanely and rationally, and in ways which do not adversely effect the environment; the definition of which must surely be, *unnecessary or beyond what can be easily renewed or which disadvantages non-proximate life*.

matter of morals but *what works*, within the context of sustainability and humanity.

Change Yourself, Change The World

Lifestylism is the theory that major social change will only come about through individuals changing the way that they live and relate to other individuals. It is vital for revolutionaries to examine and change the way that they live – for example to tackle racism and sexism in themselves and others. Those who don't, 'speak with a corpse in their mouths'. But on it's own this is not enough.

Lifestylism is an individualistic theory. It believes that society is made up of individuals who possess real choices about how they live: for example whether they do waged work and what job they do, whether they live communally, pay rent, squat etc. If enough people make the right moral or ethical choices and act upon them, reform or major social change will occur – right?

Many people look critically at what food they buy and eat, for reasons of health, ecology, animal liberation and social justice. They boycott 'Third World' cash crops such as tea, coffee and sugar in favour of "non-exploiting" home produce; buy freerange and organic wholefoods rather than food that is factoryfarmed and chemically treated, refined or adulterated; adopt vegetarian or vegan diets rather than meat or dairy ones. In the wider areas of consumption, lifestylists boycott 'bad' companies connected with oppressive regimes, vivisection or the arms trade. Similarly, they favour small shops and co-operatives rather than supermarkets and hierarchical businesses.



“The End of History” proclaimed by Francis Fukuyama consisted in the triumph of bourgeois ideology. Modernism and rationality had triumphed in a single socioeconomic culture we call civilization.

This process has increased its grip on every aspect of life as capitalism consolidated itself in the late 19th and 20th Centuries. More and more sophisticated techniques of control and surveillance have been produced. Military powers and capabilities increase as the nation states of the West exert their control over the rest of the world and fight each other for the plunder. The commodity market has become global through developments in transport and communications. Huge cities emerge while the countryside has been turned over to farming vast monocultures. These are the results of bourgeois ideology's struggle to establish itself as the single method of social organisation and the single way of understanding the world – as “civilization” itself. We cannot change the laws of nature but

PART THREE: A Truly Green Revolution

However, campaigning against ‘bad companies’ implies that there are ‘good’ companies. Big companies are only worse than small ones because they are bigger. In a class society, worker and consumer co-ops are only a milder form of exploitation. Because they are environmentally concerned they buy green products that claim to be eco-friendly and try to recycle what they use. Gardens and allotments are used to produce fruit and vegetables, and LETS (Local Exchange Trade Schemes) enable people to directly exchange goods and services at a local level and with minimum use of money.

Many lifestylists are also pacifists, people opposed to violence, particularly the existence of the military and the criminal waste and misallocation of resources of the arms trade. Peaceful methods are the means to an end; a peaceful society. Because all behaviour is a matter of individual choice, police on pickets and demonstrations (for example) should be treated as individuals who “can be nice to you if you’re nice to them”. For a number of pacifists all violence is equally bad (whether committed by oppressors or oppressed), so it was wrong for demonstrators to defend themselves; they should simply lie down passively while being arrested or beaten up. Some pacifists even argue against using peaceful force, for example a non-violent workplace occupation, because it is ‘violent’ to impose your will on other people, yet they remain blind to the institutional violence of Capitalism, which – for example – routinely kills, injures and harms thousands of workers in the name of profit.

The fundamental flaw of lifestylism as a political theory is its individualistic basis. As anarchist communists we see individual freedom as vital, but the guarantee of this lies in the social freedom of all. We live in a class society that is organised for the wealth and power of an elite, the ruling class (Bosses, Landlords, Judges, Politicians, Top Military, Police and Civil Servants). The majority of people – the working class – have no real choice about how they live. They are forced to do boring, useless (and unhealthy) work

for a boss, the drudgery of fulltime housework and childcare, or the poverty and harassment of “living” on welfare benefits.

The reality is that production for profit inevitably means the domination and exploitation of people, useless production, the ruination of nature, its pollution and destruction. The people who decide what is produced and how are neither workers nor consumers. They are the people who own the means of production (land, factories etc), the bosses and landlords. Their sole motivation is profit by domination and exploitation. Organised consumer campaigns can have an effect, if allied to workers’ action, for instance boycotting the production of goods during a strike. What is needed is local and national organisation, and collective direct action, ending in the working class seizing the means of production and reclaiming those places denied to us and simultaneously creating structures where everyone has a direct say about all aspects of society: workplace and neighbourhood councils, street committees and so on. Only in such a classless society – Anarchist Communism – will we have production for use in a world human community that is also in harmony with nature.



through social revolution. Collectively seizing control of the land, workplaces and streets, and sharing decisions, work and wealth. Deciding what is produced and how, dissolving the divisions between home, work, and play, and those between people and the rest of the nature.

Reform Is Not Enough

As anarchists, we should make explicit the real causes of environmental problems in our propaganda. We should not solely argue that revolutionary change is the only alternative to ecological disaster but also talk of what action people can take here and now to

project — a victory. Similarly, workers opposed the attempts of the Amax corporation to drill and mine for oil and diamonds on aboriginal land at Noonkanbah. These workers also actively supported the militant occupation of the site by aboriginal people. In Britain, in the 1980s, rank and file seafarers boycotted the dumping of nuclear waste at sea, forcing the government to abandon the policy. In Brazil, rubber tappers forged an alliance with native peoples and environmentalists to oppose the massive deforestation of the Amazon rainforest by big landowners and business interests. Their success led to the murder of union activist Chico Mendes by hired assassins in December 1988, but the struggle continues. Mass direct action by communities (occupations, sabotage and pitched battles with police) prevented nuclear power stations and reprocessing facilities being built at Plogoff in France, and at Wackersdorff in Germany in the 1980s. In Britain communities mobilised in 1987, to end government plans to dump nuclear waste at 4 sites. In Thailand in the early 1980's, 100,000 people rioted to destroy a \$70m steel factory. Following the revolution, the working class worldwide, having seized control of workplaces, land and streets, would direct current technology to benefit the vast majority (the working class) rather than the tiny ruling class minority, as at present.

We have seen that ecological issues and class struggle are inextricably linked. The struggle for a green society where people live in harmony with the rest of nature therefore goes hand in hand with the struggle for a society free from human domination. Capitalism cannot be reformed. It is built on the domination of nature and people. We need to take direct control of every aspect of our lives



make real improvements and changes. We must show that for us survival by itself is not enough. We aim to completely transcend capitalist society, and all forms of domination and exploitation, for a society where production is geared toward genuine need (as defined by people themselves), and produce is freely distributed. In such a society (anarchist communism), we would be free of the alienating boredom and drudgery of work, competition, and consumerism. What we must do is to bring the single issue of ecology into the general terrain of class struggle. This means breaking down the barriers between the mass of exploited humanity globally. It needs us to go on the offensive. "...Now it's between corporations and citizens to fight it out directly", as eco-feminist Vandana Shiva concluded after the 1991 Earth Summit.

The Anti-Roads Movement

The 1990s saw a radical anti-roads movement in the UK. In the 1970s, the Friends of The Earth and Greenpeace had attracted many green activists to their populist-activist environmentalism. But by the 1980s this had degenerated into professional lobbying of governments and corporations with activists becoming members/supporters who raised or gave money but did little else.



The void was filled by Earth First! (EF!) in Britain: a radical ecology group committed to direct action and grassroots organisation transplanted from its parent organisation in America (see **Organise** #26 and #28 for analysis of EF! in America).

In Britain EF! was heavily-influenced by radical liberal protest and the animal rights movement. From these it inherited militant moralism and the tactics of collective direct action, lobbying, publicity stunts and non-violent civil disobedience. EF! has adopted non-violence as a principle (rather than as a tactic). The justification is that it gives a good media image, thus winning over public opinion and creating a moral stance, in contrast to the materialist immorality

The environment was and is an area of working class struggle because it is we who suffer most from environmental degradation and expropriation of land, water and clean air. Boycotts of dam projects, nuclear power stations, forest clearances, heavy industry, the dumping of toxins and waste have been social as well as environmental victories for the working class. Early socialists argued strenuously that political and economic struggle was the means to achieve environmental reform. Revolutionaries like William Morris and Kropotkin proposed sustainable economies that were *also* socially just. The land would be a vast granary, water would run clean and food would be pure, free from chemicals and adulteration. Environmentally-caused diseases like cholera, diphtheria and typhus would be eliminated. These programs of reform grew out of the unrelenting struggle of working class people against bosses and owners, struggles to defend their place within ecologies (such as resistance to clearances or enclosures) or to improve environments that capitalism had ruined (for instance campaigns for clean water, decent housing and sanitation). Their struggle brought reforms, such as nationalized water companies, but because they did not change the nature of either ownership or control, they were only temporary. The same struggles are being waged by the working class in its millions today but most are equally led by reformist leaders. The anti-capitalist movement must re-learn, as the global poor already know, that the revolution must be made by us, here, on the land and in the towns, and not by campaigns against far-off institutions like the WTO or UN or without an end to private property or (so-called) democratic control.

There are a number of examples of workers taking class – based ecological action. In the 1970s, a number of groups of Australian workers instituted Green Bans, boycotting ecologically destructive projects. Builders, seafarers, dockers, transport, and railworkers boycotted all work connected with the nuclear industry, and the Franklin River project – which would have flooded the Tasmanian National Park (including Aboriginal land) for a large hydro-electric

Development: A Class response

Capitalism has created *the Spectacle* to seduce us, it has appropriated all the planet's resources and built a vast machinery of control, including states, governments, armies, death squads, laws, judges, policemen, prisons, gulags, advertising, schools, socialization, madhouses and the whole process of production and consumption, in order to protect and extend that grand larceny. And to be precise, by capitalism we mean *capitalists*, real people running real governments and corporations, in huge mansions, wielding vast and shadowy powers. People with great wealth and no ethics, people for whom personal aggrandizement expressed in profit, status or authority is a too powerful opium.

The effect of this is the wholesale destruction of the planet's biological and social ecologies, the mass holocaust of the poor, in which disasters are only the most visible events in an unrelenting carnage of wars, starvation, pandemics, crippling disease, ignorance, riot and pogrom. A jungle cleared, a shanty bulldozed, a golf course built on sacred land, farms drowned beneath a reservoir, chemical spills into water systems, toxins into the air from urban incinerators. These are not environmental events alone, they are social and economic events, they are battles lost in a *class* war, if the working class is those who must endlessly produce and yet have no say over what is produced and how. 900m die of hunger every year on a world even the despised UN says could support 14bn people. Is this just drought and famine, environmental events? Or is it because people have been cleared from the land, forced to work for pennies, droughts caused by massive dams or to fill the swimming pools and water the gardens of the rich ?

of the road builders. The media are not neutral however, but part of the State, largely owned by millionaire (or billionaire) capitalists such as Rupert Murdoch or Conrad Black. It defines the terms of political debate (e.g. security forces vs. terrorists, hard-working police vs. scroungers and so on). As *Aufheben* point out, liberal activists view public opinion as homogenous and passive, needing a bland, acceptable image of opposition. However, widespread public support for (for instance) the 1984–85 Miner's Strike, the Anti-Poll Tax campaign, hunt saboteurs and the anti-road movements, despite them being portrayed in the media as violent and criminal, contradict this view. The logic of principled non-violence is that there is no difference between the violence of the system (starvation, poverty, wage slavery, war etc) and the violence employed by people resisting it. This argument could also be extended to damage or destruction of property, i.e. it is morally wrong to cut fences or sabotage construction equipment. Some talk idiotically about 'violence' against property being bad – a recipe for doing nothing at all.

Strategy

The radical anti-roads movement, particularly the M11 campaign, did not take this line, and had a good record of sabotage. The rationale behind the anti-road movement's strategy and tactics was that their resistance is expensive to the road builders and that the extra cost would create a new political climate where the Government would refuse to underwrite the road-builders. This 'raise the cost' strategy did lead to a *temporary* slow-down in the building of roads and attempts to find different solutions (such as congestion charging) but soon the roads lobby was back on track. Where were the protests when Britain's first toll motorway was being built? The pause simply led to the anti-road movement melting away, convinced it had 'won' the argument!

A further argument used against violent tactics is that they give the police an excuse to wade in, but the anti-road movements own experience ought to have taught it that the police do not need 'provocation': the police are violent when they want or need to be. The question of whether or not to use violence should therefore be one of tactics, rather than principle. The entire State apparatus with its army, courts and prisons is based on violence. Capitalist exploitation is a violent attack on our freedom and wellbeing. It seems highly unlikely that we can overcome their power without any use of violence. However, it is equally wrong to have violence as a principle of action. As Emma Goldman said, "The more the violence, the less the revolution. Therefore, the decision of whether or not to use violence should depend on what tactics will best achieve our ends, whilst attempting to minimise violence".

The Future

The anti-roads movement in the 1990s had a big impact, despite defeats such as Twyford Down and the M11. Their resistance, combined with a number of other factors (growing awareness of the inadequacy of public transport, the health problems caused by cars and pressure on transport budgets at a time of general government cuts), led to the shelving of plans to level Oxleas Wood, the postponement of 6 other road schemes, and a one-third cut in the national road building programme. But the UK government has recently (summer 2003), announced a major road building programme, consisting of widening of existing major roads such as the M25. This, combined with its rapid capitulation to road-haulage protests (over the price of diesel fuel) in the late 1990s finally expose New Labour's promise to slash the volume of cars in favour of trains and buses. In the medium term the State's plans to introduce electronic tolling are advancing apace, despite fears of a backlash by middle-class car users. They are

capitals of the world. Similarly, there are problems with alternative fuels. Liquid hydrogen needs electricity to freeze it, and storage and safety are problematic. Like electric vehicles, it needs an expensive fuel that usually produces carbon dioxide in its generation. Super "technical fixes" such as hydrogen fuel cells are very expensive and distant prospects. If and when they are introduced they will displace existing car technologies to the developing world, as has happened with tobacco smoking. Even if a genuine green car is developed, the many other adverse effects of cars will remain, such as the waste of space and resources, widespread injury and death, and the effects on street life and community.

they are also the ‘acceptable’ face of corporations who continue to make the same old junk in large quantities to sell to the poor or dump in poor countries. Big firms such as Shell spend millions on advertising and PR, letting us know how ‘green’ they are – reclaiming the land after they’ve used it, putting their pipelines underground and giving money to green projects – yet they continue (with their government partners) to be *the* environmental terrorists. Consumerism (alienated buying to be happy) is part of the problem. Capitalism wants us to spend all of our ‘free’ time (when we’re not working to live or busy with domestic drudgery) buying “leisure”.

A significant part of the environmental movement remains wedded to the idea that capitalism can provide technological ‘fixes’ to the megacide it has created. Although green products are preferable, they are not the answer. They’re an individual solution to a social problem: who controls *what*, is produced and *how*. As individuals the majority of us – the working class – have no control over our lives. We certainly don’t have a say or exercise any social control over what we do or don’t buy (or as dissident shareholders).

A prime example is that of green car technology. It took years – thanks to the strength of the roads lobby – to win the introduction of lead-free petrol. But cars remain massive polluters, so what was achieved? Traffic fumes are a major contributor to the greenhouse gases that produce global warming. Cars and light vans produce 18% of global carbon dioxide emissions (with more produced by their manufacture), nitrous oxide (which contributes to surface and tropospheric ozone), and carbon monoxide. A proportion of nitrogen oxides turn to nitric acid, falling as acid rain. They react with other chemicals in sunlight to form petrochemical smogs that destroy millions of dollars worth of crops in America and elsewhere. Catalytic converters are supposed to reduce emissions of these dangerous pollutants. They don’t work when cold however, making them redundant at the start of the journey when most pollutants are emitted. They are widely used in Los Angeles, one of the smog

watching the car reduction trials of local government (such as the London congestion charge), to gauge public reaction, as well as their success. Tolls are currently charged on a third of European motorways. Technology is already far developed for tolling, electronic monitoring and control of vehicle speeds as a way of reducing traffic jams, increasing traffic flows, and of course, increasing revenue and profits for the state and private capital.

Links

It is vital that anti-road campaigners, transport workers and those threatened by road schemes build links. Revolutionaries should be working to build and support this process. Practical measures to reduce the speed and volume of cars, and promote human-scale alternatives should be supported, as long as they also promote the power of workers and communities, rather than local/national government, and corporations through taxation and tolls. Ultimately, a community-based, accessible, and green public transport system can only be built as part of a revolutionary transformation. Its components will include popular planning involving all the communities affected, minimising the need for transport through increased local self-reliance, a service that is free and accessible to all, minimal pollution and disturbance to the environment and community, and compatibility with a thriving street life of play, talk, walking and cycling.

NOTE: We are indebted to *Aufheben* #3 for their excellent analysis of the anti-roads movement. *Aufheben* (£2.00 + p&p)
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Legislate or Die?

Governments of the industrialised countries signed a treaty in 1987, the Montreal Protocol, agreeing to halve the production of CFC's (Chlorofluorocarbons, which damage the ozone layer causing global warming) by the year 2000. But it would take an 85% reduction to enable the ozone layer to repair itself. Acid rain is similarly being 'tackled': too little, too late, with the root causes being neglected. Similarly, the Earth Summits at Rio (1991), and Kyoto (2001), achieved little beyond needlessly destroying yet more rainforest to produce the tons of documents for them.

Lead-free petrol supposedly makes car exhausts okay, but cars are still major polluters and profoundly anti-social, killing 6000 people a year in Britain and injuring 40,000. The Conservative Government's conversion to environmentalism in the 1990s (e.g. its marginal 'green taxes') were window dressing: the expansion of nuclear power and reprocessing was presented as green, not contributing to global warming (sic), in contrast to 'dirty' coal fired power stations. The reality is that nuclear power leads to radiation at all stages of the nuclear chain, but is more easily controlled by the State, as well as providing material for nuclear weapons. Despite the green promises of New Labour, in power Blair's government have managed things for Capital. The introduction of GM crops under the guise of 'trials' despite mass opposition (including direct action) is a prime example. The reality of the dynamic of political power is that governments have power over the working class, and always use that power in the interests of Money.

Take the example of agriculture: in the "developed" world, it is mostly large-scale industrialised agribusiness. The emphasis is on growing single crops in huge fields – monoculture – creating an unstable ecosystem. The crops are much more vulnerable to pests, necessitating chemical pesticides. Chemical fertilisers are used to obtain (short term) high yields, in the long term these deplete the soil of nutrients and yields fall. Pesticides kill both pests and the creatures that prey on them, they also poison food and drinking water. Factory farming – concentration camps for animals – is morally indefensible, and produces unhealthy meat, eggs and milk. There is massive, government-subsidised over-production (leading to examples such as the famous butter mountains and wine lakes). This food is fed back to animals, producing delights such as CJD ('mad cow' disease, and foot-and-mouth) or destroyed. It's more economic in capitalist terms, than selling it cheaply, or giving it to the millions of malnourished and starving people who need it. The Big Food-Big Government axis periodically tries to force famine-stricken countries to accept GM maize, knowing its seed stocks will be hopelessly polluted by GM contamination. Farmers are paid to keep good land fallow in order to keep prices high; food is stock-piled or destroyed for the reason.

We Can Save The Planet (For Ourselves!)

Companies are making an increasing number and range of 'environmentally-friendly' and 'healthy' products, such as bleaches and detergents or unadulterated foods. These products are invariably more expensive (and can only be bought by the better-off), and

