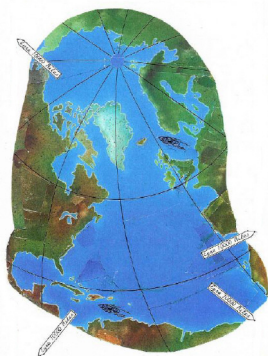


England's Climate & Energy Politics

by
William Shepherd



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An Introduction to Bill Shepherd

'I know who you are,' Margaret Kennedy said with barely concealed hostility. 'And,' she continued, 'it's guys like you - smart and unscrupulous and immoral - who have made our environment the polluted mess it is. I don't like you Mr. Shepherd. I don't like you personally. I don't like what you do in the world. And I don't like anything you stand for.'

'Interesting,' Shepherd said. 'What is your background?'

'I worked as a documentary film producer before I quit to raise my family. I am very dedicated to the environment and I have been all my life.'

Ms. Kennedy turned to Constanza Calderon.

'Just so you know. Mr. Shepherd doesn't believe in anything that normal people believe in - not even *Global Warming* or *Kyoto*. He's an industry hit-man - representing coal and oil interests'.

Shepherd said nothing. He just handed her his card. '*Institute for Risk Analysis*,' Kennedy read aloud. 'That's a new one. I'll add it to the list of phony right-wing fronts.' Shepherd said nothing.

'Because it's *all* disinformation,' Kennedy said. 'The studies, the press releases, the flyers, the websites, the organized campaigns, the big-money smears. Industry was thrilled when the *US* didn't sign *Kyoto*.'

Shepherd rubbed his chin and said nothing.'

from Tavern Talk with Bill Shepherd

A Few Words from the Author

A study from the *Society of Motor Manufacturers* will normally support the society's publicly stated positions. Otherwise the report will be hidden away in a bottom drawer. Normal people bear this in mind. The same will be true for a report from the *Soil Association*. More enlightened people bear this in mind. *Leaks* and *Whistle Blowing* complicate matters because some is bottom drawer stuff and some is disinformation.

An *Act of Discernment* will always be needed to discriminate between *Fact* and *Prejudice*. *Governments* once provided such a service and took the *Public View* as the *Impartial Discriminator* of *Common Sense*. But no longer. Nowadays *Government* are just another *Outside Interest Group* with their own *Special Pleadings* and *Private Agendas*. In these days of *Public Relations*, *Media Manipulation* and *Mass Advertising*, a *Tied Scientific Tenancy* carries out the *Scientific Research*, *Front Organisations* distribute the results and the *Piper's Paymasters* determine the tune.

What is the *Congress of Racial Equality*? Who was Joseph Rowntree and what is the purpose of his *trust*? Where do they stand? Who do they represent? These are not disinterested bodies.

The book you hold in your hand is your tally stick. Use it to weigh the evidence and measure the quality of the debates on *Climate* and *Energy*.

Sunday 3rd September 2006

UK Government Energy Policy 2006

The *Prime Minister's Address* to the *Labour Party Conference* included a section on the *UK Government's Energy Policy*. *The Times* condensed what Mr Blair had to say to the *Party Faithful* into 180 words. Here they are.

'Ten years ago energy wasn't on the agenda. Ten years ago I parked the issue of nuclear power.

Today I believe without it we are going to face an energy crisis and we can't let that happen.

Global warming is the greatest long-term threat to our planet's environment. Scarce energy resources mean rising prices and will threaten our country's economy.

In 15 years we will go from 86 percent self-sufficient in oil and gas to 80 percent imported. We need therefore the most radical overhaul of energy policy since the war.

We will increase the amount of energy from renewable sources fivefold; ensure every major business in the country has responsibility for greenhouse gas reduction; treble investment in clean technology including clean coal and home is at least 40 percent more energy efficient. We will meet our Kyoto the amount and we will take the necessary measures step by step to meet one of the most ambitious targets on the environment ever set anywhere in the world - a 60% reduction in emissions by 2050.'



*Right Honourable Tony Blair
Manchester, September 2006*

An English Energy Policy for a New Century

The *Energy Policy* section of the *Prime Minister's Address* to the *Labour Party Conference* was rewritten by William Shepherd. The *Cliff's Edge Signalling Company* condensed it into 180 words. Here they are.

'Ten years ago it was blindingly obvious that energy self-sufficiency was the right energy policy goal.

Ten years ago it was blindingly obvious that nuclear power was a dead-end technology. Nothing has changed.

Global warming and the greenhouse effect are fantasy not fact. To imagine Governments can stabilize the *Earth's* atmosphere is arrogant beyond belief.

Human beings cannot control the climate and must stop meddling with it. There is no energy shortage. The sun takes 45 minutes to provide all the energy we use in one year.'

'We will outlaw the use and development of climate weapons immediately.

We will withdraw from the *Kyoto Treaty* immediately. We will decommission all nuclear power stations immediately.

We will stop wasting electricity on space heating. We will adopt zero tolerance and polluter pays policies for emission of all substances into the landscape and the atmosphere.

We will establish a Lord Lieutenant's Department with Cabinet status to direct the dismantling of the country's national piped energy grids.

Prince Charles will head the department, negotiate county disconnection dates, issue the money and provide the people.'

<http://williamshepherd.blog.co.uk>

Wednesday 4th October 2006

Tavern Talk

with

Bill Shepherd

on

Climate

featuring

Constanza Calderón , Thomas Naylor
Margaret Kennedy

English Energy Policy
Plants & Deserts & Diseases
Species Extinction
Culture Clash
Glaciers & Sea Levels
Hurricanes & El Niños
Atmosphere & Environment
Environment & Advocacy
Kyoto Treaty
Yellowstone Park
Termites & Methane

About the Author

William Shepherd lives in *Rye, Sussex and Lund, Sweden*. He is the author of *The Rise & Fall of the Swedish Green Party (1982-1997)* published in 1989 and *The Politics of the English Pound (2002)*. He manages *Academic Inn Books* and the *Cliff Edge Signalling Company (cesc)*. His two grown-up children are bilingual in *English* and *Swedish*.

Shepherd on Climate at <http://climate.blog.co.uk>
William Shepherd at <http://williamshepherd.blog.co.uk>

Plants & Deserts & Diseases

The well-known television presenter Thomas H. Naylor Jnr. was talking to Bill Shepherd about environmental issues.

Constanza Calderón was watching from the far side of the room. She excused herself and went to stand by the window a few feet from them. She had caught the glint in Shepherd's eye - the one she called his python look.

'So,' Shepherd said, '*Global Warming* represents a threat to the world?'

'Absolutely,' Naylor said. 'A threat to the whole world.'

'What sort of threat are we talking about?'

'Crop failures, spreading deserts, new diseases, species extinction, all the glaciers melting, *Kilimanjaro*, sea-level rise, extreme weather, tornadoes, hurricanes, *El Niño* events...'

'That sounds serious,' Shepherd said.

'It is,' Naylor said. 'It really is. We are changing the atmosphere, destroying the rain forest, desecrating wilderness areas...'

Shepherd broke in. 'Of course. And can you back your claims with references to the scientific literature?'

'Well,' Naylor replied. 'I can't personally. But scientists can.'

'Actually scientific studies do not support these claims. Let's start with crop failure. Increased *Carbon Dioxide* stimulates plant growth. But it is more

complicated than that because plants sweat. The amount depends on *Carbon Dioxide* levels.

You can't study the sweating of plants without studying water tables and water run-off. Plants are part of complex hydrological systems. Recent studies indicate that each plant has a different response profile to changing *Carbon Dioxide* levels. And the subject has only just been opened up to scientific scrutiny.

As for the deserts - to the surprise of many scientists the most recent satellite studies show the *Sahara Desert* has shrunk since 1980.'

Calderón had read the article in *New Scientist* 175, 21 September 2002 pp 4-5 - *Africans go back to the land as plants reclaim desert* by Fred Pearce.

The gist of what he was saying was that *Africa's* deserts were in retreat and that satellite images reveal that dunes are retreating right across the *Sahel Region* with vegetation ousting sand across a 4000 miles swathe of land. This greening of the desert had been happening since the mid-1980s.



Shepherd had moved on to diseases. 'As for new diseases,' he was saying, 'not true. The rate of emergence of new diseases has not changed since 1960.'

'But we'll have diseases like malaria coming back to *Europe*.'

'Not according to malaria experts.'

Constanza remembered her discussion with Bill the day before. She had been explaining her historical research into the invasions of *Nazi Europe* from *North Africa* by *Allied* troops in the *Second World War* - the unsuccessful ones in *Piraeus* in 1940 and *Crete* in 1941 and the successful but costly advance through *Italy* in 1944.

Constanza was saying that there was evidence of the deliberate use of *Germ Warfare* to hold back the *Allied Invasion* of *Italy*.

Large areas of the countryside had been flooded and infected with mosquitoes. Constanza suspected this was the reason for the ferocious fire-bombing of *Dresden* a few weeks later.

In this context Bill had mentioned a June 2004 article in *Lancet* - Volume 4 Number 1 - by Paul Reiter and others entitled *Global Warming: a call for accuracy* which included the complaint that many of the much-publicized predictions about malaria and other diseases were ill-informed and misleading.

Naylor snorted. Calderón turned her attention back to the conversation. Naylor's arms were folded across his chest.

Species Extinction

'Species extinction hasn't been demonstrated,' Shepherd was saying. 'In the 1970s Norman Myers predicted a million species extinct by 2000. Paul Erlich predicted fifty percent of all species extinct by 2000. But those were just opinions.

Björn Lomborg discusses them in *The Skeptical Environmentalist* published by Cambridge University Press in 2002. Constanza knew the book well. It had a lot to do with her conversion from an advocate to a skeptic about *Global Warming* ...and then to an opponent of prejudice masquerading as science.

The author - a *Danish* statistician and *Greenpeace* activist - set out to disprove the views of Julian Simon who claimed that dire environmental fears were wrong and that the world was actually improving.

To Lomborg's surprise he found that Simon was mostly right. Lomborg's crisp calm text was devastating to established dogma and the *Global Warming Theology*. Since the book's publication the author has been subjected to relentless personal attacks.

Throughout the long controversy Björn Lomborg has behaved in exemplary fashion - unlike his critics where the behaviour of *Scientific American* has been particularly reprehensible.

However one useful outcome of the ongoing *Lomborg Debate* is confirmation of the postmodern critique of *Science* as just another power struggle.

Edward Goldsmith refused an opportunity to meet with Lomborg in a televised debate - apparently for format reasons. Nonetheless Shepherd had been disappointed as Goldsmith had an excellent grasp of the scientific minutiae of the *Climate Change* debate and the dialogue could have been a valuable resource for scientists and politicians working on the science behind the claims and counter-claims about *Global Warming*.

Constanza was surprised Naylor did not ask for references. But he was looking defeated and preferring to bury his face in his wine glass.

Bill's information had come from a study in the mid-nineties by Marjorie L. Reaka-Kudia published by the *National Academic Press* in *Washington* entitled *Biodiversity II, Understanding and Protecting our Biological Resources*.

Constanza still had the quote on a scrap of paper in her handbag. 'Biologists have come to recognise just how little we know about the organisms with which we share planet *Earth*. In particular attempts to determine how many species there are in total have been surprisingly fruitless.'

On the other side she had scribbled 'We have no way of knowing the actual extinction rate in the tropical forests let alone an approximate guess. Source. Myers.'

'Do you know,' Shepherd was asking Naylor, 'what we call opinion in the absence of evidence? We call it prejudice.'

Actually when he thought about it the remark probably came from Richard Feynman. 'Science,'

he had written, 'is what we have learned about how not to fool ourselves.' But Shepherd was not finished with species.

'Do you know how many species there are on the planet?' he was asking Naylor.

'No.'

'Neither does anybody else. Estimates range from three million to one hundred million. Quite a range, wouldn't you say? Nobody really has any idea.'

'Your point being?'

'It's hard to know how many species are becoming extinct if you don't know how many there are in the first place. How do you tell if you've been robbed if you don't know how much money was in your wallet to start with? And fifteen thousand new species are described every year. By the way do you know what the known rate of species extinction is?'

'No.' 'That's because there is no known rate.'

'Do you know how they measure numbers of species and species extinctions?' Shepherd asked. 'Someone marks off a hectare or an area of land and then tries to count all the bugs and animals and plants inside it. Then he comes back in ten years and counts again.

But maybe the bugs have moved to an adjacent acre in the meantime. Anyway can you imagine trying to count all the bugs in an acre of land?'

'It would be difficult.'

'To put it mildly - and very inaccurate,' Shepherd said.

'Now about melting glaciers - not true. Some are - some aren't.'

Culture Clash

Constanza knew that Bill had the facts and figures at his fingertips but was becoming increasingly curious about why he was bothering with Tommy Naylor. He was not normally one to suffer fools gladly.

But she could see that he was now talking to the little group that had gathered around him listening to the exchange. She turned away from the window and joined the group. As she did so she saw Margaret Kennedy looking across at them from the other side of the room and wondered whether or not she would come and join them.

There was a pause. Some people wandered off but there was a general murmur of assent from the half-dozen who remained. They were joined by a few new faces.

Constanza noticed that several of the old group had gone across to Kennedy. She presumed they were briefing her on the discussion and was about to join them but decided to stay.

'Tom. Meet Constanza Calderón. Constanza, Tom Naylor. Constanza clarifies my confusions by digging out the studies the scientific media ignores.'

They nodded politely at each other although Naylor's normal charm was noticeable by its absence. They had met before - earlier that year at a TV shoot. It was not the sort of meeting that Naylor would forget in a hurry.

Shepherd was clearly unaware of the encounter. But Calderón was remembering the dark cool forest floor beneath her toes - the shafts of sunlight filtering down through the magnificent trees.

She could smell the pine. It was a pleasant spot. Sunlight dappled the forest floor. But even so the TV cameras had to turn on their lights to film the third-grade schoolchildren sitting in concentric circles around the famous television presenter and activist Thomas Naylor. Naylor was wearing a black T-shirt that set off his makeup and his dark good looks.

'These glorious trees are your birthright,' he said, gesturing all around him. 'They have been standing here for centuries. Long before you were born - before your parents or your grandparents or your great-grandparents were born. Some of them before Columbus came to *America*! Before the *Indians* came! These trees are the oldest living things on the planet. They are the *Guardians of the Earth*. They are wise. And they have a message for us. *Leave the planet alone*. Don't mess with it - or with us. And we must listen to them.'

The kids stared open-mouthed, transfixed. The cameras were training on Naylor.

'But now these magnificent trees ...having survived the threat of fire, the threat of logging, the threat of soil erosion and the threat of acid rain - now face their greatest threat ever. *Global Warming*. You know what global warming is, don't you?'

Hands went up all around the circle. 'I know, I know!'

'I'm glad you do.' Naylor said gesturing for the kids to put their hands down. The only person talking today would be Thomas H. Naylor Jr. 'But you may not know that *Global Warming* is going to cause a very sudden change in our climate. Maybe just a few months or years and it will suddenly be much hotter or much colder. And there will be hoards of insects and diseases that will take down these wonderful trees.'

'What kind of insects?' someone asked.

'Bad ones,' Naylor said. The ones that eat trees, that worm inside them and chew them up.' He wiggled his hands suggesting the worming in progress.

'It would take an insect a long time to eat a whole tree,' a girl offered.

'No it wouldn't!' Naylor said. That's the trouble. Because *Global Warming* means lots and lots of insects will come - a plague of insects - and they'll eat the trees fast!

Constanza leaned across to the TV cameraman. 'Do people really believe this shit?'

Constanza had flown down on an impulse in the plane sent to pick up Naylor after the film shoot. By now the kids were fidgeting and Naylor turned squarely to the cameras speaking with the easy authority mastered after years on television.

'The threat of abrupt climate change,' he said, 'is so devastating for mankind and for all life on this planet that conferences are being convened around the world to deal with it. There is one in *Los Angeles* starting tomorrow where scientists will

discuss what we can do to mitigate this terrible threat.

But if we do nothing catastrophe looms. And these mighty magnificent trees will be a memory, a postcard from the past, a snapshot of man's inhumanity to the natural world. We're responsible for catastrophic climate change. And only we can stop it.'

He finished with a slight turn to favour his good side and a piercing stare from his blue eyes right into the camera lens.

Half an hour later the plane lifted off the runway and rose over the forest. 'Sorry to rush you,' Constanza said. 'But we were told to get you back by six.'

'No problem.' Naylor smiled indulgently. After his talk he had taken a few minutes to sign autographs for the kids. The cameras filmed that as well.

He turned to Constanza giving her his best smile. 'And what do you do Miss...?'

'Miss Calderón.'

'...Miss Calderón.'

'I'm on the *Global Warming* legal team.'

'Good so you're one of us. How's the lawsuit going?'

'Just fine,' she said. 'I get the feeling you're as brilliant as you are beautiful,' Naylor said.

'Actually, no,' she said.

'You're being modest. It's very charming.'

'I'm being honest. And telling you I don't like flattery.'

'Hardly flattery in your case,' he said.

'And hardly honesty in yours.'

'Believe me when I say that I genuinely admire what you're doing,' Naylor said. 'I can't wait for you people to stick it to the *EPA*. We have to keep the pressure on. That's why I did this thing with the kids. It's a sure-fire television segment for abrupt climate change. And I thought it went extremely well, didn't you?'

'Reasonably well, considering.'

'Considering?'

'That it was all bullshit.' Calderón said.

Naylor's smile remained fixed but his eyes narrowed. 'I'm not sure what you're referring to,' he said.

'I'm referring to all of it Tom. The whole speech. *Sequoias* are sentinels and guardians of the planet? They have a message for us?'

'Well they do...'

'They're *trees*. Big *trees*. They have as much of a message as an eggplant.'

'I think you are missing...'

'And they've managed to survive forest fires? Hardly - they're dependent on fires. That's how they reproduce. *Redwoods* have tough seeds that only burst open in the heat of a fire. Fires are essential for the health of the *Redwood Forest*.'

'I think,' Naylor said rather stiffly, 'that you may have missed my point.'

'Really? What did I miss?'

'I was trying to convey - perhaps a bit lyrically - the timeless quality of these great primeval forests and...'

'Timeless? Primeval? Do you know anything about these forests?'

'Yes I think I do.' His voice was tight. He was visibly angry now.

'Look out of the window,' Calderón said pointing to the forest as they flew above it. 'How long do you think your primeval forest has looked the way it does now?'

'Obviously for hundreds of thousands of years...'

'Not true. Human beings were here for many thousands of years before these forests ever appeared. Did you know that?' He was clenching his jaw. He did not answer. 'Then let me lay it out for you,' she said.

20 000 years ago the *Ice Age* glaciers receded from *California* gouging out *Yosemite Valley* and other beauty spots as they left. As the ice walls withdrew they left behind a damp plain with lots of lakes fed by the melting glaciers but no vegetation at all. It was basically wet sand.

After a few thousand years the land dried as the glaciers continued to move further north. This region of *California* became arctic tundra with tall grasses supporting little animals like mice and squirrels. Human beings had arrived here by hunt-

ing the small animals and setting fires. 'Okay so far?' Calderón said. 'No primeval forests yet.'

'I'm listening,' Tom growled. He was clearly trying to control his temper. She continued.

'At first arctic grasses and shrubs were the only plants that could take hold in the barren glacial soil. But when they died they decomposed and over thousands of years a layer of topsoil built up. And that initiated a sequence of plant colonization that was basically the same everywhere in post-glacial *North America*.'

First *Lodgepole Pine* comes in - around 14 000 years ago - joined later by hardy trees like *Spruce*, *Hemlock* and *Alder* - the real primary forest and they dominated this landscape for the next 4 000 years.

Then the climate changed. It got much warmer and all the glaciers in *California* melted. There were no glaciers in *California* back then. It was warm and dry, there were lots of fires and the primary forest burned.

It was replaced by a plains-type vegetation of *Oak Trees* and *Prairie Herbs* and a few *Douglas Firs* - but not many because the climate was too dry for fir trees.'

'Then around 6 000 years ago the climate changed again. It became wetter and the *Douglas Fir*, *Hemlock* and *Cedar* moved in and took over the land creating the great closed-canopy forests that you see now.

But someone might refer to these fir trees as a pest plant - an oversized weed - that invaded the

landscape crowding out the native plants that had been there before them - because these big canopy forests made the ground too dark for other trees to survive.

And since there were frequent fires the closed-canopy forests were able to spread like mad. So they're not timeless. They're merely the last in line.'

Naylor snorted. 'They're still 6 000 years old for God's sake.'

But Calderón was relentless. 'Not true,' she said. 'Scientists have shown that the forests continuously changed their composition. Each thousand-year period was different from the one before it. The forests changed constantly.'

And then of course there were the *Indians*.' 'What about them?' 'The *Indians* were expert observers of the natural world so they realized that old-growth forests sucked. Those forests may look impressive but they're dead landscapes for game.'

So the *Indians* set fires making sure the forests burned down periodically. They made sure there were only islands of old-growth forest in the midst of plains and meadows.

The forests that the first *Europeans* saw were not primeval but *cultivated*. It's not surprising that 150 years ago there was less old-growth forest than there is today. The *Indians* were realists. Today it's all romantic mythology.' Calderón sat back in her chair.

'A very nice speech' Naylor said. 'But those are technical objections. People aren't interested. And

it's a good thing. Because you're saying these forests aren't really old and aren't worth preserving - especially from the dire threat of *Global Warming*.'

Calderón blinked. 'I need a drink,' Naylor said. Naylor excused himself and went to the front of the plane to call his agent. The TV cameraman turned to Calderón, 'How do you know all that stuff?'

'For the reasons Naylor mentioned.' Constanza replied. 'The dire threat of *Global Warming*. We have a whole team researching dire threats because we want to find out everything we can to make our case as impressive as possible.'

'And?'

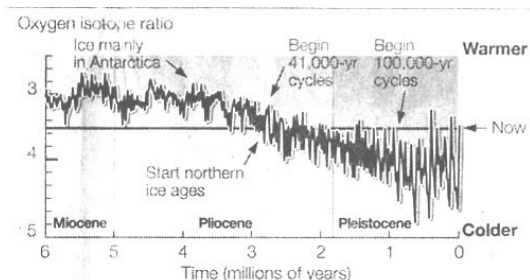
She shook her head. 'The threat of *Global Warming*' she said, 'is essentially nonexistent. Even if it were a real phenomenon it would probably result in a net benefit in most places.'

Constanza returned with a start to the room and wondered how long her mind had been away reminiscing about her previous encounter with Thomas H. Naylor Jnr. She decided it was just a few seconds - certainly no longer than half a minute. When she was bored with climate change she would research dreams - day ones and night ones. That had to be more fun - and have a lot less politics.

Glaciers & Sea Levels

The discussion had moved on to glaciers. It was very warm in the room and Constanza was having difficulty concentrating. She remembered that she

Shepherd on Climate



had started looking into the whole question of glacier movements several months ago after Bill had drawn her attention to an article in 2002 by Roger J. Braithwaite in *Progress in Physical Geography* 26, Number 1 entitled *Glacier Mass Balance, the first 50 years of international monitoring*.

The article had concluded that there was 'no obvious common global trend of increasing glacier melt in recent years.'

Shepherd was now addressing the whole group. 'Does anyone know how many glaciers we are talking about?'

Someone said two dozen. Someone else suggested two hundred. 'Tom? You're a *Californian*. How many in your state?' A satisfied smile spread across Tom's face. His bruised ego was about to get a boost and he felt grateful to Bill Shepherd for asking.

'According to Raub in 1980 there are 497 glaciers. A recent book *Glaciers of California* by Guyton counted 108 glaciers and 401 glacierets.' He could see Shepherd was impressed.

'Thank you Tom.' Shepherd said with a warm smile. 'Yes. There are a lot of glaciers in the world - one hundred and sixty thousand at the last count. About sixty-seven thousand have been inventoried but only a few have been studied with any care.

There is *Mass Balance Data* extending five years or more for only seventy-nine glaciers in the entire world. So how can anyone say they are all melting? Nobody knows if they are or not. Which is why so much is made of particular glaciers - like *Kilimanjaro*.'

'Absolutely,' said Naylor. '*Kilimanjaro* is definitely melting. Everybody knows that.'

'Why is that?' Shepherd asked.

Several people in the group said '*Global Warming*.'

'Actually probably not,' Shepherd said. '*Kilimanjaro* has been rapidly melting since the 1800s - long before *Global Warming*.

The loss of the glacier has been a topic of scholarly concern for over a hundred years. And it has always been something of a mystery because *Kilimanjaro* is an equatorial volcano so it exists in a warm region.

Satellite measurements of that region show no warming trend at the altitude of the *Kilimanjaro* glacier. So why is it melting?'

A tall bearded gentleman at the back of the group responded. 'It's beginning to look like deforestation is the culprit. I have just come back from *Nairobi* and was talking to a couple of *Swedish*

scientists at the *Norfolk Hotel*. They are working out what to do about it.

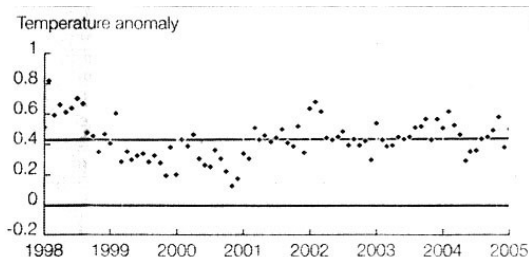
The rain forest at the base of the mountain has been cut down so the air blowing upward is no longer moist. Annika reckoned that if the forest is replanted the glacier will grow again. Göran agreed.'

'Right,' said Shepherd. 'And this is something of a trend. *Local Weather* and not *Global Warming* is the principal influence on glacier behaviour.'

An earnest-looking young woman asked for references about *Kilimanjaro*. 'Yes. Correct me if I'm wrong.' He looked across at the bearded gentleman. 'Betsy Mason's article in the November 2003 issue of *Nature - African Ice Under Wraps*. The debate continues in the *International Journal of Climatology*...'

He looked across at Constanza. 'Here is my glacier expert.'

'Yes that's right,' Calderón said. '2004, Number 24 pages 329 to 339 - an article entitled *Modern Glacier Retreat on Kilimanjaro as evidence of*



climate change: observations and facts authored by Kaser and others.'

The young woman scribbled furiously into her notebook. 'This article shifted the whole debate because *Kilimanjaro* and its vanishing glaciers have become an icon for *Global Warming*. This is part of the problem.'

'What do you mean?' the young woman asked.

'Aah,' Calderón thought - 'a journalist.'

'*Politicians* lag behind the *Environmentalists* who lag behind the *Scientists* who lag behind the latest *Scientific Findings*.

Kaser's work established that there was a drastic drop in atmospheric moisture at the end of the 19th century. The ensuing drier climate conditions could be forcing glacier retreat.'

Suddenly embarrassed as she saw the eyes of the group upon her Constanza said. 'Oh sorry Bill. I get annoyed when talking about *Big Science*. It's all so political nowadays. Back to you!' Shepherd smiled.

'Well, I'm happy to carry on if you want me to. It's nice to talk with people with open minds. We have made some headway into Tom's list.

But not all of you were here at the start so let me run through it again - crop failures, new deserts, new diseases, species extinction, melting glaciers, rising sea-levels, extreme weather, tornadoes, hurricanes, *El Niño* events - have I missed any?'

'Now then,' Shepherd said, 'I'll skip the complexities of what we mean by sea-level.' He paused.

'No, perhaps not. Professor Calderón. Can you give us sixty seconds on sea levels. Tell us about September 2006.'

'OK. This is the gist of what I wrote in my blog for Sunday 3rd September 2006. Over the next few weeks we have a few exciting cosmic events playing around with *Sea-Level Data* ensuring that future generations will have their work cut out massaging *Recorded Data* to deliver reliable *Adjusted Raw Data* to their *Climate Models*.'

'First there is the fortnightly *Spring Tide* - as in *rise up* not as in Nigel Kennedy playing *Vivaldi's Four Seasons*. The next three of these straddle one of the two annual *Equinoxes* when the *Sun*, *Earth* and *Moon* are in alignment and the *Sun* is directly over the *Equator* - which in terms of *Local Cosmic Dynamics* means that the *Earth* is doing a hand-brake turn at the far end of her elliptical orbit around the *Sun*.'

'Every four and a half year a high *Spring Tide* coincides with a *Perigee* - when the *Moon* is closest to the *Earth*. We have one of these this weekend.

But what makes the *Global Warming Priesthood* rub their hands in glee - in the hope of much flooding and generalised water-borne catastrophe - is that every 18.6 year the *Moon* reaches the extreme of its orbit around the *Earth* - *you are there before me* - and this is where we are this week.

The *Doom & Despair Brigade* now long for a couple of local weather events to spice this Cos-

mic Brew - a severe storm in the *English Channel* whipping up big waves. And a low pressure drawing the sea up higher than normal.'

'Present forecasts suggest that the *Carbonistas* will be out of luck - at least this coming weekend. But they have a couple more chances before everything settles back down to normal.

But meanwhile the probability of extravagant claims being precipitated by an array of *Global Warming Interest Groups* and *Abrupt Climate Change Advocates* remains high.

Anything that happens will be attributed to *Man* of course. And will be used to make strident calls for a *New Kyoto Protocol* and the immediate tightening of *Global Carbon Emission Targets*. Ignore them. They are *Scientific Humbug*.

We live in a *Cosmic Universe* with chunks of molten ...and not so molten - stuff moving around at a hell of a rate of knots. As for the other 96% of matter in the universe. We haven't the foggiest idea what it is.'

'That's just part of it,' Shepherd said. Measurement is not impossible - but protocols are needed to give comparable data over time and space. Work has begun.

But the problem scientists are faced with is that they can never really know what to do with any time series they dig up. Is it raw data? Has it been adjusted? How was it adjusted? Is it consistent with other time series data? And so on. Unfortunately that is not all. Ice is heavy. Constanza?'

‘With the advance and retreat of ice sheets the land beneath moves up and down. How much depends on the nature of the underlying strata.

But there is a further complication. As the ice advances or withdraws the land beneath it does not return to its former level in a linear manner but oscillates to its new equilibrium level with a frequency which in the south of *England* is not millions of years but mere centuries. Movements in the *English Channel Shoreline* have more to do with *Ice* than *Climate*.’

‘Thank you Constanza. So you see the problem. Nonetheless if I were asked to lay a bet for or against sea level rises and my life depended upon it I would say that sea level is rising...’

‘Ah-hah!’ exclaimed Naylor.

Shepherd paused for a moment and then continued. ‘...as it has been for the last 6 000 years ever since the start of the *Holocene*. The rate could anything from four to twenty inches every hundred years. But scientists working in this field are not happy with the quality of the data.

Over the last century global sea level change has typically been estimated from tide gauge measurements and long-term averaging. Most recent estimates of global mean sea-level rise from tide gauge measurements range from 0.06 to 0.09 inches per year.’

‘But it’s rising faster now,’ Naylor broke in.

‘Actually not,’ Shepherd responded.

‘But satellites prove it.’ Naylor insisted.

‘Actually they don’t.’

Constanza recollected her nights with the sea level studies. It had been a very frustrating business.

She liked her science to be clean and crisp - a hypothesis, a forecast, an experiment, the data and then the conclusion.

But sea level data was not like this. It was fuzzy and uncertain - and bedevilled by an increasing tendency for scientists to present *Adjusted Raw Data* as *Raw Data* and *Computer Simulations* as *Real Measurements*.

‘The computer models prove that sea level is rising faster.’ Naylor said.

‘Computer models can’t prove anything. A prediction can’t ever be proof - it hasn’t happened yet. And computer models have failed to accurately predict the last ten or fifteen years. But there is no arguing with faith.’

Hurricanes & El Niños

‘Now let’s deal with extreme weather, hurricanes, tornadoes and cyclones. Numerous studies show there is no increase. Professor Calderón. Some references?’

‘Yes. Page 11 of the *United Nations*’ 1995 *IPCC* report that set the scene for the *Kyoto Protocol* claimed that overall there is no evidence that extreme weather events or climate variability has increased in a global sense in the 20th century. Six years later the *IPCC* was still reporting no long-term trend for tropical and extratropical storms and

Shepherd on Climate

no systematic changes in tornadoes frequency, thunder days or hail. Björn Lomborg discusses it in *The Skeptical Environmentalist*.'

Thank you Constanza.'

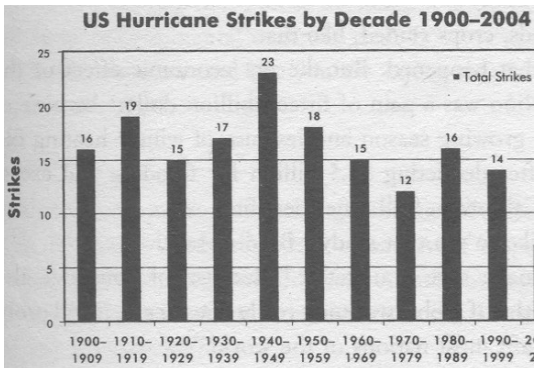
Naylor was now somewhat the worse for wear. 'What about *Anecdotal Evidence*? Lots of people think there will be more extreme weather with more hurricanes, tornadoes and cyclones in the future.'

'Yes indeed lots of people think so. But scientific studies do not bear them out. That's why we *do* science - to see if our opinions can be verified in the real world or whether they are just fantasies.'

'All these hurricanes are not fantasies.' Shepherd sighed. He flipped open his laptop.

'What are you doing?'

'One moment,' Shepherd said. 'Let me bring it up. Here is the actual data.'



,’ Shepherd said. ‘*US* hurricane strikes over the last 100 years are clearly not increasing. Extreme weather is not more frequent globally. The data simply do not agree with you. Now *El Niño* events.’
‘Yes...’

‘As you know *El Niño* is a global weather pattern that begins when ocean temperatures along the west coast of *South America* remain above normal for several months. Once it’s triggered, *El Niño* lasts about a year and a half affecting weather around the world.

El Niño occurs roughly every four years - twenty three times in the last century. And it has been occurring for thousands of years. So it long precedes any claim of *Global Warming*.’

‘But what threat does *El Niño* represent to the *US*? There was a major *El Niño* in 1998.’

‘Floods, crops ruined, things like that,’ Naylor replied.

‘Sure but the net economic effect of the last *El Niño* was a gain of fifteen million dollars because of a longer growing season and less use of winter heating oil. That’s after deducting \$1.5 billion for flooding and excess rain in *California*. Still a net benefit.’ ‘I’d like to see that study,’ Naylor said. ‘Constanza?’

‘Stanley A. Changnon 1999. *Impacts of 1997-98 El Niño -Generated Weather in the United States* in the *Bulletin of the American Meteorological Society*, Volume 80 Number 9 pages 1819-1828. To quote: the net economic benefit was surprisingly

positive. Direct losses nationally were about \$4 billion and the benefits were \$19 billion.'

'I'll make sure you get a copy of the report Tom. Because of course it also suggests that if *Global Warming* really does occur it will probably benefit most nations of the world.'

'But not all.'

'No Tom. Not all.'

Atmosphere & Environment

'So what exactly is your point?' Naylor asked. 'You're saying that we don't need to pay any attention to the environment, that we can just leave it alone and let industry pollute and everything will be hunky-dory?'

For a moment Constanza thought that Bill would get angry. But he stayed calm and said, 'If you oppose the death penalty, does it also mean you are in favour of doing nothing at all about crime?'

'No,' Naylor said. 'You can oppose the death penalty but still favour penalising criminals.'

'Yes of course.'

'Then I can say that *Global Warming* is not a threat but still favour environmental controls, can't I?'

'But it doesn't sound like you are saying that.'

Shepherd sighed. 'Let's remember where we live - on the third planet out from a medium-size sun. Our planet is five billion years old and it has been changing constantly all during that time.

The Earth is now on its third atmosphere. The first atmosphere was helium and hydrogen. It dissi-

pated early on because the planet was so hot. Then as the planet cooled volcanic eruptions produced a second atmosphere of steam and carbon dioxide.

Later the water vapour condensed forming the oceans that cover most of the planet. Then around three billion years ago some bacteria evolved to consume *Carbon Dioxide* and excrete a highly toxic gas *Oxygen*. Other bacteria released *Nitrogen*. The atmospheric concentration of these gases slowly increased. Organisms that could not adapt died out.'

'Meanwhile the planet's land masses floating on huge tectonic plates eventually came together in a configuration that interfered with the circulation of *Ocean Currents*. It began to get cold for the first time.

The first ice appeared two billion years ago. And for the last seven hundred thousand years our planet has been in a geological ice age characterized by advancing and retreating glacial ice.

No one is entirely sure why but ice now covers the planet every hundred thousand years with smaller advances every twenty thousand or so. The last advance was twenty thousand years ago so we're due for the next one.'

'Even today after five billion years our planet remains amazingly active. We have 500 volcanoes and an eruption every two weeks. Earthquakes are continuous, a million and a half a year, a moderate Richter 5 earthquake every six hours, a

big earthquake every ten days. Tsunamis race across the *Pacific Ocean* every three months.

Our atmosphere is as violent as the land beneath it. At any moment there are 1500 electrical storms across the planet. Eleven lightning bolts strike the ground each second. A tornado tears across the surface every six hours. And every four days a giant cyclonic storm hundreds of miles in diameter spins over the ocean and wreaks havoc on the land.'

'Human beings can do nothing except run and hide. To imagine that we can stabilize the *Earth's* atmosphere is arrogant beyond belief. We can't control the climate. We run from the storms because this is far and away the most sensible thing to do.'

Environment & Advocacy

Constanza noticed that Margaret Kennedy's group was breaking up and she was heading their way. Kennedy was the wife of a prominent *Hollywood* lawyer and a major contributor to the *National Environmental Research Foundation*.

Kennedy was always emphatic and talked non-stop. Calderón had known her for several years and they had worked together at the end of the 1990s before Calderón began to have her doubts about *Global Warming*.

'Constanza. I could not go without a quick word. I'll tell you what I heard. There is an industry-sponsored campaign to discredit *Non-Governmental Organisations*. I have a leaked document. This is

what I was always telling you. Industry is afraid of the growing power of the *Environmental Movement* and is desperate...desperate...to stop it. We have had our modest successes in recent years and it is driving them crazy.'

Bill Shepherd joined Constanza who introduced him to Kennedy. 'I know who you are,' she said with barely concealed hostility.

'I thought you might,' Shepherd said smiling.

'And,' she continued, 'it's guys like you - smart and unscrupulous and immoral - who have made our environment the polluted mess it is now. I don't like you Mr. Shepherd. I don't like you personally. I don't like what you do in the world. And I don't like anything you stand for.'

'Interesting,' Shepherd said. 'Perhaps some day you and I could have a detailed and specific conversation about exactly what is wrong with our environment and exactly who is responsible for making it a polluted mess.'

'Whenever you want,' she said angrily.

'Good. You have legal training?'

'No.'

'Scientific training?'

'No.'

'What is your background?'

'I worked as a documentary film producer before I quit to raise my family.'

'Ah.'

'But I am very dedicated to the environment and I have been all my life. I read everything - *The Ecologist*, *New Scientist* - I am extremely well informed.'

'Well then,' Shepherd said, 'I look forward to our conversation.'

Margaret Kennedy turned to Constanza. 'Just so you know. Mr. Shepherd doesn't believe in anything that normal people believe in - not even *Global Warming* or *Kyoto*. He's an industry hit-man - representing coal and oil interests'.

Shepherd said nothing. He just handed her his card. '*Institute for Risk Analysis*,' Kennedy read aloud. 'That's a new one. I'll add it to the list of phony right-wing fronts.' Shepherd said nothing.

'Because it's *all* disinformation,' Kennedy said. 'The studies, the press releases, the flyers, the websites, the organized campaigns, the big-money smears. Industry was thrilled when the *US* didn't sign *Kyoto*.' Shepherd rubbed his chin and said nothing.

Kennedy said, 'The *US* is the world's biggest polluter and our government doesn't give a damn.' Shepherd smiled blandly. 'The *United States* is an international pariah isolated from the rest of the world and despised because we refused to sign the *Kyoto Protocol* and attack a global problem.'

Kyoto Treaty

She continued to goad him. Finally it seemed he had had enough. 'Tell me about *Kyoto*,' he said. 'Why should the *US* have signed it?'

'Why? Because we have a moral obligation to join the rest of the civilized world in reducing *Carbon Emissions* to below 1990 levels.'

'What effect would the *Kyoto Treaty* have?' Shepherd asked.

'The whole world knows that. It would reduce global temperatures in the year 2100.'

'By how much?'

'I don't know what you're driving at?'

'Don't you? *Kyoto* would reduce warming by .04 degrees Celsius in the year 2100. Four hundredths of a degree. Do you dispute that outcome?'

'I certainly do. Four what? Hundredths of a degree? That's ridiculous.'

So you don't believe that would be the effect?'

'Well maybe because the *US* didn't sign...'

'No, the effect if the *US* *did* sign. Four hundredths of a degree.'

'No,' Kennedy said shaking her head. 'I don't believe that's true.'

Shepherd interrupted her. 'The figure has been published a number of times in scientific journals. The most recent is the October 2003 issue of *Nature* - Number 22 - with *Russia* signed on the *Kyoto* effect would be minus .02 degrees Celsius by 2050. *IPCC* models estimate more - but none exceed 0.15 Celsius.'

Naylor raised his glass as he came to join them. 'This guy's real big on references.'

'As opposed to rhetoric,' Shepherd said nodding.
'Yes I am.'

Naylor belched. 'Four hundredths of a degree? In a hundred years? What a bunch of bullshit.'

'One could say so.'

'I just did,' Naylor said.

'But *Kyoto's* a first step,' Kennedy said. 'That's the point. Because if you believe in the *Precautionary Principle* as I do...'

'I didn't think the purpose of *Kyoto* was to take a first step,' Shepherd said. 'I thought the purpose was to reduce *Global Warming*.'

'Well it is.'

'Then why make a treaty that won't accomplish that? That won't in effect do anything at all?'

'It's a first step as I said.'

'Tell me. Do you think it's possible to reduce *Carbon Dioxide*?'

'Of course. There are a host of alternative energy sources just waiting to be adopted. Wind power, solar, waste, geothermal...'

'Ted Wigley and Martin Hoffert in an article *Advanced Technology Paths to Global Climate Stability: Energy for a Greenhouse Planet* in *Science* 298 November 1st 2002 pages 981-987 write that energy sources that can produce 100% to 300% of present world power consumption without *Greenhouse Emissions* do not exist - this from a panel of seventeen scientists and engineers who

concluded that wind, solar and nuclear power will not be sufficient to solve the problem.

Wigley says that totally new and undiscovered technology is required.'

'That's crazy,' Kennedy said. 'Amory Lovins laid it all out twenty years ago. Wind and solar, conservation, energy efficiency. There's no problem.'

'Apparently there is. Lovins predicted that thirty-five percent of *US* power would come from alternative energy by the year 2000. The actual figure turned out to be six percent.'

'Not enough subsidies.'

'No country in the world produces 35% renewable energy.'

'But countries like *Japan* do much better than we do.'

'Constanza?'

'*Japan* is five percent renewable. *Germany* is five percent. *England* two percent.'

'*Denmark*?'

'Eight percent.'

'Well,' she said, 'it just means we have more work to do.'

'No question about that. Wind farms chop birds to pieces so they might not be so popular. But solar panels would work - silent - efficient.'

'Solar is great,' Kennedy said.

'Yes,' Shepherd said. 'And all we need is about ten thousand square miles of panels to do the job. Just cover the state of *Massachusetts* with solar panels

and we'd be done. Of course by 2050 our energy needs will triple so maybe *New York* would be a better choice. Or *Texas*. Nobody I know cares about *Texas*.'

'Well there you are.'

'Cover ten percent of *Texas* and you're in business. Although,' he added, '*Texans* would probably prefer to cover *Los Angeles* first.'

'You're making a joke.'

'Not at all. Let's settle on *Nevada*. It's all desert anyway.'

'But I'm curious to hear about your personal experience with *Alternative Energy*. What about you yourself Margaret? Have you adopted alternative sources?'

'Yes. I have solar heating for my swimming pool. The maid drives a hybrid.'

'What do you drive?'

'Well I need a bigger car for the kids.'

'How big?'

'Well I drive an *SUV*.'

'What about your residence? You have solar panels for your electricity?'

'Well I had consultants come to the house. Only, Jerry - my husband - says it's too expensive to install. But I'm working on him.'

'And your appliances...'

'Every single one is *Energystar*. Every one.'

'That's good. And how large is your family?'

'I have two boys. Seven and nine.'

'Wonderful. How big is your house?'

'I don't know exactly.'

'How many square feet?' She hesitated.

'Ah hell tell him Margaret,' Naylor said. 'She has a *huge* house. Must be ten, fifteen thousand square feet. Absolutely *beautiful*. And the gardens! Got to be an acre, acre and a half. Sprinklers going day and night. And such gorgeous landscaping - she has fundraisers there all the time. Always wonderful events.'

Shepherd looked at her.

'Twelve thousand,' Kennedy said.

'For four people?' Shepherd said.

'My mother-in-law lives with us. And of course the maid in the back.'

'And do you have a second home?' Shepherd said.

'She's got *two*,' Naylor said. 'Got a *fabulous* place in *Aspen* and a great house in *Maine* as well.'

'That we inherited,' Kennedy said. 'My husband...'

'And that apartment in *London*,' Naylor said, 'is that yours or your husband's company or what?'

'The company.'

Shepherd said, 'How about your travel? You use private jets?'

'Well I mean we don't *own* one but we catch rides when people are going anyway. We fill the plane up. Which is a *good* thing.'

'Of course,' Shepherd said. 'But I must admit I'm a little confused about the philosophy...'

'Hey,' Kennedy said, suddenly angry. 'I live in a milieu where I have to keep up a certain standard. It's necessary for my husband's business, and anyway - where do you live?'

'I have an apartment in *Cambridge*.'

'How big?'

'Nine hundred square feet and I don't own a car.'

'I don't believe you,' she said.

'I think you'd better,' Naylor said. 'This guy knows what he's about. And besides everybody's compromised. Nobody is perfect.'

'I'm not judging you Margaret,' Shepherd said quietly. 'I know you're a dedicated advocate. I'm just trying to figure out what your real position is on the environment.'

Margaret Kennedy paused, ran her hands through her hair, took a deep breath - and adopted her podium stance.

'My position is that human beings are heating the planet and poisoning the planet and we have a moral obligation to the biosphere - to all the plants and animals that are being destroyed, and to the unborn generations of human beings - to keep these catastrophic changes from taking place.' She sat back nodding her head.

'So our moral obligation is to others - other plants, animals and other people, Shepherd said.'

'Exactly.'

'We need to do what is in their interest?' 'What is in the interest of all of us.'

'Conceivably their interest is not the same as ours. Conflict of interest is the usual case.'

'Every living creature has a right to live on the planet.'

'Surely you don't believe that,' Shepherd said.

'I do. I'm not a speciesist. Every living creature.'

'Even the malaria parasite?'

'Well it *is* part of nature.'

'Then do you oppose the elimination of polio and smallpox? They were part of nature too.'

'You're playing with words.' Kennedy retorted. 'There is nothing new about *Environmentalism*. It is not something invented last week. We have decades of management experience. *Yellowstone Park* was the first wilderness to be set aside as a natural preserve anywhere in the world.

Americans know how to do these things. We can look after our environment if the *Bankers* and *Industrialists*... and the Mr. Shepherds of this world - would let us.'

Shepherd paused. Kennedy was surprised as she had expected an immediate response. Constanza knew otherwise. Bill was deciding whether or not to discuss the subject. It was only a slight pause unnoticeable to most people.

Yellowstone Park

Then Shepherd said. 'I agree. The *American* experience with *Yellowstone Park* is very instructive.

Professor Calderón. Take us through the background.'

'Well the region around the *Yellowstone River* in *Wyoming* has long been recognized for its wondrous scenic beauty. Lewis and Clark sang its praises. Artists like Bierstadt and Moran painted it. And the new *Northern Pacific Railroad* wanted a scenic attraction to draw tourists west.

So in 1872 in part because of railroad pressure President Ulysses Grant set aside two million acres and created *Yellowstone National Park*. There was only one problem, unacknowledged then and later. No one had any experience trying to preserve wilderness. There had never been any need to do it before. And it was assumed to be much easier than it proved to be.'

'When Theodore Roosevelt visited the park in 1903 he saw a landscape teeming with game. There were thousands of elk, buffalo, black bear, deer, mountain lions, grizzlies, coyotes, wolves and bighorn sheep. By that time there were rules in place to keep things as they were. Soon after that the *Park Service* was formed, a new bureaucracy whose sole job was to maintain the park in its original condition.

Yet within a few years the teeming landscape that Roosevelt saw was gone forever. And the reason for this was that the park managers - charged with keeping the park in pristine condition - had taken a series of steps that they thought were in the best interests of preserving the park and its animals. But they were wrong.'

'The early park managers mistakenly believed that elk were about to become extinct. So they tried to increase the elk herds within the park by eliminating predators. To that end they shot and poisoned all the wolves in the park. And they prohibited *Indians* from hunting in the park - though *Yellowstone* was a traditional hunting ground.'

'Once protected the elk herds exploded and ate so much of certain trees and grasses that the ecology of the area began to change. The elk ate the trees the beavers used to make dams so the beavers vanished. Beavers were vital to the overall water management of the region. When the beavers disappeared meadows dried up, trout and otter vanished, soil erosion increased and the park ecology changed even further.'

'By the 1920s it had become abundantly clear there were too many elk so the rangers began to shoot them by the thousands. But the change in plant ecology seemed to be permanent. The old mix of trees and grasses did not return.'

'There is more. Do you want to hear it?' There were nods. 'Well.' Calderón smiled, took a deep breath and was about to continue but Kennedy broke in.

'That's fine as far as it goes. But our knowledge has increased since then. These were early teething problems with a whole new discipline of managing environments.'

Bill Shepherd raised his eyebrows. 'I wish this were true. But you know this is a perpetual claim -

that we know more today. But it's not borne out by the facts.' He nodded to Constanza to continue.

'It became increasingly clear that the *Indian Hunters* of old had exerted a valuable ecological influence on the park lands by keeping down the numbers of elk, moose and bison. This belated recognition came as part of a more general understanding that *Native Americans* had strongly shaped the 'untouched wilderness' that the first white men saw - or thought they were seeing - when they first arrived in the *New World*.'

'The 'untouched wilderness' was nothing of the sort. Human beings on the *North American* continent had exerted a huge influence on the environment for thousands of years - burning plains grasses, modifying forests, thinning specific animal populations and hunting others to extinction.'

'In retrospect the rule forbidding *Indians* from hunting was seen as a mistake. But it was just one of many mistakes that continued to be made in an unbroken stream by park managers. Grizzlies were protected, then killed off. Wolves were killed off then brought back. Animal research involving field study and radio collars were halted then resumed after certain species were declared endangered.'

'A policy of fire prevention was instituted with no understanding of the regenerative effects of fire. When the policy was finally reversed thousands of acres burned so hotly that the ground was sterilized and the forests did not grow back without reseedling. Rainbow trout were introduced in the 1970s soon killing off the native cutthroat species.'

And on and on...and on...I'm worn out. Someone else take over.'

'So what you have,' Shepherd said, 'is a history of ignorant, incompetent and disastrously intrusive intervention followed by attempts to repair the damage caused by the repairs as dramatic as any oil spill or toxic dump. Except in this case there is no evil corporation or fossil fuel economy to blame.'

'This disaster was caused by environmentalists charged with protecting the wilderness who made one dreadful mistake after another - and along the way proved how little they understood the environment they intended to protect.'

Margaret Kennedy had been getting increasingly impatient. When Calderón stopped she had tried to jump in but was not fast enough. She did not make the same mistake a second time.

She ignored Shepherd and addressed her remarks instead to Calderón. 'This is absurd Constanza. This is all history. You know that perfectly well. Whose side are you on? Are you in the pay of the *Oil Companies* too? To preserve a wilderness you just preserve it. You leave it alone and let the balance of nature takeover. That's all that is required.'

'Absolutely wrong,' Shepherd said. 'Passive protection... leaving things alone - doesn't preserve the status quo in a wilderness any more than it does in your backyard. The world is alive. Things are constantly in flux. Species are winning, losing, rising, falling, taking over, being pushed back. Merely setting aside wilderness doesn't freeze it in

its present state any more than locking your children in a room prevents them growing up. We live in a changing world and if you want to preserve a piece of land in a particular state you have to decide what that state is and then actively - even aggressively - manage it.'

'But you said we don't know how to.'

'Correct. We don't. Any action causes change in the environment. And any change hurts some plant or animal. It's inevitable. Preserving old-growth forest to help the spotted owl means Kirtland's warbler is deprived of the new-growth forest they prefer. There is no free lunch.'

'But...'

'No buts Margaret. Name an action that has had only positive consequences.'

Margaret Kennedy bit her lip. Her normal response was to talk about the banning of *CFCs* to save the *Ozone Layer* and the banning of *DDT* but she knew what Bill Shepherd's response would be - particularly with recent findings suggesting that the *Ozone Hole Scare* was just that and the *Ozone Layer* would be back to its pre-1980 state by the middle of the 21st Century.

She also knew the argument that banning *DDT* had killed more people than Hitler.

She was exhausted. It had been a long day. She did not like arguments preferring to talk to people who respected her opinions and admired what she was doing to save the planet. She decided to go off on a different tack.

'Well it's part of the arrogant pattern of mankind, changing the world to suit his purposes. A tester-one-driven impulse not shared by women...'

'So changing the world to suit one's purposes is unnatural?'

'Of course. It is interfering with nature.'

Termites & Methane

'Ever seen a termite mound? A beaver dam?' Shepherd asked. 'Those creatures change the environment dramatically affecting many other creatures. Are they interfering with nature?'

'The world is not in danger,' Kennedy said, 'from termite mounds.'

'Arguably it is. The total weight of termites exceeds the total weight of all the humans in the world. A thousand times greater in fact. Do you know how much methane termites produce? And *Methane* is a more potent greenhouse gas than *Carbon Dioxide*.'

'I can't continue this,' Margaret Kennedy said. 'You enjoy arguing. I don't. I just want to make the world a better place.' She left and Thomas J. Naylor Jr. slipped in behind her.

Constanza Calderón looked at Bill Shepherd. 'Her intentions are good,' she said.

'And her information is bad,' Bill said.

'A prescription for disaster.'

THE END

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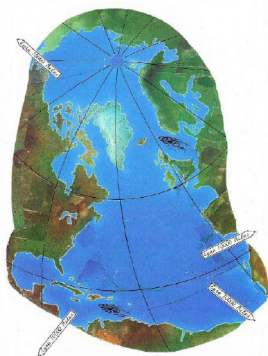
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Shepherd on Climate

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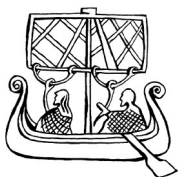
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1. Energy Infrastructure Make-Over

first published on Thursday 5th January 2006

I didn't plan it this way - life is what happens to you when you're busy making other plans - but over the next two days I will be driving my daughter's *Peugeot 106* well over a hundred miles. Today I did half of them going in and out of *Cardigan* twice. And tomorrow's monthly *Car-marthen* day will do the rest. All this to-ing and fro-ing will leave me some £10 out of pocket.

But goodness knows what it will cost the planet. The real planetary burden comes embedded in what Ivan Illich refers to as a structural monopoly. The planet needs a complete energy infrastructure make-over.

Mind you I am a little more optimistic than most about our energy futures. Buckminster Fuller assured me that the world economy went into surplus in the fifties making the classical economics of scarcity of our ruling elites redundant. This was more by luck than judgment. The bottom line is that modern scarcities are man-made. So why not peace crime tribunals to deal with the criminals who create them?

The developed world has been quietly switching from coal to oil to natural gas. The journey from a carbon to a hydrogen economy continues as the car-makers bring out their hydrogen vehicles - see my [Energy Wars](#) article. We need energy for three things: heating space, rushing ourselves and our stuff about and winding things up. Space seldom needs to be warmer than one hundred degrees

Celsius - the first nonsense of the nuclear kettle technology. And electricity demands will be coming down over the next few decades as the world gets smarter at doing more with less - which is the next bit of nuclear nonsense. The \$100 wind-up lap-top computer unveiled by Nicholas Negroponte recently is a good example of the trend.

In just half an hour *Earth's* very own nuclear reactor 93 million miles away showers our back gardens with enough power to keep 'us and ours' going for a whole year.

In the best of all possible energy worlds, grids and cables would be taxed until the pipes squeak and households (not companies) would be paid in local money for any surplus power they could donate to the village or parish pool. As long as the 50-year old technology - formerly known as cheap atomic power - is kept in business by massive public subsidies, the whole energy cost and price structure will be so distorted that it will be well-nigh impossible for a *Sane, Humane, Ecological (SHE)* energy infrastructure to emerge.

Nuclear fission is a mug's game and hot fusion is not much better. But don't get me wrong. The power of atoms and molecules is well worth exploring. But the most promising effects takes place at room temperature. The science of colloids is interesting. Goethe is where it's at - and Rudolf Steiner was first and foremost a Goethe scholar who spent his formative years pouring over the great man's scribblings.

Check out *The Secret Life of Plants* and *Secrets of The Soil* by Peter Tompkins and Christopher

Bird before dismissing me as a complete nutter. And if you feel really inspired go google your way through searches for scientific papers by the likes of Henri Coanda, Patrick Flanagan, Olof Alexanderson, Alex Podolinsky, Philip Callahan and Ehrenfried Pfeiffer. You could also do worse than download my article *Megaliths, Meis & Miners*.

2. Politics of Wind Farming

First published in Rye's Own (12/2005)

Republished on Thursday 12th January 2006

How much energy do we really need? Well the answer is: 'Not a lot!' Lie in the sun for half an hour and you will find out. You might not have got all the energy you need for a year, but your planet has. The sun showers the earth with all the energy our species generates in the course of one year in just half an hour. Have you ever got up early in the morning to watch the earth go down as the sun smacks night time clean out of the sky? That's power. How puny are our human needs in comparison.

But what actually are these needs? They come in three easy to understand forms: to heat up space, to rush ourselves and our stuff around and to wind things up. We hardly ever need to be warmer than our own body temperatures so boiling a nuclear kettle to the sort of silly numbers best kept ninety three million miles away in the centre of the sun is about as loopy as it gets. Insulation is the name of the space heating game. Once you have it, don't lose it.

Most of our rushing around is unnecessary and counterproductive. Food miles are a case in point. Who needs them? Slow is beautiful and the future is still. As for winding things up. We're doing more and more with less and less. Wind-up laptops will soon be all the rage following fast on the heels of wind-up torches and wind-up radios. Electricity use will go down not up over the next few decades. So much for the demand side of the equation.

What about supply? This sceptered isle is surrounded by sea. Free energy on tap and ours for the harvesting. Tide mills and wave power should be the *English* way to energy self-sufficiency.

Romney Marsh on the *Kent-Sussex* border is one of the most beautiful lowland areas in *Britain* with a magic all of its own. On the coast, it is bordered by the exquisite ancient towns of *Rye* and *Winchelsea*. Outside the towns, the roads and lanes, flanked by rich hedgerows, wind through charming villages and hamlets and fine farmland often heavy with grazing sheep. Beautiful small and even tiny churches, sited on spots now largely deserted, have inspired travel writers by their neat, simple interiors. The area is a home to many rare birds and a vital migratory route in the spring and autumn attracting bird watchers from all over the world.

Slicing up flocks of *Canadian Geese* as they wing their way across *Romney Marsh* is one way to keep bird flu at bay. But this underestimates avian intelligence. Migrating birds only fly along the *English* shipping lanes because the *French* peasants are gunning for them on the other side of the

channel. Birds are quick learners which is more than can be said for the human species.

Take this silly idea of farming the wind. For those who go down to the sea in a sailboat the first lesson is how to put up your sail. Next you get taught the fine nautical art of spilling wind. Your problem is too much wind not too little. But if you insist on farming the wind then let me give you a hint.

If you are old enough you may remember the cluster of cooling towers at *Ferrybridge*. They collapsed. There was a *Commission of Inquiry*. 'It was the wind wot did it. Honest m'lud!' But not just the wind. It was the lay-out of the cooling towers that was the root cause of the collapse. Unwittingly the designers had exceeded their brief and created a wind factory.

Meanwhile the younger ones among my readers might like to reflect on why the skyscraper city of *Chicago* is called the windy city. Bernoulli is the correct answer. He discovered that fluids flow and that the shape of the containing vessel is what really matters. Our little local worlds can be shaped to suit the needs of our turbines. There is no need to put them hundreds of feet in the air at the end of long poles. Bring wind to your turbines instead of taking your turbines to the wind.

Let me introduce you to a group of gentlemen with names like Roels, Fischer, Schneider, Bonekamp, Maichel and Sturany who inhabit the supervisory board of *RWE*, an enormous power and utilities conglomerate with an annual turnover of five billion pounds.

The *Little Cheyne Court Wind Farm* these barbarians plan to build on *Romney Marsh* is not about wind power or renewable energy or even economic efficiency but about the black hole in the accounts of the *RWE Aktiengesellschaft*, a company which stealthily hides the de-commissioning costs of its nuclear power plants from public gaze by the sleight of hand of 'net present value' mis-accounting.

Messrs. Roels & Co believe their salvation is in offloading their loss-making *German* landfill sites and seeking shareholder nirvana in the *Garden Of England* far away from the shrewd *German* regulatory regime for energy providers. In *Germany* it is impossible for scorched earth operators like *RWE* to do what the ignorant pillars of the *British Establishment* encourage.

Welcome to *Romney Marsh* all ye carbon polluters. No need for your shares to go into free fall. Erect a forest of monstrous towers each twice as tall as *Nelson's Column*. Collect your free carbon credits each time you pass GO. Indeed let us pay your construction costs out of the public purse. Our *English* house-owners expect to be taxed until the pips squeak. They have become used to it. Trade your way out of financial disaster. Why do it unprofitably in your own backyard when you can destroy beauty profitably far far away on the other side of the *English Channel*?

RWE is an enormous power and utilities conglomerate with an annual turnover of five billion pounds. *RWE* has devised a series of cunning plans to exploit the gaping holes in *New Labour's*

regulatory regimes of the energy and water sectors and does so most efficiently for the benefit of *German* shareholders and to the considerable detriment of the long-suffering residents and taxpayers of the *English Home Counties*.

Half of *RWE's* operations are in *Germany* and a fifth in the *United Kingdom* where it trades under such brand names as *Thames Water*, *Yorkshire Electricity* and *npower*. In an article in the *Daily Mail* on Friday 28th October 2005, the columnist Andrew Alexander recommended that those who feel strongly about the beauty of our waning countryside should avoid buying their water, electricity or gas through or from *RWE*.

RWE's Annual Report comes out on 23rd February 2006. Order your copy from www.rwe.com or talk to *RWE's* spin doctors on +49 1801 451280. But why not buy a few shares in the company? It's a small price to pay for saving paradise. Invite yourself to the company's annual general meeting in *Essen* on 13th April 2006. And while you have your broker on the line, instruct her to buy shares in *Doughty Hanson*, the turbine blade manufacturer. Rumour has it that Nigel Doughty is a major contributor to *New Labour's* party funds. Now there's a surprise.

3. Blue Moon Waves

first published on Monday 23rd January 2006

Twenty years ago I wrote an essay entitled *Green Houses or Blue Moon Waves* in which I discussed the work of the marine scientist Otto Pettersson. My sole source was a book first pub-

lished in 1950 entitled *The Sea Around Us* by Rachel Carson. My manuscript remains unpublished but I included the Otto Pettersson section in *The Art of Fine Publishing* which I posted onto my website last year.

However Otto Pettersson's work remains unknown buried with the object of his research at the bottom of the *Skaggerak*. A year ago I did a *Google* search which confirmed his obscurity and prompted me to write away to *Oslo University* for more information about the gentleman and his work. Today's search came back with 415 references to this great scientist. And my comments were right up there on the top page in fifth position.

The background to this tale is that while browsing in the *Ashford County Library* I chanced across a Rachel Carson book published in 1968 by MacGibbon & Kee entitled *The Sea*. The book was a 3-in-1 reprint of *The Sea Around Us*, *Under the Sea-Wind* written in 1941 and *The Edge of the Sea* published in 1955.

Under the Sea-Wind was not a success. It enjoyed excellent reviews but few readers. But then ten years later in 1951 came *The Sea Around Us* and instant success. Between one spring tide and the next Rachel Carson was world-famous and being showered with honours. The book remained high on the best-seller lists for eighty-six weeks and was translated into thirty languages.

There were two interesting side-effects. Firstly *Under the Sea-Wind* was reprinted in *America* and published for the first time in *Britain*. But for the triumph of *The Sea Around Us* this remarkable

book would have remained gathering dust in the basements of a few *American* public libraries.

Secondly her success brought Rachel Carson the financial independence essential for the research and writing of *Silent Spring* - and about this book the introduction to *The Sea* had this to say:

'There can be few literate people who have not heard of Rachel Carson. Her last book *Silent Spring* sounded a tocsin round the world prompting governments in many countries to restrict the use of pesticides. It has been given to few women, other than the mistresses of emperors and kings, so to influence governments. It has been given to no other woman to do so through the medium of a book.'

4. Cosmic Warning on Global Warming

first published on Tuesday 14th February 2006

Disaster has struck. My monitor has given up the ghost. The timing was interesting. At the end of 2004 I started working on a long essay against global warming - or rather against the conventional wisdom surrounding the hype about global warming. I got up at four this morning intent on revisiting my last draft and spending a day or two preparing my long essay for restricted distribution. It was at this point that my monitor refused to crank up. It has now gone to the skip.

5. Six Million Years

first published Wednesday 22nd February 2006

A little after midday I returned to the moorings on the *Rye Harbour Road* and lit the fire.

Outside a gang of men and machines were feverishly demolishing my sloe bushes and white hawthorn trees - new source of berries for my sloe gin required for next Christmas. Nobody seems to know what or why this is happening but the assumption is that it is the preparatory work for hammering in pilings on our side of the river - the other side was piled last year.

All this frantic work is part of a big spend inflicted on the public purse by the private insurance companies who have persuaded the politicians that the country will be flooded by global warming sea-level rises so the realm must be protected by hundreds of public works all around the country. Future generations will find that this was one of the biggest scams of the century.

Last time I looked - about a year ago - there was no scientific evidence of changes in sea levels. There is a lot of noisy chatter about the *Arctic* but the *Antarctic* has nearly all the unmelted water so is the only area needing careful watching - and here the evidence goes both ways suggesting just the normal fluctuations in local weather systems.

Then there is the temperature curve for the last six million years. This shows a three-million year period when it was several degrees warmer than today followed by a three-million year cooling trend accompanied by an increase in the magnitude of the pervasive higher frequency cold and warm climate cycles.

When people talk about the world being run by computers they are right. But they are quite wrong

about the details. Computers run the world by falsely modeling the future.

Academics in their ivory towers invent new fears which they then impose upon an increasingly gullible public by producing computer models that forecast dire consequences from their self-fulfilling theories. There should be a warning on all academic research.

CAUTION

This research is based on computer modeling.

6. Global Baloney

first published Wednesday 22nd February 2006

Global warming is the theory that increased levels of carbon dioxide and certain other gases are causing an increase in the average temperature of the earth's atmosphere because of the greenhouse effect.

Imagine the composition of the earth's atmosphere as a 100 yard football field. Most of the atmosphere is nitrogen so starting from the goal line this will get you to the seventy-eight yard line. Nearly all of what is left is oxygen which takes you to the ninety-nine yard line. Most of what remains after that is the inert gas argon which brings you to within three and a half inches of the goal line. That's pretty much the thickness of the chalk stripe.

How much of the remaining three inches is carbon dioxide? One inch. That's how much CO₂ we have in our atmosphere. One inch in a hundred yard football field. And do you know how much it has

increased on our football field in the last 50 years? Three eighths of an inch - less than the thickness of a pencil.

Carbon dioxide is used by plants to photosynthesise. The plants take in the gas via small openings on the surface of their leaves called stomata that can open and close in response to atmospheric conditions and the plant needs. When the stomata are open some water is lost in a process called plant transpiration - plants sweat. Laboratory experiments have shown plants become more efficient in the presence of greater levels of carbon dioxide so the stomata do not open as often or for as long. More carbon dioxide means less transpiration which means more water stays in the soil.

It seems to be a well-known fact that the flow of many rivers around the world is increasing even though rainfall has changed very little in the last few decades. Aha - you have got there before me. Scientists and propagandists for global warming have their pseudo-scientific link between carbon dioxide in the atmosphere and rising sea levels.

More water in the soil means more runs off into rivers which explains the increase in river flow and must lead in the fullness of time - and with the right parameters in the computer models - to the inundation of low-lying cities like *New Orleans* within all our lifetimes.

But sea levels are not rising - the last time I looked at the data a year or so ago there was no discernible shift over the past few decades. Of course sea levels move around. There was a disaster in *Queensland* over the weekend with sea levels

changing by up to twelve feet for instance. And have you heard of tides?

My sea level goes up and down like a yo-yo twice a day and the waters of the *North Atlantic Ocean* swirl around like water in a cooking basin. And do you remember in the days before the invention of global warming all the concern about the increasing run-off all over the world as hills were stripped of their trees and intensive agriculture decimated the natural vegetation cover. Increased run-off? Of course. But caused by plants getting fitter and sweating less in their extra fraction of an inch of carbon dioxide. Pull the other one. What complete and utter baloney.

7. Michael Crichton's State of Fear

first published on Sunday 26th March 2006

I spent a hundred minutes on the phone with my daughter in the evening which must be my longest ever phone call to her. She reckons I am wasting my time trying to wheedle out the facts behind global warming.

I first did some work on this at the end of 2004 with a view to giving *Fourth World Review* a review of Michael Crichton's *State of Fear*. However Crichton's line about the falsification of the environmentalists' case - and the convincing evidence he brought to bear in support of his view - meant that I needed to do more delving before publishing a controversial review.

I also hoped that a colleague would read *State of Fear* and give me some moral support but that has not yet happened.

Anyway to cut a long story short I am now convinced that my work got lost in one of my dongle and computer collapses so I have been recreating everything from an old draft in hard copy and some scribbled notes.

8. Think Global Act Local

first published on Wednesday 29th March 2006

This week *The Independent* has been putting out supplements on *Global Warming*. Today it was the turn of its readers. There were two things that struck me. Firstly nearly all the letters, while well-meaning and sensible to the writer, were based on much ignorance. Secondly solutions to global warming fell into three categories: world government must do this, our government must do that and each of us must do our bit and turn off the lights.

The *Archbishop of Canterbury* was on *BBC Radio Four* the other day being quizzed about *Global Warming* and he took much the same tack - although it was good to see him insisting that the *Anglican Church* had a moral duty to address the problem instead of contemplating its collective navel by going on and on and on about women priests and homosexual curates. But Rowan Williams is missing an opportunity to make *Her Majesty's Church* relevant again.

Neither the *United Nations*, nor David Cameron's *Conservatives* nor *The Man in the Street* can solve the problem of *Global Warming*. It can only be addressed from outside the mindset - and the institutional structure - that created the problem in

the first place. *District Councils, County Councils, the Westminster Parliament, The City, Whitehall, Brussels, the World Bank, IMF and WTO*, multinational companies - none of these can solve the problem.

But in sharp contrast to every other seat of power in the land Rowan Williams is blessed with an institutional structure that can solve the problem. In doing so, the *English Church* can act as a beacon for the rest of the world. Villages and urban parishes are capable of cleaning up their own local acts in a way governments can't.

Parishes can reclaim the power to act on *Global Warming* within their own boundaries and in collaboration with their neighbours. The *Anglican Church* could lead the charge. The key to success is not global treaties or legislation or exhortation but working together in local communities across the land and across the world - village by village and parish by parish.

9. Global Electricity Grid

first published on Wednesday 5th April 2006

Three years ago *Fourth World Review* published a long essay of mine entitled *Energy Wars*. The main thrust of the article was that piping energy around the place made sense to monopolists and elites intent upon controlling and profiting from the demand for piped energy. But for the rest of us local energy catchment - the *Woking Strategy* - was the way to go.

In arguing my case I remarked on the dwindling importance of oil in the future of piped energy.

Putting ignorance and cock-up aside - despite the fact that these loom large on the international stage where miscalculation seems to be the norm - this means that the *Anglo-American* grab for Iraq's oil was an insufficient justification for the costs of an invasion and the maintenance of a permanent presence in *Mesopotamia*. Think of the people, the money and the energy costs. Wars use up an awful lot of energy. The *Iraq War* energy account might even be in net deficit.

Hence I argued that the real reasons for the invasion of *Iraq* were not oil but the extension of the techniques of *Central Banking* into the *Moslem World* and of course to shore up the *State of Israel* by more direct means than hand-outs from the long-suffering *American* taxpayer.

Confirmation of the latter has recently come to light with the publication of the Walt and Mearscheimer report on *The Israel Lobby and US Foreign Policy*. Incidentally in case you took my earlier remarks about this for an April Fool the lads from *Harvard's John F Kennedy School of Government* have written a short version for *The London Review of Books*.

But my case also rested on my review of the future development proposed by energy producing industries in the fossil fuel business, the nuclear fission and fusion fiascos and the more hopeful worlds of hydrogen and solar energy (wind, wave, biofuels etc).

It was in this context that I mentioned Buckminster Fuller's proposal in his 1981 book *Critical Path* of a *Global Electricity Grid* and the emergence after

its construction of the Kilowatt-Hour as the *Global Reserve Currency* to take the place once held by gold. Here is what Bucky had to say in *Critical Path* (page 206).

It is engineeringly demonstrable that there is no known way to deliver energy safely from one part of the world to another in larger quantities and in swifter manner than by high-voltage-conducted 'electricity'. For the first half of the twentieth century the limit-distance of technically practical deliverability of electricity was 350 miles.

As a consequence of the post-World War II space programme's employment and advancement of the invisible metallurgical, chemical and electronics more-with-lessing technology, twenty five years ago [now fifty] it became technically feasible and expedient to employ ultra-high-voltage and superconductivity which can deliver electrical energy within a radial range of 1500 miles from the system's dynamo generators.

To the *World Game* seminar of 1969 Buckminster Fuller presented his integrated, world-around, high-voltage electrical energy network concept.

Employing the new 1500-mile transmission reach, this network made it technically feasible to span the *Bering Straits* to integrate the *Alaskan USA* and *Canadian* networks with *Russia's* grid, which had recently been extended eastward into northern *Siberia* and *Kamchatka* to harness with hydro-electric dams the several powerful northwardly flowing rivers of north-easternmost *USSR*. This proposed network would interlink the daylight half of the world with the nighttime half.

Fuller argued that electrical energy integration of the night and day regions of the *Earth* will bring capacity into use at all times, thus overnight doubling the generating capacity of humanity because it will integrate all the most extreme night and day peaks and valleys.

From the *Bering Straits*, *Europe* and *Africa* will be integrated westwardly through the *USSR* and *China*; *Southeast Asia* and *India* will become network integrated southwardly through the *USSR*. *Central* and *South America* will be integrated southwardly through *Canada*, *the USA* and *Mexico*.

Bucky's idea is a dream-come-true for the lovers of macro-engineering projects. But it has two fundamental flaws.

Firstly security. The power line will always be down somewhere. How can anyone stop the *Global Electricity Grid* being blown up by insurgents?

Secondly who needs it? The underlying energy truth is that the energy commons is not for privatising. Energy is not a scarce resource. In half an hour our world gets all the energy it needs for a whole year. Nature is prolific. The sun showers us with thousands of times more energy than we will ever need. The only energy pipes we truly need are within our village or parish electricity and hot water grids. All the other energy being piped around is not for the benefit of the users but for the profits of the pipe owners and the energy commodity monopolisers.

Bernard Daly read my *Energy Wars* article on the internet and e-mailed me to ask whether the world

electricity grid was the only way that an energy-backed currency could work.

My answer was no. They can evolve from within our existing energy and monetary infrastructures. As a result the idea is gaining support.

Tomorrow's weblog will discuss Douthwaite's thinking behind *Energy Backed Currency Units (ebcus)* and *Special Emission Rights (SERs)*.

10. Carbon Emissions & the IMF

first published on Thursday 6th April 2006

In *The Ecology of Money* Richard Douthwaite argues that 'an international currency should be based on the global resource whose use it is highly desirable to minimize'.

Actually he doesn't argue this but merely states it. So this is a premise. Bear that in mind. Douthwaite then picks up the old *Limits to Growth* argument from 30 years ago.

Economic growth needs piped energy, piped energy and economic growth produce pollution and pollution brings economic growth to a shuddering halt. The structure of Jay Forrester's *System Dynamics* model for his *World Dynamics* modeling ensured that collapses were suitably dramatic - good visual effects. With me so far?

This is where *Global Warming* enters the argument. But first a cautionary note. Please remember that nearly everything in today's weblog is either an assumption based on pretty dodgy science or a computer projection based on pretty dodgy parameters and incomplete theories.

Global Warming is not caused by all piped energy but by bad piped energy - let's call it *BPE*. *Gross National Product* is an arithmetical sum of goods and bads - and hence pretty meaningless - so goodness knows how the economists will cope with these *BPEs*. But that's their worry - not ours.

Enter the *Global Commons Institute* and their *Contraction & Convergence* agenda. *We The World* can stop *Global Warming* dead in its tracks, they claim, by reducing global carbon dioxide emissions. Think ration books in the *Hitler War* and coupons for *Carbon Dioxide Emissions*.

Hey presto! You've got yourself a scarce resource. And a scarce resource is just what is needed for an international currency. Hold on to your hats. We are nearing the currency link.

In *New York* seven years ago a book was published entitled *Kingpins of Carbon: How Fossil Fuel Producers Contribute to Global Warming*. It included the interesting fact that 80% of the fossil carbon that ends up as man-made carbon dioxide in the earth's atmosphere comes from only 122 producers of carbon-based fuels.

So the idea is that someone somewhere guesstimates how much *Carbon Dioxide* can be emptied into the atmosphere each year and expresses these annual emissions as *Ration Book Coupons*. This is what then happens to these coupons.

The *Competent Receivers* of these *Carbon Emission Coupons* sell them to the *Gang of 122* who receive them in addition to cash from big users

such as the electricity companies and the oil and coal merchants.

This forces the wicked polluters to pay an arm and a leg for all the foul fumes they spew out into the atmosphere. This leads to shareholder profits plummeting and so they pull their money out and invest in profitable new carbon-free technologies like the 600-year old *Windmill Business* and the 60-year old *Nuclear Fission Steam Kettle Industry*.

So far so good. But you got there before me. Who? Whom? Who hands out these coupons to whom? The current ideas doing the rounds talk about half of them going to ordinary people as *Domestic Tradable Quotas (DTQs)* so we can pay our energy bills with them instead of paying in cash. Someone has already designed the credit cards.

The other half get auctioned off like the 3G licences for mobile phone companies. Economists from the *University of Chicago* have proved that auctions are an efficient way to allocate scarce resources. So that's alright then.

You were there before me again. Who decides? And what happens to the money? The *Global Commons Institute* has worked out how to put the *International Monetary Fund* in charge. The *IMF* would assign *Special Emission Rights (SERs)* to national governments every month, issue the energy backed currency units (ebcus) and fix their value relative to the *SERs*.

Then *The Great and The Good* would spend the money on noble causes like renewable energy development and energy conservation.

If your mind is wandering in the direction of Lottery and Arts funding and sees *Her Majesty's Treasury* at every turn you may feel a little skeptical about the whole scheme.

But why not think instead of *Parish Councils* with real teeth run by *Pillars of Local Communities*. Or a devolved version of the *National Trust* with hundreds or thousands of *Local Community Trusts* holding *Brussels Milk and Fish Quotas*, buying up local farmland when it comes on the market and administering the local libraries and community halls left to local people in the estates of local benefactors? Governments need us. We really don't need them at all.

11. Local Energy Power

first published on Monday 17th April 2006

Most small towns in *England* have a local environment group. Here in *Rye* it is the *Rother Environmental Group* looked after by Christopher Strangeways. They brought the *Wednesday Farmers' Market* to *Rye*. One vital function performed by these environmental groups is to monitor planning. No subject breeds more copious paperwork. A few paragraphs later I introduced *Woking's* carbon emissions strategy. Here is most of the rest of the article.

Woking Borough Council calculated that in 1990 their population of ninety thousand souls emitted collectively a million tons of carbon dioxide. They read the report by *The Royal Commission on Environmental Pollution* and decided to see if they could reach the report's targets by reducing these emissions by eighty percent. They never asked

anyone's permission. Who's business is it other than their own? They just went ahead.

Woking did not feel the need for a *Kyoto Treaty* with *Wokingham*. Nobody came up with the idea of a *Carbon Emission Trading Exchange* for *Berkshire*. There were no thoughts that their share of the sixty billion pounds promised for cleaning up *Nuclear Power Plants* should be diverted to a *County Fund for Countering Global Warming* - as James Lovelock has proposed. They just had a few bright people think about the local problem of carbon emissions and come up with a local plan and a local strategy to reduce their own pollution to 200 000 tons.

One key element in *Woking's* local plan is to convert the town to combined heat and power sources of energy. How can a town do such a thing? Actually quite easily. The economies of scale are one of the myths of our age. Producing your own power is much more efficient than taking electricity from the *National Grid*.

Most fuel cells run on hydrogen but there are some that convert natural gas to energy at the cost of little more than a conventional boiler. Gas consumption is unchanged but electricity is generated as a byproduct.

There are 25 million households in this country and *British Gas* who will be backing the *Ceres Micropower Initiative* reckons two thirds of them are suitable for these home micro-power plants - like disconnecting your *BT* landline and going with *Skype*.

Buying electricity from unscrupulous foreign-based intermediaries and letting the *French* off the pollution hook by paying rigged prices for the surplus nuclear electricity they clandestinely pipe through the *Channel Tunnel* is a mug's game.

Rye does not need to play. After all, what is best? A small group in *Rye* battling for the public weal or a small group in positions of power (presumed to be) battling for it for the nation at large?

The *Rye Town Region* has a tenth the population of *Woking* so our CO₂ emissions will be around 100 000 tons per year. The town should reduce this to 10 000 tons. That will bring in tourists from all around the world to find out how we did it.

Next year's *Independent Rye Town Council* should join with other like-minded town councils in associations like the *South East Climate Change Partnership* to claim back real *Local Public Powers* over airborne pollution as an extension of their responsibility for land-borne pollution such as sewerage.

Rye Town Council already has the right to be consulted on planning matters. The new council should not feel itself limited to reclaiming old powers that have fallen into disuse. It should get ahead of the game and start wielding *Future Public Powers* locally.

It should insist that *Planning Applications* within the town - and by agreement with the surrounding parishes also within the *Rye Town Region* - comply with *Rye Local Plan Carbon Emission Targets*.

One of the golden rules of power is that it must be won. Sometimes this can be done without a fight.

Christopher Strangeways may have missed out by 111 votes in the May 2006 elections but his slate of a couple of dozen new local candidates from an *Independent Democratic Rye Party* should be a shoo-in 12-months hence when all sixteen council seats are up for grabs.

It is time that *Rye* once again had a local scene of disinterested and dedicated citizens devoting their lives to making things better for the people in *Rye* and her surrounding parishes.

As such people start to acquire real power to make real decisions on local affairs - rather than to serve on powerless committees - so they will involve more and more local people in their work and the present cult of passivity in politics will start to change.

When asked how to invigorate democracy my thoughts never turn to Messrs. Blair-Brown, Cameron or anyone up there to tell us local people how to run our local matters.

'What do you thing of John Major?' my mother once asked me. 'I don't think of John Major,' was my response.

Instead here in *Rye* - and in all the other *Ryes* around the country - I turn to good people like Sonia Holmes, John Izod, Jo Kirkham, Christopher Strangeways who I know can be trusted.

12. Arctic Photo Opportunity

first published on Friday 21st April 2006

In the *United Kingdom* the latest leader of the *Conservative Party* has been on a three-day fact-finding mission to see at first hand the impact of climate change. David Cameron's 15-mile journey by dog sled - the ultimate in environmental friendliness - took place on the *Svalbard Peninsula* in *Norway*. Big mistake.

Spitzbergen is definitely not the place to go for a photo opportunity on glaciers and the melting of the *Arctic* ice.

Some computer models tell us that higher temperatures in the *Arctic* lead to more snowfall as more water is evaporated off the oceans and carried north on the prevailing winds. Conclusion? *Glacial Advance*.

Unfortunately other computer models predict that warmer weather will lead to less precipitation - and *Glacial Retreat*. In the *Svalbard Peninsula* both processes are taking place at the same time - in different glaciers. Some climate is local.

Here was another problem. Before David Cameron jumped on his canine caravan he had to get to *Norway*. So he arranged to be driven from *London* to *Farnborough* in *Hampshire* by *Government Car*. Over the 38-mile journey his *Vauxhall Omega* spewed out 30 lbs of carbon dioxide.

At *Farnborough* he boarded a 10-seater private jet which flew him and his entourage to *Longyearbyen* in *Svalbard* - a distance of 1909 miles. Another five tons of carbon dioxide per passenger into the atmosphere.

The coordinators of the trip - *World Wildlife Fund-UK* - insisted that all carbon emissions would be offset using Gold Standard credits which will cost the *Conservative Party* a total of £200. So that's all right then.

13. State of Ignorance

first published on Tuesday 25th April 2006

Global Warming was invented in 1988 by a prominent climatologist James Hansen. At the time he was giving testimony before a joint *House and Senate Committee* headed by Senator Wirth of Colorado. Hearings were scheduled for June so Hansen could deliver his testimony during a blistering heat wave.

This would be fair enough for a *Press Conference* but *Public Science* should be beyond such ploys. However this was no isolated incident of media manipulation. *Global Warming* is awash with dodgy dossiers. Dossiers about *Weapons of Mass Destruction* are paragons of integrity by comparison.

In the late 1980s the *United Nations* formed the *Intergovernmental Panel on Climate Change (IPCC)* which comprises a huge group of bureaucrats - and scientists under the thumb of bureaucrats. The idea was that since this was a global problem the *UN* would track climate research and issue reports every few years.

The first assessment report in 1990 said it would be very difficult to detect a human influence on climate although everybody was concerned that one might exist.

But the 1995 report announced with conviction that there was now 'a discernible human influence' on climate - echoes of the 45-minute claim when Alistair Campbell sexed up the *WMD Dossier*.

Much the same happened to the 1995 *IPCC Dossier*. Originally the document said scientists couldn't detect a human influence on climate for sure, and they didn't know when they would. They said explicitly, 'we don't know.' The statement was deleted and replaced with a new statement that a discernible human influence did indeed exist. It was a major change - and one that caused a stir among scientists at the time with opponents and defendants of the change coming forward.

If you read their claims and counter-claims you can't be sure who's telling the truth. But a review of the actual text changes makes it crystal clear that the *IPCC* is a political organisation and not a scientific one. Back to James Hansen.

In the summer of 1988 he accompanied his global warming announcement with a prediction that temperatures would increase 0.35 degrees Celsius over the next ten years.

The actual increase was 0.11 degrees and this prompted him to state - along with his fellow authors Makiko Sato, Andrew Lacis, Reto Ruedy, Ina Tegen and Elaine Matthews - in a 1998 article *Climate Forcings in the Industrial Era in the Proceedings of the National Academy of Science* (127533-58) that 'the forcings that drive long-term climate change are unknown with an accuracy sufficient to define future climate change.' arguing for scientists to use multiple scenarios in future.

The problem is that climate is very complicated - so complicated in fact that no one has been able to predict future climate with accuracy - even though billions of dollars are being spent and hundreds of people are trying all around the world.

Nobody is trying to predict weather more than ten days ahead but computer modellers are predicting what the temperature will be one hundred years in advance - sometimes a thousand years - three thousand years. And they are probably doing worse than the weathermen.

The biggest events in global climate are the *El Niños*. They happen roughly every four years. But climate models can't predict them - not their timing, their duration, or their intensity. Climate science simply isn't there yet - not by a long chalk. It may be one day. But not now.

As for David Cameron's trip to *Norway*. Like *Sweden, Iceland, Canada, Siberia, Alaska, the Alps, the Himalayas and Mount Kilimanjaro*, *Norway* has nothing to contribute to the scientific case for *Global Warming*. 94% of all the ice in the world is elsewhere - 4% in *Greenland* and 90% in *Antarctica* where the ice is 5 to 6 miles thick in places.

This merely reinforces the need for an impartial forum for *Public Science*. What Cameron is doing is media manipulation.

The irony is that Cameron's key environmental adviser is Zac Goldsmith who took over the editorship of his uncle's scientific journal *The Ecologist* and to Edward Goldsmith's horror has destroyed everything that Teddy had built up over the years.

The impartial and respected journal that once reported scientific facts and the considered opinions of leading scientists in the new field of *Ecological Science* is now a glossy purveyor of ethical chic for the chattering classes. With *The Ecologist* Zac Goldsmith has done for ecology what Satish Kumar has done for politics with *Resurgence*.

14. Politico-Legal-Media Complex

first published on Sunday 30th April 2006

The power of the *Military-Industrial Complex* began to wane after the fall of the *Berlin Wall* and the rise of the *Politico-Legal-Media Complex (PLM)*. I had occasion to discuss this in an exchange of e-mails with Tom Greco earlier this week about my intention to go public with my misgivings about the *Global Warming* bandwagon. The exchange went like this.

Tom Greco had written in response to my e-mail on *Global Warming* that it seemed to him there were far better uses for 'my considerable talents'.

"Why not focus on what we can do something about rather than idle debates about matters that may or may not eventuate? Time will tell about that.' I begun my reply by writing that I though we might be at cross-purposes on this. This is how I continued.

I have absolutely no intention of getting involved in the *Global Warming Issue* and will not be taking sides as an activist for or against - if this is what you fear.

But I have some deep generic concerns about where this whole *Global Warming* issue has come from and it is these that I will be highlighting once a week in my Sunday weblogs over the next few weeks - in the second volume of my three volumes in 2006.

Let me try to give some sort of overarching paradigm for this. The *Military-Industrial Complex* is not the primary driver of society. It all changed when the *Berlin Wall* came down.

For the past two decades we have been under the control of an entirely new complex - the *Politico-Legal-Media Complex (PLM)* - far more powerful and far more pervasive and is dedicated to promoting fear under the guise of promoting security.

Western nations are actually really safe and secure by any objective standards yet people are being made to feel insecure by the *PLM*. And the *PLM* is powerful and stable precisely because it unites so many institutions of society.

Politicians need fears to control the population; lawyers need dangers to litigate and make money; the media need scare stories to capture an audience. These three estates are where power is being exercised - the tail that is wagging the dog - and the place where much funding is going - to such an extent that they can go about their business even if the scare is totally groundless.

And then there's academia. *Global Warming* facts are coming out of the ivory towers' computer models - and there is no longer any disinterested

Public Science Forum to verify the data and adjudicate between rival scientific claims.

The universities have invented a new role for themselves as the factories of fear. They invent all the new terrors and all the new social anxieties; all the new restrictive codes; the words you can't say; the thoughts you can't think.

They produce a steady stream of new anxieties, dangers and social terrors to be used by politicians, lawyers and reporters. Foods that are bad for you; behaviours that are unacceptable. Can't smoke, can't swear, can't think etc.

Dr Aidan Rankin was getting close in his focus on Political Correctness - but this is just one part of a much larger complex.

In the course of pulling together my *Global Warming Research* to write my Sunday weblogs - I will be trying to clarify why I believe the issues behind the emergence of *Global Warming* are very pertinent to concerns such as reclaiming the commons, evolving strategies for our peace parties to outwit their *War Party* etc.

I see it as a brief but necessary diversion to make sure radical politics does not get spun off into the weeds and lose sight of the ball.

Once I have had my say about this I think we can start looking at how the money boys keep the whole of the *PLM* show on the road - because there may be some way to cut off the funding at the pass - once we find out where we should be setting up our ambush.

One final little remark - at the personal psychological level, fear and love are directly opposed to each other - so if there is an axis of evil anywhere then this is where it is - and this is where the battle between *Good* and *Evil* may need to take place. i.e. the personal response to all this is to refuse to be made insecure and *Make Love Not War* - which brings us full circle to the sixties and the hippies. They were actually right all along. That at least is probably what this Sunday's weblog will say. And that is what it said when written a week later.

15. Orthodoxy & Heresy

first published on Sunday 7th May 2006

Questioning *Global Warming Orthodoxy* instantly banishes you to outer darkness - with *Holocaust Deniers* and *Conspiracy Theorists* as your cellmates. The abuse poured on Michael Crichton for getting *State of Fear* into the *US Bestsellers List* is a case in point. Use *Goggle* to locate the columns of journalistic vitriol.

Psychologically this is perhaps more interesting than the fear that a challenge to the *Global Warming Orthodoxy* itself engenders.

Let me discuss the *Scientific Enterprise* as seen by a former *Minister for Science and Technology* in a *Socialist Government*.

Scientific Tradition derives from six main principles:

1. an insistence upon maintaining a rigorous regime of accurate scholarship;
2. a practice of subjecting hypotheses arising from research to the critical scrutiny of the scientific

community which then judges those results by the highest possible standards;

3. a determination to defend and entrench academic freedom to protect scientists from improper pressures which might lead them to abandon their research or to corrupt their results to suit the powers that be;

4. an acceptance of the importance of dissent within the scientific tradition allowing scientists to seek to establish new hypotheses even though these may run counter to the conventional scientific wisdom of the day;

5. the maintenance of an output which overrides political, theological or ideological divisions between nations;

6. the assertion of the importance of publishing results so that the whole world may benefit from the new knowledge as it is acquired.

In *Dare To Be A Daniel* Tony Benn then goes on to contrast these *Scientific Traditions and Principles* with the ideas that lie at the root of *Parliamentary Democracy*.

Benn's view - which was also the official view of Sir James Goldsmith's *Referendum Party* when I stood as their *Parliamentary Candidate for Oldham West and Royton* in 1997 - is that in *Britain* the idea of democracy is not based on the sovereignty of *Parliament* or *Government* but upon 'the sovereignty of the people as a whole who have a moral right to govern themselves.'

By exercising their vote they lend their sovereign powers to members of *Parliament* to be used on their behalf for the duration of a single parliament

- and these powers must be returned intact to the electorate to lend again at a subsequent election.'

Benn then points out that 'in the end the people can dismiss ministers without bloodshed, and replace them by others' and that it is this 'destructive power of democracy that gives it its vitality, because ministers who know they can be dismissed are obliged to listen.'

So Benn's democratic theory rests on being able to kick the rascals out because 'in this way the capacity to dismiss changes the relationship between those who govern and those who are governed.'

For Benn the role of the elected representative is not to reproduce the expertise of the expert but to subject him or her to rigorous cross-examination on behalf of the people.

In *Dare To Be A Daniel* the 80-year old veteran of countless socialist rallies - and the best Prime Minister this country never had - is reflecting on projects that came up on his watch - like *Concorde* and *Nuclear Power* rather than *Climate Change*.

But general principles are just that and indicate the direction his thinking was leaning. Here are the first nine of *Benn's Ten Questions for Scientists*.

1. Would your project promise benefits to the community? What are they? To whom and when will they accrue?
2. What are the disadvantages? Who experiences them? What remedies might correct them? And when?

3. What are the demands on skilled manpower? Can this be met?
 4. Is there a cheaper, simpler, less sophisticated way to achieve all or part of the objectives? What are the options?
 5. What new skills would people need to acquire? How are they to be created?
 6. What old skills would be rendered obsolete? How serious is this for those involved?
 7. Is the work being done elsewhere? Is there experience elsewhere to help assess the proposed project?
 8. If the project happens what disadvantages would accrue to the community? What are the alternative approaches?
 9. What other supporting projects are needed to cope with consequences or subsequent stages?
- Benn regarded his 10th question as very important.
10. If an initial decision to proceed is made, for how long will the option to stop remain open, and how reversible will this decision be at progressive stages beyond there.'

16. Precautionary Principle

first published on Sunday 7th May 2006

It is on this tenth point that I took Kirk Sale to task in an e-mail exchange this week when commenting on the *Global Warming* lobby's abuse of the *Precautionary Principle* - which has now become a policy of convenience to environmentalists.

The *Precautionary Principle* should mean that we do not meddle around implementing half-cock

solutions that are just as likely to make matters worse - the dynamics of complex systems often means that things get worse before they get better for instance - until we understand what their long-term and intermediate impacts will be.

The *Precautionary Principle* is being misapplied to justify ignorant meddling in very complicated processes that are not understood.

17. Who? Whom?

first published on Tuesday 9th May 2006

The fourth report of the *International Panel for Climate Change (IPCC)* is being finalised as I write. The *second-order draft* is up on the internet behind the citation 'please do not cite, quote, or distribute the draft report'.

It would be nice to be able to copy the report onto my hard drive and ignore it until the *Sexed-up Dossier* emerges next year. But nothing is ever quite that simple. Here are my marching orders - and I quote...

'Because the report is still in draft, distribution of the materials for review will be through a password-protected website.

If you are interested in reviewing the report, send a message - with your name and affiliation in the subject line - obtain the username and password required to access the report.'

Then click here to download the report and to obtain explicit instructions regarding comments.'

Nothing ventured nothing gained so I'll give it a whirl and report back on my success or otherwise.

All you do to run a company is increase the company's income and reduce its expenses. You increase income by raising the price of your products and you reduce expenses by getting somebody else to pick up the tab.

Oil has shot up in price since the *Bilderberg Boys* decided to go for it. The bigger you are the bigger the pocket you must pick.

The biggest pockets are public pockets. Big corporations have become adept at wheedling money out of taxpayers.

What better way to transfer a sixty billion pound *Clean-up Budget* from the *Nuclear Fiasco Industry* to the *Public Purse* than to roll out the 80 year-old James Lovelock to extol the joys of spent fuel lumps for home heating and reallocating *Nuclear Clean-up Money* to *Global Warming*?

What better way to get the *Public Purse* to pay to swap out the petrol in petrol station for some new piped fuel such as hydrogen or cornoil than to invent *Climate Change* and promote a theory that blames it all on *Carbon Emissions*?

This is probably all you need to know about *Global Warming*. Adam Smith would have been skeptical too.

Spent fuel rods in your gardens will do wonders for the shrubbery. Wildlife is flourishing inside the *Chernobyl Exclusion Zone*.

One of Tom Paxton's song has a father telling his daughter about flowers. It was quite hard for him to explain them to her because she had never seen any.

18. Changing Climate Change

first published on Wednesday 10th May 2006

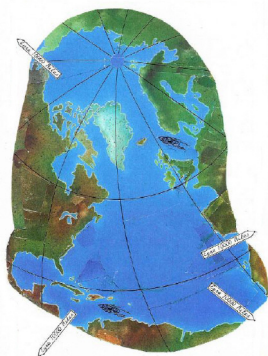
There is an interesting footnote on page 3 of the *IPCC Report* which I am not allowed to quote so I will just summarise - provided you promise not to cite or quote me because it may have disappeared by the time the final report emerges next year. Climatic change in *IPCC* usage refers to any change in climate over time, whether due to natural variability or as a result of human activity.

This usage differs from that in the *Framework Convention on Climate Change*, where climate change refers to a change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable time periods.

Here we go again. Alastair Campbelling around.

Shepherd on Climate

Carry On Talking
about
Climate
with
William Shepherd



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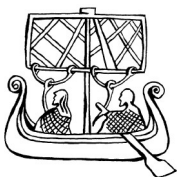
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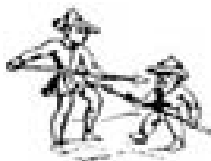
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about

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19. Global Warming Orthodoxy

first published on Sunday 28th May 2006

One problem with *Global Warming Orthodoxy* is that it is based on some pretty questionable scientific hypotheses built into its *Climate Forecasting Models*.

Most of the computer models embrace partial hypotheses that rely on *Old Science* and are backed up by data of very varying reliability.

Climate Science is a rapidly evolving field - and one that *Climate Politics* is unable to keep abreast of. New connections are being made by *Good Science* all the time.

My request on the *Intergovernmental Panel on Climate Change IPCC* website for their report generated an instant e-mail response for downloading the document.

I had to promise not to cite, quote or distribute it before I could get the document but duly did so. Not being sure quite how to keep on the right side of *The Feds* I then consulted my partner at the *Cliff's Edge Signalling Company* on what to do with the document. Here is what I wrote.

I have downloaded the 15-page draft *IPCC Report on Global Warming* and was wondering about making it available on the cesc website for policy-makers such as ourselves and our cesc colleagues - behind a password perhaps.

Do you have a view on how cesc should deal with this? I ask because despite *US Freedom of Information Acts* etc. the *IPCC* website states 'please

do not cite, quote, or distribute the draft report' - see today's weblog for background.

I also included the text of the reply that went like this. *REB Limited (UK Company No. 04199788)*;

'Thank you for your interest in participating in the *US Government Review of the Working Group I contribution ('Climate Change 2007: The Physical Science Basis')* to the *Intergovernmental Panel on Climate Change Fourth Assessment Report*.

You will need the following username and password to access the Draft document. The email continues in the best *UN/US* federalese.

Be advised that you must be a *US Citizen* or resident alien to participate in the *US Government Review*. Please send properly formatted comments by the 9 May 2006 deadline if you wish to have your input considered for the official *US Government* submission.

Comments submitted as part of the *US Government Review* should be reserved for that purpose and not also sent to the *IPCC Working Group I Technical Support Unit* as a discrete set of expert comments.'

I particularly like the bit about the rights of aliens. But I suppose Venusians have a legitimate interest in making sure *Planet Earth* doesn't go the way of their planet after the trouble they took restocking their new planet with life forms.

20. Per's Peer Review

first published on Sunday 14th May 2006

Per Einarsson was shaking with anger. He raised his fists. "I tell you, no!" he yelled, and pounded the table.

Standing opposite him, Drake was very red in the face, clenching his teeth. "Per," he said, "I am asking you to consider the realities."

"You are not!" Einarsson said, pounding the table again. "The reality is what you do not want me to publish!"

"Now Per – "

"The reality," he said, "The reality is that *Iceland* in the first half of the twentieth century was warmer than the second half, as in *Greenland*.*

In *Iceland* most glaciers lost mass after 1930 because summers warmed by .6 degrees Celsius, but since then the climate has become colder. The reality is that since 1970 these glaciers have been steadily advancing. They have regained half the ground that was lost earlier. Right now, eleven are surging. That is the reality, Nicholas! And I will not lie about it."

"No one has suggested you do," Drake said, lowering his voice and glancing at his newly arrived audience. "I am merely discussing how you word your paper, Per."

Einarsson raised a sheet of paper. "Yes, and you have suggested some wording – "

"Merely a suggestion – "

"That twists truth!"

"Per, with due respect, I feel you're exaggerating."

"Am I?" Einarsson turned to the others and began to read. "This is what he wants me to say: 'The threat of global warming has melted glaciers throughout the world, and in *Iceland* as well.

Many glaciers are shrinking dramatically, although paradoxically others are growing. However, in all cases recent extremes in climate variability seem to be the cause...blah blah blah...og svo fram-vegis."

He threw the paper down. "That is simply not true."

"It's just the opening paragraph. The rest of your paper will amplify."

"The opening paragraph is not true."

"Of course it is. It refers to 'extremes in climate variability.' No one can object to such vague wording."

"Recent extremes. But in *Iceland* these effects are not recent."

"Then take out 'recent.' "

"That is not adequate," Einarsson said, "because the implication of this paragraph is that we are observing the effects of global warming from greenhouse gases. Whereas in fact we are observing local climate patterns that are rather specific to *Iceland* and are unlikely to be related to any global pattern."

"And you can say so in your conclusion."

"But this opening paragraph will be a big joke among *Arctic Researchers*. You think *Motoyama* or *Sigurosson* will not see through this paragraph?

Or Hicks? Watanabe? *Ísaksson*? They will call me compromised. They will say I did it for grants."

"But there are other considerations," Drake said soothingly. "We must all be aware there are disinformation groups funded by industry – petroleum, automotive – who will seize on the report that some glaciers are growing and use it to argue against global warming. That's what they do. They snatch at anything to paint a false picture."

"How the information is used is not my concern. My concern is to report the truth as best I can."

"Very noble," Drake said. "Perhaps not so practical."

"I see. And you have brought the source of funding right here in the form of Mr. Morton, so I do not miss the point?"

"No, no, Per," Drake said hastily. "Please, don't misunderstand - "

"I understand only too well. What is he doing here?" Einarsson was furious. "Mr. Morton? Do you approve of what I am being asked to do by Mr. Drake?"

It was at this point that Moreton's cell phone rang and with ill-conceived relief he flipped it open.

Einarsson stared at the floor, sucking in his breath, still furious. Drake stuck his hands in his pockets, looked at the roof of the tent.

Drake said, "Look, Per, I feel we have gotten off on the wrong foot."

"Not at all," Einarsson said coldly. "We understand each other only too well. If you withdraw your support, you withdraw your support."

Note

* *P.Chylek*, et al. 2004, "Global warming and the Greenland ice sheet," *Climatic Change* 63 201-21. "Since 1940 - data have undergone predominantly a cooling trend - The Greenland ice sheet and coastal regions are not following the current global warming trend."

21. Majority Against Orthodoxy

first published on Wednesday 17th May 2006

The *British Government* is a signatory to the 1997 *Kyoto Protocol* to restrict carbon emissions. The scientific work underpinning this came from the *UN Intergovernmental Panel on Climate Change (IPCC)* who claimed there was a scientific consensus that:

- (a) global warming is a major threat to the planet;
- (b) it is primarily man-made;
- (c) the cause is carbon emissions from burning fossil fuels;
- (d) these greenhouse gases trap the sun's heat and warm the planet.

But there has never been such a scientific consensus. Indeed a *recent analysis* of scientific papers on climate change by Dr Benny Peiser of *John Moores University* and Dr Dennis Bray of the *German GKSS National Research Centre* concluded that dissenters are in a healthy majority.

In July 2005 a report from the *House of Lords Select Committee on Economic Affairs - The Eco-*

nomics of Climate Change Volume 1, HL Papers 1201 - included the following remarks from Professor Reiter at the *Institut Pasteur* in Paris.

Here is the text of the Committee's remarks in Section 116 of the report where the professor's comments are cited:

"We cannot prove that Professor Reiter's nomination was rejected because of the likelihood that he would argue warming and malaria are not correlated in the manner the *IPCC Reports* suggest. But the suspicion must be there, and it is a suspicion that lingers precisely because the *IPCC's Procedures* are not as open as they should be.'

'It seems to us that there remains a risk that *IPCC* has become a "*Knowledge Monopoly*" in some respects, unwilling to listen to those who do not pursue the consensus line. We think Professor Reiter's remarks on consensus deserve repeating.'

"Consensus is the stuff of politics, not science. *Science* proceeds by observation, hypothesis and experiment. Professional scientists rarely draw firm conclusions from a single article, but consider its contribution in the context of other publications and their own experience, knowledge and speculations.'

'We are concerned that there may be political interference in the nomination of scientists whose credentials should rest solely with their scientific qualifications for the tasks involved.'

And here is the full text of the House of Lord's Committee's Conclusion in Section 118:

'Overall, we are concerned that the IPCC process could be improved by rethinking the role that government-nominated representatives play in the procedures, and by ensuring that the appointment of authors is above reproach.'

'If scientists are charged with writing the main chapters, it seems to us they must be trusted to write the summaries of their chapters without intervention from others.'

'Similarly, scientists should be appointed because of their scientific credentials, and not because they take one or other view in the climate debate.'

"IPCC publications as a whole contain some of the most valuable summary information available to the world on what we know about climate change. The standards employed are clearly very high."

'But this is all the more reason to ensure that procedures are unimpeachable. At the moment, it seems to us that the emissions scenarios are influenced by political considerations and, more broadly, that the economics input into the *IPCC* is in some danger of being sidelined. We call on the *Government* to make every effort to ensure that these risks are minimised.'

22. Carbon Emissions Trading

first published on Thursday 18th May 2006

I have been reading the *Financial Times* for the past couple of days to understand the *European Carbon Trading Exchange*.

The newspaper clippings spread out on the cabin table in front of me - I am working on my *Dell*

laptop - have headlines like *Blair's Decision Time On Nuclear Power, Carbon Credit Errors Throw Permit Scheme Into Turmoil, Independent Auditing a Must if Carbon Trading is to be a Success, The Real Story Behind the Collapse of Carbon Prices and Give the Emissions Trading Scheme a Fair Chance* - written by the ceo of RWE npower.

These shenanigans lend credence to those claiming that the whole point of *The Kyoto Treaty* is that it should fail.

I don't believe the *Global Warming Orthodoxy* that sees *Armageddon* in carbon emissions. But that is no reason not to eliminate them. The side effects often turn out to be the main effects. It is almost a *Rule of Nature*.

The less muck spewed into the atmosphere the better. But some of the side effects have to be seen to be believed - and many have little to do with cutting back on atmospheric pollution or reining in the emission of greenhouse gases.

My *Crap Detector* first began to register with the allocation of CO₂ emissions permits for 2005 - based on self-assessments which made *Cod Quotas* look like divine justice. The *Dirty Half Dozen* are *Germany* with 473 million tonnes, the *UK* with 242, *Italy* with 215, *Spain* with 181, *France* with 131 and *Holland* with 81. The other ten countries in the *European Commission's* scheme account for just 12% of all permits and can be disregarded.

Demand on the *Carbon Trading Exchange* is driven by the *UK, Spain* and *Italy* - respectively 15%, 11% and 4% over quota. The *UK* has to buy

40 million tons-worth of CO₂ emission permits, *Spain* 20 and *Italy* 10.

Who has them for sale? Last week it was *France* and *Germany*. But then Angela Merkel announced that *Germany* would give 12 of her 21 million tonnes surplus back to *Brussels*.

But *France* with her massive 'non-polluting' nuclear industry wants to keep her 15 for 2006. Market chaos duly ensued as carbon prices shoot up from €9 to €15 overnight. What a game!

It gets worse. *Britain* has enforced the toughest cuts on the electricity generators. Here's the logic.

The electricity sector is more insulated from overseas competition than sectors like chemicals, cement and steel so costs can be passed on to customers in higher prices.

But the giant German polluter *RWE* owns *Yorkshire Electricity* and *npower* which supply *UK* consumers.

Electricity companies have been accused of profiteering by charging customers for the free carbon permits they were given by *Brussels*. Now there's a surprise. You couldn't make it up.

23. Useful Idiots

first published on Sunday 21st May 2006

A few weeks ago I got an email from a colleague on *the left* that went like this. 'I don't get it. Are you guys saying there's no *Global Warming*? You think it's all created by fear-mongers in universities? Are you nuts?'

That's the *right-wing* line. It's real and it will have - as it already has had - many unintended consequences, most of them disastrous. Along with peak oil, collapse of the dollar and new diseases it will usher in the downfall of Western civilization and maybe worse.'

This is what I should have replied - one always thinks of these things some time afterwards.

What I am saying is that nobody understands climate and that the *Precautionary Principle* is being misapplied by environmentalists to justify ignorant meddling in a very complicated and very poorly understood process.

If *the left* were to embrace the *Precautionary Principle* properly they would not be stampeded into meddling around trying to implement half-baked solutions cooked up from contaminated hypotheses like the *Greenhouse Carbon Dioxide Theory*.

Instead we would be working day and night to understand how our planet's climate works and the short-, medium- and long-term impacts of any meddling we might think was worth doing.

NASA did not rush off to the moon two weeks after Kennedy announced a lunar landing as an *American National Goal*. They took ten years making sure they knew what to do so they could get there safely and bring their astronauts back home again.

Governments and *Corporations* meddling around in today's state of knowledge on climate is as likely to make matters worse as improve things. And in complex systems things often get worse before getting better.

Then there is the attempt to dismiss my opinions by calling them *right wing*. There is a set of *right-wing* views on climate that appears to be similar to mine but there is rather more to it. The *right-wing* slur for instance is a *left wing* way of avoiding facing up to uncomfortable truths.

There is no scientific consensus on the causes of global warming for instance. If there is any consensus it is that scientific consensus is an oxymoron because *Science* doesn't work this way. But that is something else. More important is to clarify terms when discussing *left* and *right*.

For today think of *left* and *right* this way. *The left* believes everybody is equal. *The right* believes society needs leaders. A *right-wing* society works from the top down. A *left-wing* society works from the bottom up.

That's the theory - then there are the consequences. Authority, leaders and led, us and them is *right-wing*. Socialism as equal money, one man one vote - *wyfman* and *karlman* - and the freedom to do what you like is *left-wing*.

Both ends of the political spectrum talk of democracy and freedom. But for *the right* democracy means one dollar one vote - the democracy of the market place - while freedom means being free to be poor.

So there are plenty of mind games to contend with. Then there are other ideas like the *Rule of Law*. For the *right-wing* this means the powerful use the police to get the powerless to do what they are told. For *the left* this means equality under the law

for rich and poor alike - except that the right have expanded it beyond real persons to judicial persons like corporations.

In the global warming context this *right-wing* slur is deployed to close down debate and avoid discussion just as *anti-Semitic* is used to silence anybody who questions *Israel*. *The right* is quite skilled at putting such slurs in the mouths of useful idiots on *the left*. Divide and rule is the name of this game - and *agents provocateurs* the means employed.

Galbraith once remarked that there were two types of forecasters: those who don't know and those who don't know they don't know. But follow the money and it is clear there is a third category - those who don't care.

Between them these three categories hog 99% of the funding leaving very little over for honest scientists intent on searching for the truth about our planet's climate.

These are either muzzled or neutralised. Others write their headlines and mis-summarise their conclusions and recommendations. Their sound scientific reporting is turned into dodgy dossiers.

Nearly everything published about *Global Warming* should be labeled: *WARNING: Forecasts are produced by Computer Models*. *The left* should be wary of any global warming hypothesis and approach computer forecasts with skepticism - particularly those seeming to emanate from *left-wing environmentalists* pleading the case of the poor and assuring you they will be overwhelmed by

tsunamis and rising sea levels unless *The World Community Acts Now*.

At the end of the day there is only good science and bad science. Regrettably since the demise of Edward Goldsmith's scientific journal *The Ecologist* discriminating between the two is not easy. As a result the *Carbonistas* have been getting away with rather too many lies and half-truths.

Much of what *the left* labels *right wing* is disinformation put out by the *right* - and their public relations firms to dupe the useful idiots on *the left* into shooting themselves in the foot with their *Doom & Gloom & Climate Change*.

Have you noticed how *Global Warming* and *Abrupt Climate Change* - ...the specifics keep shifting as the bad science is exposed - knocks everything else off the global justice agenda while *Nuclear Power*, *World Government* and *Piped Energy* sneak in through the back door?

Think about it -like Machiavelli - and ask yourself 'Who? Whom?'

24. Story of Global Warming

first published on Monday 22nd May 2006

Media Studies is a standing joke to many - conjuring up images of *PhDs in Elvis Presley* and studies of the *Sociology of Big Brother* - not the one from 1984. But occasionally something interesting emerges. What begins as shifting verbal fashions - slang to you - in TV soap operas can lead to investigations of cycles, periodicities, correlation and randomness. From here it is one small

step for a man to mental abstractions, ideas, thought - and memes - that benefit all mankind.

Within modern-day cultures ideas rise and fall. For a while everybody believes something and then they stop believing until no one can remember the old idea. In fashion as in natural ecology there are disruptions and sharp revisions of the established order. A lightning fire burns down a forest. A different species springs up in the charred acreage.

This happens to science too - the scientific process encourages it. Thomas Kuhn identified the internal mechanisms and structures at work creating these scientific revolutions.

In environmental thought in the 1960s the idea of the balance of nature was widely accepted. Leave nature alone and it will come into a self-maintaining state of balance.

The young James Lovelock born in 1926 called it his *Gaia Hypothesis* but the idea has a longer pedigree - the *Ancient Greeks* believed it three thousand years ago.

But by the 1990s no scientist believed in the balance of nature anymore. Ecologists spoke of dynamic disequilibrium and multiple equilibrium states. Nature is never in balance, never has been and never will be. Nature is always out of balance. Man - the great disrupter - is nothing of the sort. The environment is being disrupted constantly.

Then one day at the leading edge of *Media Studies* some *American* media scientists set their search engines to work analysing the rise and fall of *The Idea of Environmental Crisis*.

Others looked at transcripts of news programmes from the major networks - *NBC, ABC, CBS*. Others studied stories in the *New York, Washington, Miami, Los Angeles* and *Seattle* newspapers.

They got their computers to count the frequency of certain concepts and terms used by the media. The results were very striking. There was a major shift towards the end of 1989.

Before that time the media did not make excessive use of terms such as *crisis, catastrophe, cataclysm, plague* or *disaster*.

For example during the 1980s the word *crisis* appeared in news reports about as often as the word *budget*.

In addition prior to 1989 adjectives such as *dire, unprecedented* and *dreaded* were not common in television reports or newspaper bulletins.

But then it all changed. These terms started to become more and more common.

The word *catastrophe* was used five times more often in 1995 than it was in 1985. Its use doubled again by the year 2000.

In 1989 the stories changed too. There was a heightened emphasis on *fear, worry, danger, uncertainty* and *panic*.

The critical question is why it should have changed in 1989 which seemed like a perfectly normal year. A Soviet sub sank in *Norway*; *Tiananmen Square* in *China*; the *Exxon Valdez*; Salmon Rushdie sentenced to death; the *Episcopal Church* hired a female bishop; *Poland* allowed striking unions;

Voyager went to *Neptune*; a *San Francisco* earthquake flattened highways; and *Russia*, the *US*, *France* and the *United Kingdom* all conducted nuclear tests. A year like any other.

But in fact the rise in the use of the term *crisis* can be located with some precision to the autumn of 1989. And it seemed suspicious that it should have coincided so closely with the fall of the *Berlin Wall* on the *Ninth of November*.

At first the media scientists dismissed this association as spurious. But it wasn't. The *Berlin Wall* marks the collapse of the *Soviet Empire* - and the end of a *Cold War* lasting for half a century.

For fifty years Western nations had maintained their citizens in a state of perpetual fear. Fear of the *Other Side*; fear of *Nuclear War* - the *Communist Menace*, the *Iron Curtain*, the *Evil Empire*. Within the *Communist blocs* it was the same in reverse - fear of us - but with the heightened fear of personal betrayal and incarceration.

Then suddenly in the fall of 1989 it was all finished - gone, vanished, over. The *Fall of the Berlin Wall* created a vacuum of fear.

Nature abhors a vacuum and the evidence suggests that instead of inventing the moral equivalent of the *Cold War* as William James would have wished - in the absence of any initiative from *the Left* - *the Right* homed in on *Environmental Crisis* to serve up for global consumption. But there is an irony here.

As far as *the Right* is concerned the *Environmental Crisis* has served its purpose. It is beyond its

sell-by date. They have moved on and have generated new fears like *Islamic Fundamentalism* and *Al Quaeda Terrorism*.

But in reality they have created a monster - and they cannot stop their *Fear Machine*. It is like the *Sorcerer's Apprentice*. *Communist Menaces*, *Toxic Environments*, *Wars against Terrorism* - it is unstoppable.

But the environmentalists are trapped in their time warp. The momentum of their careers and their funding means that like military generals they are fighting the last war. The *thinking right* are doubtless much amused.

Be our guests, they cry. Fight your old stale environmental wars. We have moved on. We have created new fears and new wars for your distraction. But it's no fun having the field to ourselves. When will you start to catch up?

25. New Ice Age

first published on Wednesday 24th May 2006

Warning: A Figment of My Imagination.

It was cold last night. I gave the boat a half-hearted burst of heat for a few minutes in mid-evening but then thought better of it and dug out a sweater. But we had the best of it. In *Scotland* the *Sassenachs* shivered through one of the coldest nights recorded for May with temperatures plunging to 25 F. at *Tulloch Bridge* in the *Highlands*. Clear skies and an *Arctic* wind produced a freezing snap. We are clearly heading for a *New Ice Age*.

On 23rd May 1935 *Britain* was carpeted in snow. Small villages in the *Yorkshire Dales* were two to three feet deep in snow and villages had to dig themselves out of their homes according to a report in *The Times*. Cars were abandoned in snowdrifts on roads and trains derailed on frozen railway points.

Devon and *Cornwall* were said to look like a scene from a Christmas card. The bitter cold spelt disaster for fruit and vegetable farmers from *South Wales* to *Kent*.

The Times reported a loss of thousands of pounds in *Sittingbourne*. In desperation one apple grower used thousands of oil lamps to save his crop from freezing.

And at the *Chelsea Flower Show* exhibitors worked frantically to save prize plants using heaters in greenhouses to keep the blooms alive in the bitterly cold nights.

With this wasteful and extravagant use of oil no wonder the world is running out. Oil for flowers indeed!

But what does this tell us about the temperature?

Snow was falling so it would have been hovering around 32 Fahrenheit. Humidity levels and wind chill factors would have done the rest.

A fall in temperature of seven degrees over 71 years is an average drop of 0.0547731 degrees per year. What a disaster.

By 2100 temperatures will have fallen by a massive ten degrees. There will be icebergs in the

Thames while Londoners mud-skate on the river's edge.

But there is some good news. There will be no need to *tow icebergs* from *Greenland* to solve the capital's water shortages. *Thames Water* will be quarrying its own ice and delivering it to the ice houses of the rich and famous in *Thames Ditton* and *Wokingham*.

But spare a thought for the poor farmer. There are a thousand *Sittingbournes* in *England* and there will be thousands of cold spells between now and 2100.

With decades of arctic weather, falling sea levels and declining soil fertility the apple orchards will disappear as the farmers throw themselves on the mercy of the bankruptcy courts and their new *Debt Orders*. There will be massive emigration to *Nigeria* and the *West Indies*.

26. Unnatural Disasters

first published on Sunday 28th May 2006

The case for *Global Warming* does not hinge on a tenth of a degree Celsius or a few experts quibbling over the technical details behind a graph of carbon emissions.

What the *Carbonistas* need is something with emotional impact. *Tsunamis* fit the bill. So their present case hinges upon the sea-level records. It won't last.

Their case will shift again when the scientific community refuses to kow-tow to their paymasters by permitting misleading use of their data. But it has

served their purpose well. Truth after all is not where it's at. With the *Fear Factory* perception is all - from a *Goebbel's Primer*.

Climate Changelings are shining their spotlights on helpless, victimized, impoverished people being flooded out of their ancestral homelands. They talk of the terror of sea levels rising precipitously - and inexplicably - with no conceivable cause.

They tell of extraordinary events and unprecedented happenings affecting the entire world in recent years. Something unknown is causing sea levels to rise and threaten innocent men, women and children.

The idea is that if a convincing record can be shown of rising sea levels then the *Carbonistas* will be on very strong ground.

When the public and the policy makers commanding the public purse strings - insurance companies for instance - see the damage that has been done and the costs they might incur - and here the computer modellers come into their own - they will spend money to solve the problem and scan the horizon for someone to blame for the mess.

Grappling with problems is not what action-oriented types do. They define, act and solve. They get it sorted. Then they look for someone to blame - and somebody else to pay the bill.

So not only is the sea level data important to the *Carbonista's Bait & Switch Strategy* but the fact that sea levels are rising around the world must be beyond dispute.

Unfortunately that's the rub. There is considerable dispute about sea level. It is not simple at all.

You cannot just put a mark on a dock at high tide, measure it year after year, watch it go up and publish your findings.

One of the core concepts in the measurement of sea levels is the *geoid* - the equipotential surface of the earth's gravitational field that approximates the mean sea surface.

Then there are the complexities of glacio-hydro-isostatic modeling and the eustatic and tectonic effects on shoreline dynamics.

Even with some rudimentary grasp of these subjects there is still holocene sedimentary sequences and intertidal foraminifera distributions to master.

And when that is done waiting in the wings are the carbon analysis of coastal paleoenvironments and aminostratigraphy. Sea level is not simple.

Were this enough to determine the precise scientific nature of sea level data, a consensus about this data might be feasible even if some agreed to disagree.

However there would be many different hypotheses about the causes of any drift or sudden shift in the data pattern.

But unfortunately for the *Carbonistas* this is likely to be the wrong consensus.

One of several places around the *Indian Ocean* decimated by the *Boxing Day Tsunami* was *The Maldiv Islands*.

But it would be quite wrong to think that the inhabitants of these islands had been sitting on the beach for the past few decades waiting for the tsunami to strike.

They had arranged for a team of *Scandinavian* researchers to study sea levels in the ocean around them. The scientists found no rise in several centuries - and a fall in the last twenty years.

Michael Crichton started his research for *State of Fear* - published in 2004 - in 2001. At that time I was reading through Tom Clancy's published works and was somewhat alarmed to notice that many of Clancy's plots turned up in the real world a few years after he had seemingly invented them.

I had two conspiratorial explanations. Either Clancy was on a retainer with the *CIA* or *Mossad* were reading the plot outlines he sent to his publisher.

Crichton and Clancy plots have wheels within wheels and move rapidly between different pieces of the action before bringing it all together in one hectic final sequence.

Their plots are full of outrageous and improbable coincidences and - as in the old *Westerns* - the hero comes through unscathed while the baddies and the secondary good guys go down like flies. That's not a problem for me - it's the nature of the genre. But one of Crichton's subplots worries me.

The *Island of Gareda* is one of the *Solomon Islands* off the coast of *New Guinea* north of *Australia*. Here the *Pacific Plate* slides under the *Ontong Java Plateau* resulting in the *Solomon Trench* - a

huge underwater feature that curves in an arc all along the northern side of the island chain and is an active geological region with a deep trench.

Along the length of the trench are undersea volcanoes with lots of slope debris and therefore the potential for undersea landslides which displace enormous volumes of water very quickly - the most common way a tsunami is formed.

In Crichton's book the really really bad guy heads up a global environmental organisation. The underlying action that provides the fiendish plot for the novel involves three earth shattering natural disasters - each timed to take place on the first morning of a conference on *Abrupt Climate Change*.

These were a lightning-induced flash flood in Yellowstone National Park, an enormous ice floe breaking off from a glacier in Antarctica and - you are there before me - a tsunami activated by giant Hypersonic Cavitators placed on the seabed off the Island of Gareda.

27. Hubris & Nemesis

We need a new environmental movement with new goals and new organisations. We need more people working in the field - in the actual environment - and fewer people behind computer screens. We need more scientists and many fewer lawyers.

Nothing is more inherently political than our shared physical environment and nothing is more ill-served by allegiance to a single political party.

Precisely because the environment is shared it cannot be managed by one faction according to its own economics or aesthetic preferences. Sooner or later the opposing faction will take power and previous policies will be reversed.

Stable management of the environment requires recognition that all preferences have a place - snowmobiles & angling, dirt bikes & bird-watchers.

These preferences are at odds and their incompatibility cannot be avoided. But resolving incompatible goals is the true function of politics. This is what politicians are for. And then there is the problem of science.

We desperately need a non-partisan, blinded funding mechanism to conduct research to determine appropriate policy.

Scientists are only too aware whom they are working for. Those who fund research - whether a drug company, a government agency or an environmental organisation - always have a particular outcome in mind. Research funding is almost never open-ended or open-minded.

Scientists know that continued funding depends on delivering the results the funders want. As a result environmental organisation studies are just as biased and suspect as industry studies.

Government studies are similarly biased according to who is running the department or administration at the time. No faction should be given a free pass.

A local not a global approach is needed to global problems. I have a problem with people in some

far-away *Western City* at a desk in some glass skyscraper deciding what is in my best interest.

They don't live where I do. They don't know the local conditions or the local problems I face. They feel they know the solutions to all my problems and how I should live my life. But they don't.

And this concern is just the tip of the iceberg. Ivan Illich has drilled into this iceberg from different directions and has deeper misgivings about the *disabling professions* and their impact on conviviality and the structural monopolies they have imposed upon the overdeveloped world.

It is one thing to seed clouds over *Vietnam* in a vain attempt to meddle with climate to win an unwinnable local war.

But it is hubris for global organisations - whether made up of governments, corporations or selfish money interests - to believe they can manage the world's climate. Nemesis will be the inevitable consequence as sure as night follows day.

Science is just one of many commons that local people must reclaim from the money power, from the financial and industrial mechanisms and from the embrace of the would-be architects of a totalitarian one world state.

There is an integrity in diversity and a sanity in locality that is altogether absent in large systems and global missolutions. When something is wrong something is too big.

And where science is concerned only the local is real - and this applies as much to scientific data -

this place, this laboratory, this scientist - as it does to everything else.

28. Limits to Models

first published on Sunday 4th June 2006

In the early eighties I was a *Special Graduate Student* at MIT's *Alfred P. Sloan School of Management*. During my two years as a student much of my waking day was spent in the company of MIT's *System Dynamics Group*. The head of this group was Jay Forrester.

In his commentary on his background research for *State of Fear* Michael Crichton remarks that Professor Emeritus Forrester was 'one of the most important scientists of the twentieth century'.

I had little to do with the great man personally but came to be familiar with his work - and worked closely with Professor Alan Graham and George Richardson. Two entries in my *Curriculum Vitae* make mention of this brief interlude in my life.

Under *Schools and Colleges* is the entry: 1980 – 1981; Special Graduate Student; MIT Sloan School Cambridge, USA; System Dynamics & Industrial Dynamics.

And in the section on *Own Work (1980-2004)* under *America's Atlantic Coast (1979-1987): P-E Consulting Cambridge, USA 1979-1985* is another reference to my labours at MIT that goes like this. 'Assignments for a US clients including:

1. managing the *European* planning cycle and carrying out a corporate integration study in the

construction products sector (*Norton Company, Worcester*);

2. writing a proposal to the *US Energy Department* on soft energy systems (*Technology & Economics, Cambridge*);

3. managing partner for project to relate innovation to shareholder value in high-tech high-growth companies (*Smith Barney, Chicago*);

4. working partner for the development of a system dynamics model for *Canadian* printing firms (*Interconsult, Cambridge*)¹.

Professor Jay Forrester was the most influential researcher to model complex systems on the computer. He did ground-breaking studies of everything from high-tech corporate behaviour to urban renewal, and he was the first to get any inkling of how difficult it is to manage complex systems.

One landmark essay from Forrester was entitled '*The Counter-Intuitive Behavior of Complex Systems*'.

Forrester's work was an early inspiration for attempts to model the world - particularly the *Club of Rome* Study from *Dartmouth College* published as *The Limits to Growth*.

Forrester was quick to realize that the political voices behind the *Club of Rome* had a poor understanding of the limits of modeling - and even less interest in the science behind the modeling.

They latched onto Forrester's work because it backed up their pre-conceived notions and political agenda.

So Forrester took care to distance himself from the consistent tone of urgent overstatement - bordering on hysteria - of the *Limits to Growth* book published by Donella and Dennis Meadows from their ivory *New Hampshire* towers.

The Meadows' book was an early example of the sexed-up dossier - in this case from Forrester's more technical and conservative *World Dynamics* issued by *MIT Publications* a year earlier.

Two other giants from the *Environmentalists' Hall of Fame* - Amory Lovins and Rachel Carson - receive a somewhat ambivalent response from Michael Crichton.

Amory Lovins became an advocate for *Alternative Energy* when he authored the 1970s anti-nuclear text *Soft Energy Paths: Towards a Durable Peace* - which started life as an article in *Foreign Affairs*.

Michael Crichton sees *Soft Energy Paths* as a major link in the chain of events and thinking that set the *US* on a different energy path from *Europe* - though I would not attribute it so much influence.

Rachel Carson's *Silent Spring* published in 1962 is a poetic persuasive text that was read with alarm and excitement when it was first published.

But with the passage of time the text appears more flawed and more overtly polemical.

Crichton estimates it to be about one third right and two thirds wrong. My line would be somewhat different. But I would require that *Silent Spring* be read in conjunction with an earlier work by Rachel Carson: *The Sea Around Us*.

I think it unlikely that Rachel Carson would have endorsed the *Global Warming by Carbon Dioxide Emissions Hypothesis*. Large sections of *The Sea Around Us* have been airbrushed out of the *Climate Debate*.

Central to the argument in my 1979 unpublished manuscript *Green Homes or Blue Moonwaves* was Carson's reporting of the work of the *Norwegian Marine Scientist* Otto Pettersson.

And Carson was also aware of the key role of oceans and algae in the *Global Carbon Cycle* - something that climate scientists have only recently started to rediscover.

Science has a poor understanding of the behaviour of the ocean's algae - the subject of a future *Shepherd on Climate* weblog.

Science has similar levels of ignorance about many other variables that might turn out to be crucial to an understanding of local and global climate patterns.

Clouds and trees, aerosols and halocarbons, radioactivity and free radicals, solar winds and sun spots are just a few of the subjects on my current research list where I have noticed that good data is absent and well-reasoned hypotheses are thin on the ground.

But as more data is collected and as these specialist subjects are subjected to the scrutiny of *Good Science* so they will give up their secrets and it will become clearer what role each plays in our planet's self-regulatory climate system.

The natural greenhouse effect at the heart of the *Carbonistas'* argument for *Kyoto* is influenced primarily by water vapour and not carbon dioxide. Does this mean a *Khartoum Protocol on Steam Emissions* is next on the agenda? Is fear of the *Four Horsemen of the Apocalypse* to be the harbinger of a *New One World Totalitarian Order*?

29. Greenhouse & Nuclear Effects

first published on Sunday 11th June 2006

My Curriculum Vitae has an entry for 'Wheelock College, Boston, USA, 1981-1985' that reads: 1981 Assistant Professor of Education teaching Organisational Development; 1983 Co-Founder and Tutor-in-Residence of Human Scale Institute on Martha's Vineyard; 1985 Publication of *The Ecology of Learning* course for teachers and professional educators'.

The summer campus for the *Human Scale Institute* was at Anna Edey's *Solviva Gardens*.

Anna Edey was born and raised in Sweden and moved to the USA in 1957 where she raised three daughters and built herself a career on *Martha's Vineyard* dyeing and weaving wool from her own sheep and Angora rabbits before the gods took her under their wings and set her to work weaving a web of life. Here is Anna in *Growing Edge Magazine*.

'At four o'clock in the morning on the coldest night of 1984, I am awakened by the howling blizzard. To my utter surprise, inside the greenhouse it's like a balmy night in June. The thermometer reads

13 Celsius. The Angora rabbits are quietly muffling about in their communal dens.

Moon and stars shine brilliantly through the four layers of clear glazing. Here among the tall, lush tomato vines loaded with red sweet tomatoes the thermometer reads 7 degrees.

I proceed toward the east end, scooping up deep comforting breaths of humid, mild air fragrant with nasturtium, thyme, sage, dill and living earth.

At the far end a hundred chickens acknowledge me with sleepy murmurs, cozy at 21 degrees in their spacious quarters'. The insulation comes from the still air between the layers of glazing.

A greenhouse is a hot and sticky place. Light from the sun is absorbed by the dark plants and partially re-radiated as infrared radiation. Not much escapes because glass blocks radiation at the infrared end of the spectrum.

This is the *Greenhouse Effect* and the Earth is a greenhouse - for dark green plants read the planet's surface and for the glass read the earth's atmosphere.

There are two problems with this analogy. The earth's atmosphere does not behave like glass and although the *Amazon Rain Forest* may be dark green the polar ice caps are not, much of the planet's land surface is desert and semi-savannah and almost three quarters of the earth's surface is ocean.

We are told that 99% of the earth's atmosphere has no insulating properties, that oxygen and nitrogen have no role and that carbon dioxide alone

keeps the earth warm enough for life. Why do we allow ourselves to believe this nonsense?

Nuclear Power Plants generate steam that turns turbines to produce electricity. So the nuclear debate is not a debate about energy needs but about electricity supply. Electricity accounts for 18 per cent of total energy used in the *United Kingdom* and nuclear power stations contribute 19 per cent of this - falling to 7 per cent by 2020 as reactors are switched off before they get so old that they break apart from corrosion and spew *radioactivity* into the atmosphere.

So that's 3.4% falling to 1.3% of the country's energy requirements. The *Channel Tunnel* cables can cope. So what's all the shouting about?

My mind has started to have uncharitable thoughts about the perfidious *French* and the dastardly *Germans*. They are up to something and *Brits* are the fall guys. My headline would be *Blair Duped Again*.

First the *Texans* and the *Israelis* take him for a ride over the *Iraq Invasion*. Now the *European Bank* is trying to get its two biggest clients off the hook by flogging Blair a dead nuclear horse.

Nuclear Power is an archaic technology for goodness sake. It's more than 50 years old. It has no more place in a modern economy than a horse and cart. Blair must go urgently. He is dangerous to our health. This latest *love-in* could be the death throes of *President Blair*.

Renewable forms of energy are almost limitless in their potential. They are flexible and offer good security of supply.

Nuclear, by contrast, requires uranium to be mined and transported, produces toxic waste and poses a potential terrorist threat.

No one has the foggiest idea of the cost of new nukes, new designs will have to be imported - so much for freedom from foreign control of our energy supplies - and the *Ministry of Truth* will have to control the whole of *Government* if real economic appraisals of actual past and future reactor costs are to be kept as state secrets.

The real opportunity is not renewable technologies but local energy. All the energy we need for a year arrives in half an hour of sunlight - the rest is complications.

Cross-channel cables for *Surplus French Nuclear Electricity (SFNE)* and a gas pipeline from *Norway* are all the *Energy Insurance* this country will be needing.

All our national utility grids can be dismantled. The *English* have no need of them.

Over the past 14 years *Woking Borough Council* has reduced energy demand by 50% and made savings of 77% in carbon emissions through green procurement, basic energy conservation, community use of combined heat and power, biomass, photovoltaics and fuel cells.

The *Woking Strategy* is the way forward. Tackle energy locally - town by town, village by village and parish by parish.

Disregard *private* interests - the *personal* and the *community sectors* are more efficient - when working in tandem locally.

Get *Energy Supply Pricing* right - talk to the *Danes* - and include utilities in your local tax calculations. The job of central government is to stop private interests getting in the way of local investments and to enable local development strategies by shutting down private utilities - tax them 'til their pips squeak - and phasing out *Whitehall* and *County Council* budgets over a single parliament.

This is the *Labour Party's* back-to-basics way to renewal.

30. Cloud Cuckoo Land

first published on Sunday 18th June 2006

Whilst wintering in *Llangolman* I made it through the long dark *Welsh* winter nights by watching *DVDs* of a twelve-part series of *The Best of the TV Detectives* acquired for the price of a copy of the *Daily Express* each weekday for two weeks.

The plot of one of these dramas hinged on a claim that there was no mobile phone signal. The hero of the hour did his research and at the last moment - with the situation at its bleakest for the poor besieged train driver up for manslaughter - a defence witness was rushed onto the stand.

He was an expert on mobile phones and duly explained to the judge and the jury that mobile phone signals are affected by wind and rain.

The strength of a mobile phone signal dips in the rain - and in sleet, snow and hail. The heavier the precipitation the greater the interference. So next time you are on the train tell your caller that it is raining outside as well.

This presents an interesting opportunity for a new era of *Gentlemen* and *People Science*. Mobile phone networks can replace radar as a back-up to rain gauges - with the big advantage that they record what happens under the clouds instead of guessing that where there are clouds there must be rain like the radar does.

But then guessing is what meteorologists do - and climatologists have carried on the tradition.

The atmosphere is a big mystery. The *Carbonistas* like to push the notion that *Global Warming* is going to raise the temperature so more moisture will evaporate from the ocean and put more moisture into the air and that this will increase the *Greenhouse Effect* by fifty percent.

Their computer models tell them that a doubling of CO_2 in the air will heat the planet by 3 to 8 degrees Celsius.

The trouble is when you talk to people who understand things like the scientists at the *Center for Clouds, Chemistry and Climate* in *La Jolla California* they tell a rather different story.

A warmer moister atmosphere will create a different pattern of cloud cover. This might dramatically enhance the heating - or it might counteract it.

Five years of satellite measurements between 1984 and 1989 established that clouds cool the

planet more effectively than they heat it - for now. Clouds remove the heat of a 60-watt light bulb from every six-by-six foot patch of *Earth's* surface.

These results show that net cloud cooling is four times greater than the warming expected from doubling CO_2 . Without clouds the planet could be twenty degrees hotter.

So clouds matter - so water is one of the greenhouse gases that *Carbonistas* have mixed feelings about because it might just play merry hell with their *Carbon Story*.

The H_2O molecule has four times the power of the CO_2 molecule. So the climate modellers take the only course open to them. They make a stab at it when it comes to clouds.

As far as cloud cover is concerned they guess - although it is only the very best scientists that call it that.

The rest use words like estimate, parameterisation or approximation. But how do you approximate something you don't understand? Finger in the wind? Whistle in the dark? It's a guess. But perhaps the humble mobile phone can come to the rescue.

The evidence is not there yet but the thinking is that if the mobile phone mast is picking up fluctuations caused by wind and rain then it is probably reacting to shifting levels of water vapour in the atmosphere as well.

Mobile phone masts might not be the scourge we all thought they were. They could be the leading edge of the *War Against Global Warming*. Now

there's a thought - and a rather useful one - because collecting scientific data is no simple matter. It is no accident that so much science is qualified by the term 'under laboratory conditions'. Operant conditions have a way of playing havoc with the best-laid scientific hypotheses so good scientists always record all of them.

Take the temperature-time series to illustrate. You can do one of two things. You measure the temperature in the same place for as long as possible - hopefully for centuries - or you measure under similar operant conditions.

The first course of action seems to make sense because the shape of the landscape affects the local climate. A number this side of the hill will not be the same as one from the other side.

But there is a problem. A hundred years ago your measuring point was in the middle of a field five miles out of town. Today it's in the middle of a shopping centre.

In fact as a general statement towns have expanded to overwhelm most of the climate scientists' data collection points.

Built-up environments are several degrees warmer than similar places without people. On that at least there seems to be a consensus - although I have not delved that deeply and have become skeptical about the idea of consensus.

So what does our poor scientist do? He looks for an article in the scientific press with a graph of temperature versus land use.

He gets a little hot under the collar when he sees that it swamps any shifts in his own data but he has learnt how you do this sort of thing in college - and besides everybody else does it. It is best practice. So he alters his data.

He has clever names for these alterations like correcting for anomalies. But to you and me what he is actually up to is crossing out the numbers he measured and replacing them with different numbers that he has made up. Now just a minute! What we thought was raw data is now adjusted raw data.

And this brings in a whole new question about how the data is adjusted, where that graph came from, what algorithms are being used and the different operant conditions at the graph site and the measurement site.

Even something as simple as collecting data is far from simple.

31. Sunken Knowledge

first published on Sunday 25th June 2006

Christopher Strangeways is in the vanguard of environmental activism in and around *Rye* and is the mastermind behind the *Rye Farmer's Market*.

As he is thinking of entering mainstream local politics by standing for the *Rye Town Council* next year he has started addressing such local issues as a *Town Programme* to counter the effects of *Global Warming*.

During a recent e-mail exchange I pointed him to my *Climate Blog* and he responded by giving me his understanding of what my climate blog was saying.

Christopher picked up on Michael Crichton's presentation in *State of Fear* of the idea that increasing concern for the environment since the fall of the *Berlin Wall* had been orchestrated by those with an interest in creating a crisis to preoccupy *The West* - and that this *Fear Generation* had got out of control.

I share Crichton's suspicion about the *Fear Factories* but *Fear Generation* being out of control is mine - though not my central idea.

I don't think I suggested that environmental fears were irrational and based on dodgy science - although this might be the case - so I responded to this interpretation of my views by remarking that my principal concern was the extent to which the *Climate Change* scene was bedeviled by bad science.

Everybody was spinning findings that were derived from preconceived prejudices and manipulating public information.

For the *Environmental Movement* this was a mistaken strategy. They should change tack and be seen as cleaner than clean whenever they adopt scientific findings to champion a particular case. Truth will win through in the end. The quality of the science matters.

I was also concerned to see a shift in the way the *Precautionary Principle* was applied. To do any-

thing just because the situation was desperate begged two questions.

Firstly how desperate was the situation and secondly whether what was being suggested would help or hinder.

The answers at the moment are that we don't know whether the situation is desperate - the data is ambivalent, poorly collected and badly processed - and we don't understand the planet's climate. So we have no way to appraise the consequences of our meddling.

While in this state of limited knowledge *Environmentalists* should be skeptical about the *Smoke and Mirrors Departments*.

Bad science is always bad science, every scientist is paid by someone and pipers calling the tune have agendas.

In summary I am calling for intellectual clarity. One thing we know little about is *Ocean Algae*.

For centuries there has been anecdotal evidence that small creatures can sense the approach of earthquakes. But it now turns out that tiny algae in the sea are every bit as sensitive to earthquakes.

Studies of recent earthquakes with epicentres close to the coast - *Gujarat India* (2001), *Algeria* (2002) and *Bam, Iran* (2003) - have supplied evidence of a huge surge in *Chlorophyll* levels just before a quake.

It might therefore be possible to programme satellites to flag up unexpected algal blooms and to use

this data as the basis for a reliable *Earthquake Early Warning System*.

The behaviour of algae is important because algae fix half the world's *Carbon*. Every year more CO_2 is produced than can be accounted for in the atmosphere so the numbers don't work out.

Algae and photosynthesis might explain the missing CO_2 and *European Oceanographers* may have found the missing *Carbon Sink* and how it works.

Water surging into the open ocean from the *Iberian Peninsula* pulls *Carbon* out of the air. Nutrient-rich water from a deep *Upwelling* near the coast causes a burst of algal growth.

When algae are eaten the CO_2 they absorb is recycled back into the atmosphere.

But some of the water travels hundreds of miles out into the *Open Atlantic* causing even more algae to grow.

In the open ocean the algae simply die and sink taking their *Carbon* with them. The effect is much greater than was previously realised.

Something else that has been puzzling *Ocean Researchers* is the way that half the algal species in our oceans need to take in *Vitamin B12* from outside in order to grow properly. They do so by means of a beneficial relationship with bacteria.

Here is the science.

It seems that no algae have the necessary genes to produce *Vitamin B12*. Those that do not require a supply are like higher plants with an alternative metabolic process that does not need the vitamin.

However algae that need *Vitamin B12* cannot make it themselves and must get it from somewhere else.

But the numbers do not add up because the amount of *Vitamin B12* required to grow the types of algae that do not need the vitamin in the laboratory is much higher than natural levels in the seas and rivers.

It turns out that in the natural environment *Bacteria* supply the necessary *Vitamin B12*. But this is not a one way relationship. The algae support the bacteria by providing them with *Carbon* from their own photosynthesis.

What these observations demonstrate is that although algae live by harvesting the sun's energy through photosynthesis many of them are like animals in that they need another organism to supply them with a vital nutrient.

Time and time again as you look at the science it becomes apparent that these are early days in *Climate Science*.

Caution and not desperation is what is called for. Don't just do something - anything - stand there!

32. Right Science

first published on Sunday 2nd July 2006

In our stupidity we have entrusted computers with the job of forecasting our future.

But since this is impossible the machine-minders in their grey suits and white coats have been busy inventing new fears and forecasting imminent dis-

asters to back-up their own self-seeking wild-eyed prophecies.

In half an hour our nuclear reactor in the sky ninety three million miles away showers our back gardens with enough power to keep everyone in energy for a year.

Behind the *Kyoto Protocol* on carbon emissions was a *UN* report claiming a scientific consensus that global warming is real, damaging, man-made and caused by burning fossil fuels - economical with the actualité springs to mind.

It is doubtful whether more than one in four climate scientists would voluntarily sign this statement if it were given a full page in a leading daily newspaper.

But scientists are fighting back and refusing to be misrepresented in these dodgy dossiers. The *UN* is running scared too.

A footnote in the latest draft of *IPCC's* next climate change report removes the phrase 'caused directly or indirectly by human activity' and replaces it with the fluffy 'any change over time whether due to natural variability or human activity'.

This is tantamount to admitting that *Kyoto* is based on a pack of lies or - more charitably - on a case which is unproven.

We are told that 99% of the earth's atmosphere has no insulating properties and only *Carbon Dioxide* keeps the earth at an even temperature.

But insulation theory tells us that the secret of effective insulation is still air.

Then there are sea levels - whatever that means in spherical geometry. Sea levels don't rise and fall they move around.

Twice daily the sea surrounding my houseboat goes up and down six feet and then drains away leaving me high and proud on the mud.

Meanwhile the waters of my local *North Atlantic Ocean* swirl around like water in a cooking basin. A planet moving through space at speed produces tides and currents in its oceans.

Untold billions of pounds is being siphoned off to utility bosses, jerry builders, crooked politicians and bloated bankers on the back of fraudulent prospectuses. Only our *House of Peers* and the *Audit Commission* puts up any token resistance.

The claim that nuclear power can solve the problem of rising sea levels is humbug. Rising sea levels make nuclear plants unfeasible because all the existing sites would be six fathoms deep.

Feasibility studies will need two contradictory sets of predictions. One lot for building new plants and another to prove they will be safe for 100 years. Ignorant is a polite way to put it.

How much energy will it take to make and move all that construction concrete and pump billions of gallons of cooling water to the steam kettles high on the *Yorkshire Moors* - on the off chance oceans overrun the coastal plains 100 years hence?

The *Nuclear Energy* account will be millions of gigawatts in the red - and rising - before any nuclear plant opens for business.

It makes more sense to shut down existing plants, drape black roofing felt over them and run a few hundred miles of water-filled copper coils on top of them. Atomic power that was *Too Cheap To Meter* in the 1950s is *Too Expensive In Energy* today.

But the root of the problem lies elsewhere - in our 19th century piped energy mentality.

The national piped energy grids - electricity, oil, gas and hydrogen - must be dismantled. Water leaks can be plugged by replacing broken pipes.

But leaking energy is what electricity grids do, leaking oil is what oil pipelines do eventually. And who needs to strap explosives round their waist when gas pipelines criss-cross the country.

Each town and every county, each village and every urban parish needs to disconnect from the national piped energy grids.

But to ask the nuclear, oil, electricity, hydrogen and utility industries to take the initiative is like expecting turkeys to vote for Christmas.

My investment tip is black roofing felt and recycled copper piping from telephone cables made redundant by glass fibre optics.

A hundred years ago the world's leading *Economic Geographer* predicted that the politics of the 20th Century would pit *Locality* against *Interests*. *Locality* has been losing heavily.

There are no adequate theories of locality and the wealth of villagers. There are no examples of viable self-sufficient *Village States*. The *Napoleons of Notting Hill* are ridiculed. The *Good Life* for

all the community - real people in real places - never makes it through the planning jungle.

Without viable alternatives outside interests will continue riding roughshod over local people.

Countervailing power needs harnessing to stop the scientific juggernaut of the *Political-Legal-Media (PLM)* complex and its *Big Banks, Big Industry and Big Government (BIG-BIG)* backers.

The interests of *Homecomers* are not those of the *Onward and Upward* brigade - to use the terms coined by E.F.Schumacher 40 years ago to explain the idea of an *Intermediate Technology Development Group*.

A coalition of *Gentlemen Scientists* and *Royal Scientific Societies* needs to reclaim *The Idea of Science*.

The *Dodgy Climate Dossiers* provide the opportunity. The task of the *Human Scale Movement* is to represent the inside interests of real people in real places, to design models for right livelihood in the towns and in the countryside.

The movement must furnish *Local Fronts* with the tools and recipes to bypass the moneylenders and traders and invest in their own solutions to their own problems. Control of *Science* must pass out of the dead hands of *Interests* and flow into the life-giving care of *Locality*.

Another Schumacher innovation - the *Soil Association* - shows the way forward. The *Human Scale Movement* - the champions of locality over outside interests - must put our own mark on scientific research so that ordinary people can discriminate

between *Good Science* and *Bad Science* just as the *Soil Association Mark* enables them to distinguish between *Good Food* and *Bad Food*.

But as the *Organic Movement* has discovered this is necessary but not sufficient. A loose-knit world-wide organisation that academics, scientists and activists can join is also needed. Over the past 40 years the *Organic Movement* has developed recipes that a *Real Science Movement* can adopt.

The *International Federation of Organic Agriculture Movements (IFOAM)* is a new form of organisation that is neither trade association nor special interests lobby group but a functional democratic confederation of individuals and small societies who share a mutual interest in *Good Food*, *Good Soil* and *Good Farming*.

This is what the *Real Science Movement* needs.

Internally *IFOAM* provides space for inside interests to resolve their differences and grapple with their mutual problems.

Externally *IFOAM* supplies the ambassadors and the diplomatic function that *Good Food* interests needs to negotiate effectively with *Global Agribusiness*.

Just as food is too important to be left to the *Agriculture Industry*, science is too important to be left to the *Science Business*.

33. Good Science

first published on Monday 2nd October 2006

From William of Normandy in 1066 to Dwight Eisenhower in 1944, *England's* fortunes have been hostage to the weather.

The ferocious winter of 1941-42 was an ordeal for the long-suffering *English Speaking Peoples* of these war-torn *European Offshore Islands* cowering in their air-raid shelters.

But for *Nazi Germany* it was a catastrophe. Its impact on their invasion of *Russia* was as devastating as the storms that scattered the *Spanish Armada*.

At the end of 1941 temperatures on the continent dropped to minus forty - the same number in *Centigrade* and *Fahrenheit* - machinery froze and hundreds of thousands of troops froze to death. *Hitler's Blitzkrieg* was stopped dead in its tracks. The *Nazi Military Machine* never recovered and was destroyed at *Stalingrad*. We were very lucky.

Two years ago *Swiss* climatologists figured that *Hitler* should have consulted his *Argentinean Agents* instead of his *Astrology Charts*. Then he would have seen it coming.

Just the right kind of *El Niño* set off the disturbances in the stratosphere. This surged like a wave across the globe and created the extreme conditions in Europe. Wonderful stuff hindsight.

But with stories like this doing the rounds it is no wonder that the *Global Supremacy Boys* show such a keen interest in *Climate Meddling*.

It will all end in tears. But put out enough propaganda and the idiots will put down the ensuing disasters to *Global Warming* - and dig deep into

the *Public Purse* to solve the problem by redoubling the *Kyoto Carbon Emission Targets*. *Useful Idiots* was Lenin's phrase for people who could be fooled all of the time.

A study from the *Supporters of Nuclear Energy*, the *Society of Motor Manufacturers*, the *European Chemicals Association* or the *American Petroleum Institute* will normally be broadly supportive of the issuer's publicly stated positions - otherwise the report will be hidden away in a bottom drawer. Normal people bear this in mind.

The same is true for reports from the *World Wildlife Fund*, *Greenpeace*, the *Soil Association*, the *International Society for Ecology & Culture* or *The Ecologist*. More enlightened people bear this in mind - in much the same way. Leaks and *Whistle Blowing* complicate matters because some is bottom drawer stuff - and some is disinformation.

Whatever the source, an *Act of Discernment* is required to discriminate between *Fact* and *Truth* on the one hand and *Prejudice* and *Untruth* on the other. Whether any particular individual is capable of *Right Discernment* is another matter - the discernment of a *Third Party* might be called upon.

Governments once provided such a service by taking the *Public View*. They were the *Competent Receiver* of the *Common Wealth* and the *Impartial Discriminator* of the *Common Sense*.

But no longer. Nowadays *Government* are rightly seen as just another *Outside Interest Group* - with their own *Special Pleadings* and their own *Private*

Agendas. So who is sound? Where resides *Common Sense*?

In these days of public relations, media manipulation and advertising, *Front Organisations* distribute results and a *Tied Tenancy* carries out the studies. *Scientific Research* is tuned by the *Piper's Patrons*.

The Congress of Racial Equality, the Rowntree Foundation, Scientific Alliance, the Competitive Enterprise Institute and the Heritage Foundation? Where do they stand? Who do they represent?

These are not disinterested bodies. They have their own agendas - some of them open and some of them hidden - and they have paymasters with other agendas. What to do?

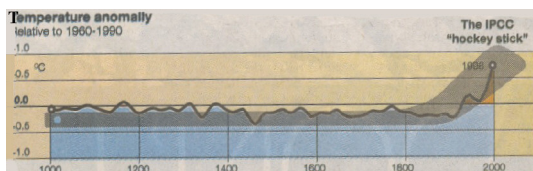
34. Medieval Warm Period

first published on Friday 10th November 2006

In 2004 John Youngdahl was charged by the *Securities and Exchange Commission* with *Securities Fraud* and *Insider Trading*. In October 2001 Youngdahl found out that sales of the *Treasury Department's* 30-year bonds were going to be cut off. He found this out before the news was made public - and gave his firm's *Bond Traders* the tip-off. In a matter of minutes they made a killing estimated at £3.5 million. Youngdahl was working for *Goldman Sachs* at the time and is now behind bars - incarcerated in the *Land of Striped Sunshine*.

Ways need to be found to put scientists in the dock too. They have their own forms of *Insider Trading*

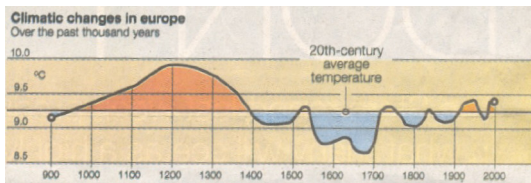
and need to be held publicly accountable for their *Scientific Fraud*. So far they have had an easy ride. This particular buck starts and stops at the top with the *United Nations* and its corrupt *Inter-governmental Panel on Climate Change* which stands accused of knowingly undervaluing the sun's effects on historical and contemporary climate, slashing the greenhouse effect, overstating the past century's temperature increase, arbitrarily repealing a fundamental law of physics for political convenience and tripling the man-made greenhouse effect to shoehorn its computer data into its prejudices.



IPCC's third assessment report released four years ago is a *Scientific Fraud* - right up there with the *Blair Dodgy Dossier* on non-existent *Weapons of Mass Destruction* in *Iraq*. The report implies that carbon dioxide ended the last four ice ages by displaying two 450 000 year graphs - a sawtooth curve of temperature and a sawtooth of airborne CO₂ that is scaled to look similar. Usually similar curves are superimposed for comparison. The *IPCC Report* didn't. If it had the truth would have shown - the changes in temperature preceded the changes in CO₂ levels.

Shepherd on Climate

In 1995 David Deming - a geoscientist at the *University of Oklahoma* - reconstructed North America's historical temperatures from borehole data. He later wrote: 'With the publication of my article in *Science* I gained significant credibility in the community of scientists working on climate change. They thought I was one of them - someone who would pervert science in the service of social and political causes.' One of the more important players foolishly let his guard slip and sent Deming an email that said 'We have to get rid of the *Medieval Warm Period*.' So they did.



The second *IPCC Report* in 1996 showed a 1000-year graph demonstrating that temperature in the *Middle Ages* was warmer than today. But the third *IPCC Report* in 2001 contained a new graph showing no medieval warm period. It concluded that the 20th century was the warmest for 1000 years. This is wrong. Here is how it was done.

Firstly *IPCC* gave one technique for reconstructing pre-thermometer temperature four hundred times more weight than any other - and omitted to mention the fact. The over-weighted technique was one which *IPCC's* second report had said was

unsafe - measurement of tree-rings from bristle-cone pines. Tree-rings are wider in warmer years because temperature speeds up growth. But tree fertiliser speeds up growth too and one of them is carbon dioxide so this distorts the calculations unless some way is found to make allowance for shifting carbon dioxide levels.

This might be bad science but need not be criminal. But closer scrutiny shows that the deception goes deeper - a domain of barefaced lying and *Scientific Fraud*. *IPCC* stated that 24 data sets were included going back to 1400. But without saying so they left out the set showing the medieval warm period - tucking it away in a folder marked 'censored data'.

IPCC then used a computer model to draw the graph from the data. Now anyone with a rudimentary knowledge of statistics knows you can best fit data to any curve. Give it $a=x+b$ and you will get a straight line. Give it $a=x$ to the power of b and you will get a curve. *IPCC* asked for hockey-sticks so it got them - even from random electronic 'red noise'.

The large full-colour hockey stick was the only graph to appear six times in the *IPCC Third Report* in 2001. The *Canadian Government* copied it to every household. It is a lie. It took four years for a leading scientific journal to publish the truth. It was ignored. The *Canadian Government* did not apologise...and *IPCC* still uses it. The good news is that the *US Senate* investigated. They unearthed a conspiracy, labelling the graph 'meretricious' and noting that known associates of

the scientists who had compiled the graph wrote many of the papers supporting its conclusions.

IPCC - and the *Stern Report* - pretend the graph is not important. But scores of scientific papers show the medieval warm period was real, global and up the 3C warmer than now. There were no glaciers in the tropical *Andes*, *Viking* farms in *Greenland* and little ice at the *North Pole* when a *Chinese* naval squadron sailed round the *Arctic* in 1421.

35. Climate Thermodynamics

first published on Saturday 11th November 2006

Two centuries ago the astronomer William Herschel was reading Adam Smith's *Wealth of Nations* when he noticed that grain prices fell when the number of sunspots rose. Temperature tends to be warmer at solar maxima so grain grows faster. Better harvests. Lower prices. Farmers always complain of terrible harvests or ruinous prices. In the second half of the 20th century the sun has been at its hottest for over ten thousand years. This is a fact. The influence of this particular *Forcing* on the temperature of *Planet Earth* is the very stuff of *Skulduggery* and *High Treason*.

The *Intergovernmental Panel on Climate Change* dates its *Temperature Forcings* from 1750 when the sun was as warm as now. But its start-date for the increase in world temperature is 1900 when the sun was much cooler. This is just a little too contrived - *Scientific Fraud* in fact - because the warmer the air the more water vapour it holds.

Water is a very odd substance. *School Physics* has taught my generation that water expands when it freezes which is why unlagged pipes spray water everywhere in the thaw after *The Big Freeze* - and why there are fish to catch beneath the thin layer of air under the two feet of ice in which *Swedish Sports Fishermen* cut their holes in the depths of winter. Afterwards they pile into their saunas, drink beer - and sweat profusely before diving into the ice-cold lakes to join the fish they failed to catch. Sweating only makes sense because of the odd properties of water.

In the *Climate Changelings' Theology* Carbon Dioxide is just one of several *Greenhouse Gases*. *Methane* is another. And *Water* another. Both *Methane* and *Water* have an impact many times greater than *Carbon Dioxide*. In scientific terms demonising *Carbon Emissions* means slaughtering cows and eradicating termites to reduce *Methane Emissions*. According to the *Carbonistas* the *H₂O* molecule is four times better at destroying the planet than the humble *CO₂* molecule. But not even the *IPCC* has the nerve to ignore water vapour - though they have a damn good try.

The *IPCC* expresses *Heat-Energy Forcings* in watts per square metre per second. Twentieth Century warming from all sources is around two watts per square metre per second. Not only must *IPCC* get rid of the *Medieval Warm Period* they must also ensure that man-made *Carbon Emissions* are responsible for a significant proportion of this 2.0 watts. Otherwise there is no case to an-

swer and its case would be thrown out of court. So *IPCC* fiddled the figures.

The first trick was to contrive 0.3 watts for the extent of *Solar Temperature Feedback Forcings*. The figure would have been 0.7 watts if the *IPCC* had adopted 1900 instead of 1750 for its start-date and - 1.9 watts if it had adopted the *Royal Society's* climate feedback 2.7 multiplier guideline. Next the *IPCC* slashed the *Natural Greenhouse Effect* by 40 percent from 33C in the climate physics textbooks to 20C making the man-made additions appear bigger.

Finally there is the *Battle of the Lambdas* - the factor converting *Forcings* to *Temperature*. The *Stefan-Boltzman Law* is to the thermodynamics of climate as Einstein's equation $E=mc^2$ is to astrophysics. Boltzman relates energy to the square of the speed of light but by reference to temperature rather than mass. It was derived experimentally 100-years ago by a *Slovenian* professor and proved by his *Austrian* student. Buried in the small print of *IPCC's* third assessment report is the bizarre statement that its climate models had found *lambda* to be 0.5C per watt of *Forcing*. *Lambda* from the *Boltzman Equation* is half this - based on *Experiments with Nature* not *Manipulations with Computers*.

Lambda Inflation is in fashion because the bigger the value of *lambda* the bigger the temperature increase you can predict from any particular set of *Forcings Data*. James Hansen who invented *Global Warming* in his evidence to *Senate Hearings* in the middle of a *Washington Heatwave* offers *lamb-*

das of 0.67, 0.75 or 1.0. John Houghton who chaired the *IPCC* working group trumps this with 0.8 while *IPCC's* computer models now use 1.0. But *The Stern Report* deserves an *Oscar* for its implied *lambda* of 1.9 - between six and eight times the *Boltzman lambda*.

Multiply by *Boltzman's lambda* and temperature rise this century is in line with observation at 0.44 to 0.6C. *Stern's lambda* gives nonsense. The *Hadley Centre* had the same problem so they now have one *lambda* to predict with and another - *lambda* divided by three - to match actual 20th Century temperatures. My *Texan* artist friend Bob Stuart had a parrot in his studio. He had trained it to say 'Get A Rope and Hang The Bastards!' Hark! I hear it even now!

36. Consensus Statistics

first published on Sunday 12th November 2006

Dr Benny Peiser is a social anthropologist at *Liverpool John Moores University* and the editor of the *Cambridge Conference Network (CCNet)*. His research focuses on the effects of environmental change and catastrophic events on contemporary thought and societal evolution. In my 17/5 blog - posted to my climate blog as *Majority Against Orthodoxy* - I mentioned his analysis of scientific papers on *Climate Change* which Dr Dennis Bray of the *German-based GKSS National Research Centre* checked out and endorsed. *The Peiser Analysis* concluded that dissenters were in a healthy majority. Here is my edited version of the

letter Peisner sent to *Science Magazine* for publication.

'On December 3rd 2004, only days before the start of the *10th UN Conference on Climate Change*, *Science Magazine* published the results of a study by Naomi Oreskes. For the first time, empirical evidence was presented that appeared to show a unanimous scientific consensus on the anthropogenic causes of recent Global Warming.

Oreskes claims to have analysed 928 abstracts she found listed on the *ISI Database* using the keywords "climate change". However, a search on the *ISI Database* using the keywords "climate change" for the years 1993-2003 reveals that almost 12 000 papers were published during the decade in question. What happened to the countless research papers that show that global temperatures were similar or even higher during the *Holocene Climate Optimum* and the *Medieval Warm Period* when atmospheric CO₂ levels were much lower than today; that solar variability is a key driver of recent climate change; and that climate modelling is highly uncertain?

These objections were put to Oreskes by science writer David Appell. On 15 December 2004 she admitted that there was indeed a serious mistake in her *Science* essay. According to Oreskes her study was not based on the keywords "climate change" but on "global climate change". Her use of three keywords instead of two reduced the list of peer reviewed publications by one order of magnitude. On the *UK ISI Databank* the keyword search "global climate change" comes up with

1247 documents. Since the results looked questionable I replicated the *Oreskes Study* by analysing all abstracts listed on the *ISI Databank* for 1993 to 2003 using Oreskes' keywords.

1117 of the 1247 documents listed included abstracts - 130 listed only titles, author' details and keywords. The 1117 abstracts analysed were divided into Oreskes' six categories plus two which I added: explicit endorsement of the consensus position; evaluation of impacts; mitigation proposals; methods; paleoclimate analysis; rejection of the consensus position; natural factors of global climate change and unrelated to the recent global climate change issues.

My results contradict Oreskes' findings and essentially falsify her study: Only 13 (1%) of the 1117 abstracts explicitly endorse the *Consensus View*. 322 abstracts (29%) implicitly accept the *Consensus View* but mainly focus on impact assessments of envisaged global climate change. 89 (less than 10%) focus on mitigation; 67 on methodological questions; 87 deal exclusively with paleo-climatological research unrelated to recent climate change; 34 reject or doubt the view that human activities are the main drivers of the 'the observed warming over the last 50 years' and 44 focus on natural factors of global climate change. 470 abstracts (42%) include the keywords "global climate change" but do not include links or reference to greenhouse gas emissions or anthropogenic forcing of recent climate change.

According to Oreskes, 695 of the 928 abstracts (75%) 'either explicitly or implicitly accepting the

Consensus View'. This claim is incorrect on two counts. Only 424 abstracts - less than a third - fall into Categories 1 to 3 and many abstracts on 'evaluation of impact' and 'mitigation' do not discuss the drivers of global climate change but concern themselves with the effects of elevated CO₂ levels on plant growth and vegetation. Many do not include any implicit endorsement of the *Consensus View* but discuss hypothetical impact assessments or mitigation strategies.

Quite a number of papers emphasise that *Natural Factors* play a major if not the key role in recent climate change. There are almost three times as many abstracts that are sceptical of the notion of anthropogenic climate change as explicitly endorse it. In fact, the explicit and implicit rejection of the *Consensus View* includes distinguished scientific organisations. This is not to deny that a majority of publications go along with the view of anthropogenic climate change and apply models based on its basic assumptions. Yet it is beyond doubt that a sound and unbiased analysis of the full *ISI Databank* will find hundreds of papers - many by the world's leading experts in the field - that have raised serious reservations and outright rejection of the concept of a *Scientific Consensus* on climate change.'

On 18th February 2005 Peisner received the following reply from Etta Kavanagh, *Associate Letters Editor* at *Science Magazine*. 'Dear Dr. Peiser, a couple of weeks ago you submitted a *Letter to the Editor* on Naomi Oreskes' essay *The Scientific Consensus on Climate Change*. In its current form

it is too long for a letter but we would consider a shorter version if you are willing to edit it. It should be 500 words or less, not counting the references. A correction dealing with the mistake in the search terms "global climate change" vs. "climate change" was published in our Jan. 14 issue. ' Well that's all right then. My tip is to sell shares in companies trading in *Carbon Emissions* - or bet on their collapse.

37. The Ozone Story

first published on Sunday 26th November 2006

If the Ozone in the atmosphere were compressed into a layer on the ground it would be a few millimetres thick. If a 100-yard football pitch represents the *Earth's* atmosphere the width of the chalk line is the amount of *Carbon Dioxide*. If a scientist came up with a *Homeopathic Theory of Atmosphere* I might believe minute quantities of *Ozone* and *Carbon Dioxide* are crucial to life on earth. But homeopathy is being rubbished. And *Atmosphere Theories* to date are clearly nonsense. *The Ozone Story* - like the *Carbon Dioxide Story* - is complicated and poorly understood.

200-years ago Friedrich Schönbein noticed a strong odour lingered in the air after a lightning strike on a church near his home in *Basle*. 40-years later he noticed a similar smell when he passed a current through water. He named the substance ozone after the Greek *ozein* 'to smell'. He experimented and found the gas had some very unpleasant effects. It affected breathing,

caused chest pains and irritation of the mucous membranes and killed small animals.

Oxygen we breathe has two oxygen atoms - *Ozone* has three. Airlines fly at six miles. From here to thirty miles is a rarefied ozone layer - a *cause célèbre* for *Environmentalists* since 1985 when holes were found in it over the poles. A few of us pointed out that this was to be expected if the earth was spinning on its axis. But in September 1987 the *Montreal Protocol* banned *chlorinated fluorocarbons* (CFCs). Subsequently this agreement was trumpeted as proof that a *One World Government* is needed to make such agreements and exact compliance from recalcitrant states.

We were told that the *Ozone Layer* is repairing itself and would be hunky-dory by 2050. Then a month ago NASA's *Aura Satellite* photographed an *Ozone Hole* over the *South Pole* of 10.6 million square miles - close to the record 11.4 million square miles on 9th September 2000. Handbrake turns at the far end of an elliptical orbit will swirl the ozone layer about. Yet *Ozone Layer Theories* fail to take such a dynamic planetary orbit approach to the *Ozone Hole*.

Back on *terra firma* it is a well-known fact that pollution from industrial emissions and car fumes builds up in hot sunny weather. *Ozone* is accused of playing a big part in the subsequent *Smog Problem*. *Ozone* is also accused of damaging vegetation in rural areas 'because wind can carry *Ozone* and the pollutants that form it hundreds of miles'. Perhaps someone can explain the mechanism to me. But until then I will stick with my

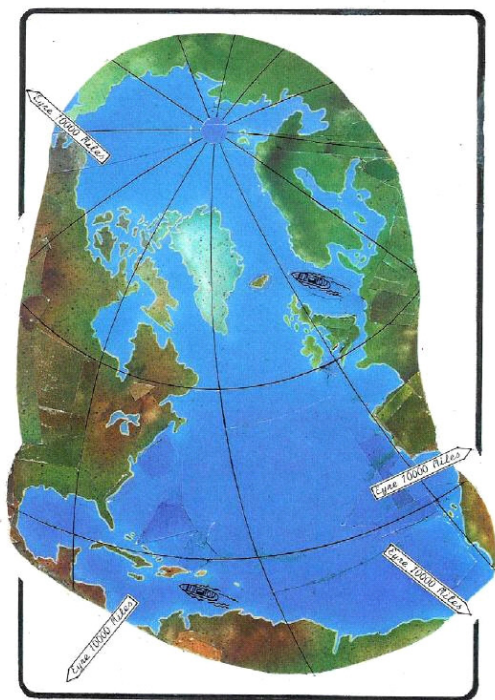
anecdotal expertise. I was in *London* for the *Great Smog* of December 1952 which killed 12 000 people and led to calls to outlaw coal-burning.

Fifty years ago *Parliament* passed the *Clean Air Act* banning coal smoke. In the early years of the twentieth century November in *Central London* averaged a total of just 38 hours of sunshine. After the *Clean Air Act* the hours of daily sunshine improved hugely throughout the winter months. By the end of the century November's sunshine in the capital had soared to more than 70 hours with lichens recolonising the capital's trees, parks and gardens.

In December 1952 the smog was as acidic as a car battery. The corrosive effect of centuries of acidic smogs eating into metal and stonework disappeared when buildings were scrubbed clean of grime and black soot. By the end of the millennium *London* was sparkingly clean. Back in the days that the climate computers were being run in reverse to predict a *Nuclear Winter* the dust particles in the atmosphere were key parameters. Erupting volcanoes were also charged with depositing dust in the atmosphere. Yet where are these *Clean Air Acts* in the *Global Warming Studies*?

THE END

Shepherd on Climate



**The Next United Kingdom
by
William Shepherd**

The Next United Kingdom

The planet we inhabit is a sphere - of this we are assured by the evidence of the satellites that we send into space to take its picture.

Globes are three-dimensional objects while maps are typically two dimensional. Transferring three-dimensional information to a two-dimensional flat surface requires a technique.

The techniques most commonly adopted for our planet have had as their principal purpose the propagation of some nationalism or other. The latest of these is called *Internationalism* and being the biggest is both the most dangerous and the most deceptive.

This map is no exception but my nation is the circle of my friends and these typically live at the boundary between the water trails criss-crossing the *North Atlantic Ocean* and the land trails fanning out from the ports, harbours and estuaries where their forefathers rested their vessels and reprovioned them for further exploration.

At certain places on our planet the three elements of earth, air and water can be found coming together and merging into one another.

These places are not fixed but ebb and flow with the rhythms of the cosmos. Joined together on maps these land-falls appear as shore-lines.

The only map that accurately represents surface areas is *Buckminster Fuller's Dymaxion Map*. Our map distorts like all the others.

But in like manner to satellite cameras it distorts only to the extent that the eye delivers a distorted image when it gazes at a globe. And that means that the mind can deduce the three-dimensional shape with practice.

This projection takes a point between *Norway* and *Siberia* - not the *North Pole* - slices a great circle through Stockholm and then peels thirty degree segments from this northerly point.

Four water trails lead out of the *North Atlantic Ocean* to other places on the planet. 200 years ago there were just two.

Then the *Suez* and *Panama Canals* were built to the great confusion of our modern day politicians whose ideologies were invented before the engineers set to work.

The mountain pass at the top is narrow enough to allow the *Siberian* and *Alaskan Electricity Grids* to be connected. The pass at the other end of the lake is a couple of sailing days wide.

Whether you go by mountain pass or the man-made water trails cut through the mountain ridges sloping down into the *Pacific* and the *Indian Oceans* you can if you will make a journey by water of about 10 000 miles and arrive on the *Great Australian Bight*.

This is where you will find the *City of Eyre* - that is what the signs say. Contrary to popular belief you can get there from here - ..several ways. That's *Spherical Geometry* for you.

Canterbury, Kent December 1989

Shepherd on Climate

Declaration of Independence

The Hathaway Great Hedge of India Fund
and the
US Bill Gateway Project
for
Privatising the United Nations Organisation
are not funding
this
cesc publication

Energy Wars

By

William Shepherd



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Energy Wars by William Shepherd

The Special Relationship

Deep in the heart of *Texas*, a small arrogant clique of ailing cold-war gladiators is busy fighting the last energy war, working to a master plan drawn up decades ago by *America's military industrial complex*.

Their intention is to secure for *America* the world's dwindling oil supplies by ringing the last remaining oil fields with *American Military Bases*. As the only ones that really matter are in the *Middle East*, the *USA* is aided and abetted by *Israel* and its *Jewish Diaspora*...or at least the *Zionist* wing of it.

This is a marriage of convenience that will last just as long as it is politically correct for the *American Mid-West* to believe that good old farm boys from *Kansas* will be happy defending *Jewish* settlements in *Palestine*.

Europhiles suffer from similar illusions in believing that the *Galway Militia* will roll out of the pubs and volunteer as cannon fodder when *Karelian* tanks roll into *Estonia*.

Meanwhile at the rotten heart of *Europe* there are still bureaucrats so bedazzled by the lure of a centralised energy supply system for *Fortress Europe* that they continue to push a fifty year old technology already decades past its promised sell-by dates.

No sane person believes that space heating at a hundred degrees can be sensibly supplied by boiling a super-charged kettle to the sort of tem-

peratures best left ninety three million miles away at the centre of the sun.

Indeed as early as 1923 John Burden Sanderson Haldane remarked that 'on thermodynamical grounds which I can hardly summarize shortly, I do not much believe in the commercial possibility of induced radio-activity...' But that is only half of it.

Fritz Schumacher was never one to mince words when it came to nuclear power. In his 1967 *Des Voeux Memorial Lecture...see Small is Beautiful, Chapter 9 for the full text...* he had this to say:

'No degree of prosperity could justify the accumulation of large amounts of highly toxic substances which nobody knows how to make 'safe' and which remain an incalculable danger to the whole of creation for historical or even geological ages.'

'To do such a thing is a transgression against life itself, a transgression infinitely more serious than any crime ever perpetrated by man.'

'The idea that a civilisation could sustain itself on the basis of such a transgression is an ethical, spiritual and metaphysical monstrosity. It means conducting the economic affairs of man as if people really did not matter at all.'

New Kids On The Block

In the last couple of decades a third set of players have started muscling in on this special relationship.

These are the well-intentioned reformers from green parties around the world, vociferously supported by the woolly-minded fringes of the global

alternative movement who believe that a *United Nations* led coalition of right-thinking *Non-Governmental Organisations* can grab the reins of our emerging *One World Government* and impose upon ordinary people the type of regime that Aidan Rankin in *The Politics of The Forked Tongue* refers to as 'authoritarian liberalism'.

These noble souls truly believe that a planetary paradise will arise some day from the ashes of the fossil fuel age if they impose their version of *Earth Summit* and *Kyoto Agreements* on intransigent transnational corporations, reverse the clauses in the *World Trade Organisation* statutes and ban the burning of coal, oil and natural gas in cars, homes and businesses.

They have a dream in which our hills are alive with the sound of wind mills and fields are full to overflowing with fuel crops instead of opium poppies.

To find out all there is to know about this *Third Energy Way* you could do worse than struggle through the europrose in Hermann Scheer's compendium on *The Solar Economy* translated from the German original, *Solare Weltwirtschaft*, penned three years ago.

But recently a fourth set of players has started gearing up to launch itself upon an unsuspecting world.

So unsuspecting in fact that despite privileged access to leading edge research as a member of the *Deutsche Bundestag*, President of the *European Association for Renewable Energy*, and General Chairman of the *World Council of Renew-*

able Energy, as recently as 1999 Hermann Scheer regarded the hydrogen fuel cell technology at the heart of the proposed new energy infrastructure to be no more than a rather inefficient way to store wind farm electricity surpluses.

This may now have changed as there is clearly big money behind Jeremy Rifkin's ambitious attempt in *The Hydrogen Economy* to demonstrate that the reverse is the case. Rifkin believes that hydrogen will be at the heart of the future energy economy and that solar energy will be just one of several poor relations.

In clearing the ground for his sales pitch, Rifkin does a first rate job of pointing out the reasons that the oil and nuclear emperors have no clothes.

And in doing so he also exposes the ignorance and arrogance of the *Texan* oil barons and provides powerful insights into the out-moded thought patterns pervading what Dwight Eisenhower once called, with strong misgiving, his *Military Industrial Complex*.

Edgy in the knowledge that *al-Quaida* is not the vast mysterious and formidable spectre, fiendishly capable, fabulously rich and incredible cunning, portrayed by their political paymasters, *America's* military planners twitch nervously in the certain knowledge that they will soon be fighting the wrong war in the wrong place against the wrong enemy.

Meanwhile *America's* vast army of military contractors rampage through the global economy, punch-drunk from the massive budget increases

nodded through the *American Congress* with hardly a dissenting voice after the dramatic events of September 11th 2001 and the subsequent puffing up of *al-Qaeda* and the invention of the Osama bin Laden legend. Here is the provenance of Rifkin's proposals.

Energy Chemistry

I n 1874 Jules Verne published *Mysterious Island* in which he gave voice to Rifkin's seemingly quirky notion of a hydrogen economy.

'Water' he wrote, 'will be the coal of the future'. Within a few decades the *Stanley Steamer* was a familiar sight on the bridges of *New England* refuelling from the streams running down the mountainsides.

For several years these cars were serious competitors to their more complicated rivals with their explosion motors and sparse network of fuel suppliers.

But Jules Verne meant something quite different. 'When America runs out of coal', he wrote, 'water is what they will burn instead. Water decomposed into its primitive elements, and decomposed doubtless by electricity, which will then have become a powerful and manageable force.

Water will one day be employed as fuel, that hydrogen and oxygen which constitutes it, used singly or together, will furnish an inexhaustible source of heat and light, of an intensity of which coal is not capable.'

Fifty years later in 1923, J. B. S. Haldane continued the same thoughts in a lecture at *Cambridge University*. This is Rifkin's version of what he had to say:

'In four centuries, Britain's energy requirements would be met by rows of metallic windmills working electric motors which in their turn supply current at a very high voltage to giant electric mains.'

'At suitable distances there will be great power stations where during windy weather the surplus power will be used for the electrolytic decomposition of water into oxygen and hydrogen.'

'These gases will be liquefied and stored in vast vacuum jacketed reservoirs probably sunk in the ground ... In times of calm the gases will be recombined in explosion motors working dynamos which produce electrical energy once more, or probably in oxidation cells...'

'These huge reservoirs of liquefied gases will enable wind energy to be stored so that it can be expended for industry, transportation, heating and lighting as desired...'

For Haldane, chemistry was the key. When trees are stripped from the hillsides of the third world and the charcoal used for heating and cooking (one of the most efficient methods of soil erosion yet devised by man) Nature gives up ten carbon atoms for each hydrogen atom.

When coal is burnt just two carbon atoms go up in smoke with each hydrogen atom.

With oil, decarbonisation goes further and reverses the hydrogen:carbon ratio from 1:2 for coal

to 2:1 for oil. Natural gas takes this still further with four hydrogen atoms for every carbon atom.

So what the world has been doing over the past two hundred years, Rifkin argues, is to deliver more and more energy with less and less carbon.

The sensible way forward is to carry on down this road and go hell for leather for a full hydrogen economy.

Over the past few years this view has been steadily winning adherents in the boardrooms of the banks and the automobile companies.

In their version of our hydrogen future the good citizen's civic duty will be to drive around the block for a couple of hours after work every night to charge up the global energy grid.

No wonder the car makers love the idea. The PR hype will be coming to your Sunday supplements shortly. Rifkin's recent appearances in *The Guardian* should be seen as the opening salvo in a global war for control of these emerging global energy grids.

But there is some sound evidence for his claims.

Small is Visible

Iceland, with a population of a quarter of a million souls, is a tenth the size of *Wales* but has the political independence that allows her to have some say in her energy future.

She is already gung-ho for the Rifkin option. Within 20 years *Iceland* will have virtually eliminated fos-

sil-fuel energy from the country and be running the entire economy on hydrogen.

The plan is to first convert the country's fleet of cars, buses, trucks and trawlers to hydrogen and then use hydrogen to generate electricity and provide heat, light and power for *Iceland's* factories, offices and homes.

Behind this transformation of the country's energy infrastructure is *Iceland New Energy* which is the type of *Private Finance Initiative* (PFI) much beloved by *New Labour* and by the governmental participants in the recent *Earth Summit*.

This particular *PFI* is a joint venture between *Royal Dutch Shell*, *Daimler-Chrysler* and *Norsk Hydro* who have gone into partnership with six Icelandic participants: *The Reykjanes Geothermal Power Plant*, *The Reykjavik Municipal Power Company*, a fertilizer plant, *the University of Iceland*, *the Iceland Research Institute*, and the *New Business Venture Fund*.

The *Icelandic* participants control 51.01% of the venture. 'Well,' as *Private Eye* is wont to say, 'that's alright then!'

But unfortunately what this all comes down to is a choice between the lesser of four evils with each one being pushed by a different cabal of wealth and power grubbing global interests.

Is there a fifth option that might allow us to say none of the above?

I think there is, because whichever way the global cabals dodge and weave, they cannot get away from Nature's truth which is that as much energy

arrives at the *Earth* from the sun in forty minutes as the planet uses in a year.

Haldane was making a similar point when remarking that '...if a windmill in one's back garden could produce a hundredweight of coal daily (and it can produce its equivalent in energy), our coalmines would be shut down to-morrow...'

Energy is not a scarce resource and never will be. The energy problem, like the water problem, is to get the right amount in the right place at the right time and in the right form.

And virtually everything that needs to be said about the right form of energy was said by Avory Lovins in *Soft Energy Paths* fifty years ago and is embedded in the concept of energy quality.

The real political struggle is always between interests and locality, but where energy is concerned the gods have thrown their weight on the side of locality.

Local energy catchment has enormous economic advantages over any piping system the monopolists might come up with.

Energy Morphology

But energy is more than just an energy problem. The *American* economist, Ralph Borsodi was one of the first to really come to grips with the issue.

He discovered in his lifelong experiments into the economic essence of the good life that the one thing that invariably made everything go to hell in

a handcart was for the little individual to connect up to the market.

It made very little difference whether this market was local, regional or global. In the long run the market itself was always bad news and 'Production For Use' was the only sane response.

In the depression years in the United States many families responded to Borsodi's lead by turning their backs on the high life and heading for the good life back on the land.

Borsodi's underlying message has been lost but others have come along since the 1930s with different personal discoveries but much the same message.

John Seymour has spent a lifetime understanding the nature of real wealth and this is why he believes fervently in his ideas of self-sufficiency.

John Papworth has spent a lifetime knocking his head against the brick walls built by the political intrigues of the rich and powerful and this is why he is convinced that competent receivers of power and wealth must be locality-based instead of being at the mercy and whim of outside interests.

Sooner or later local people must grab what is theirs. The place people live is their home and it is theirs to do with as they wish.

But to be able to, they must create democratic local institutions that are robust enough to ensure that the nexus of power never disappears over the brow of the hill.

The natural limit is the parish boundary and the blood cells of a sane civilisation are its villages and urban parishes.

Beyond these limits moral forces can no longer call to account the ways of the wealthy and powerful.

Fritz Schumacher also saw clearly what was needed and this was why he devoted so much of his time and energy to practical ideas like the *Intermediate Technology Group*, the *Soil Association* and the *Scott Bader Commonwealth*, decades before their natural gestation rates would otherwise have placed them on the reformer's agenda.

And it was not just casual editing in Part II of Schumacher's *Small is Beautiful* that placed education as the first of all the resources.

Hierarchies mattered to Schumacher for he knew that if they were not rightly set then it would not be long before the tail was wagging the dog.

Of course industry had a need for resources and for energy resources in particular because 'if energy fails, everything fails'.

But after education came land. And by land, Schumacher meant proper farming on good soil and with sound animal husbandry.

Such esoteric notions like harvesting wind and growing barleycorn to feed society's mobility cravings had no part in Schumacher's thoughts on the subject.

But the ideas that will ultimately transform our local worlds lie deeper than any of their practical manifestations.

One such idea is hidden deep inside Leopold Kohr's writings. Ivan Illich has grasped the quintessential essence of Kohr and has given it the name of social morphology.

Here is Illich in his *E.F. Schumacher Lectures* at *Yale University* in 1994.

'I see Kohr as the one social thinker who picks up the biological morphology of D'Arcy Thompson and J.B.S. Haldane...Kohr discusses society in analogy to the way plants and animals are shaped by their size and sized by their shape...Kohr's thought resists reduction to any scenario of the future....nor is it oriented towards progress...rather he enquires into the form that fits the size...'

Our energy requirements should take a certain form.

We need to think these things through much more carefully before rushing off after the latest brand of snake oil on the market.

Rye, Sussex, England
Thursday 24th October 2002
[Web Version](#)

Endnotes

1. *The full text of Haldane's remarks in his 1923 lecture was as follows:*

'It is on some such lines as these, I think, that the problem will be solved.

It is essentially a practical problem, and the exhaustion of our coalfields will furnish the necessary stimulus for its solution.

Even now perhaps Italy might achieve economic independence by the expenditure of a few million pounds upon research on the lines indicated.

I may add in parenthesis that, on thermodynamical grounds which I can hardly summarize shortly, I do not much believe in the commercial possibility of induced radio-activity'.

2. *The Politics of The Forked Tongue* by Dr Adrian Rankin; Published by New European Publications; London 2002; Price £ 13.95; 155 pages; ISBN 1-8724--1016-2.

3. *The Solar Economy* by Hermann Scheer; Published by Earthscan, London, 2002; Price £ 17.99; 325 pages; ISBN 1-85383-835-7.

4. *The Hydrogen Economy* by Jeremy Rifkin; Published by Jeremy Tarcher, New York, 2002; Price \$ 24.95; 250 pages; ISBN 1-58542-193-6.

5. *The three omissions from the Rifkin quote each represented by '...' in the text were as follows:*

a. 'If these reservoirs are sufficiently large, the loss of liquid due to leakage inwards of heat will not be great; thus the proportion evaporating daily from a reservoir 100 yards square by 60 feet deep would not be 1/1000 of that lost from a tank measuring two feet each way.'

Shepherd on Climate

b. 'Liquid hydrogen is weight for weight the most efficient known method of storing energy, as it gives about three times as much heat per pound as petrol.

On the other hand it is very light, and bulk for bulk has only one third of the efficiency of petrol. This will not, however, detract from its use in aeroplanes, where weight is more important than bulk.'

c. 'The initial costs will be very considerable, but the running expenses less than those of our present system. Among its more obvious advantages will be the fact that energy will be as cheap in one part of the country as another, so that industry will be greatly decentralized; and that no smoke or ash will be produced.'

6. *The full text of Haldane's remarks in his 1923 lecture was as follows:*

'Water-power is not, I think, a probable substitute, on account of its small quantity, seasonal fluctuation, and sporadic distribution.

It may perhaps, however, shift the centre of industrial gravity to well-watered mountainous tracts such as the Himalayan foothills, British Columbia, and Armenia. Ultimately we shall have to tap those intermittent but inexhaustible sources of power, the wind and the sunlight.

The problem is simply one of storing their energy in a form as convenient as coal or petrol. If a windmill in one's back garden could produce a hundredweight of coal daily (and it can produce its equivalent in energy), our coalmines would be shut down to-morrow.

Even to-morrow a cheap, foolproof, and durable storage battery may be invented, which will enable us to transform the intermittent energy of the wind into continuous electric power.'

7. The web version of this essay can be found at <http://hem.passagen.se/aibpeter/energy/energywars.pdf>

Afterword

The *Global Warming Conspiracy* is spilling over into the *National Energy Agenda* which is now marching off in quite the wrong direction. But my *English Energy Agenda for a New Century* and the *Government's* proposals for *Climate and Energy Management* is quite revealing about the *Who? Whom?*

Here are the results of an analysis that reverses the 10-point programme inherent in my response to the official *British Government's Climate & Energy Policy* announced at this year's *Labour Party Conference*. From this analysis real specific conspirators begin to emerge - and it is beginning to look like our usual suspects. The lines of battle are beginning to be drawn.

My first four policy recommendations for immediate action are to outlaw the use and development of *Climate Weapons*; withdraw from the *Kyoto Treaty*; decommission all *Nuclear Power Plants* and stop wasting electricity on space heating.

Hence *Enemy One* is the *Military Climate Weaponry Programmes* in *Russia, US, China* and elsewhere; *Enemy Two* is the *One World Government Conspirators*; *Enemy Three* is the *Nuclear Industry* and *Enemy Four* is all those pulling the wool over our eyes by fraudulently claiming that *Energy Need* and *Electricity Need* are synonymous. They are not - electricity is essential for less than a tenth of our energy needs.

My next two policy recommendations were to adopt *Zero Tolerance* and *Polluter Pays* policies

for emission of all substances into *Landscape* and *Atmosphere*. Hence *Enemy Five* is those who are using the fraudulent *Carbonista Theology* to limit *Private Corporate Liability* from their much wider responsibilities to eliminate all pollution and implement *Closed Recovery & Recycling Systems* throughout the *Supply Production & Distribution Chain*.

Enemy Six is the same as *Enemy Five* but the *Looting Mechanism* is different. Instead of avoiding paying the full public costs of their *Commercial Operations* the trick is to get the *Public Purse* to pick up the *Capital Investment* tab for staying in business and reaping future profits.

In my *Energy Wars* article I discuss *Energy Chemistry* in which our steady shift from *Carbon Energy* to *Hydrogen Energy* is explained. The *Carbonista Theology* allows the costs of this shift in raw feed material to be dumped on the public - enhancing the profits raked in for *Private Gain*.

Enemy Seven is the *National, European and Global Economic & Political Forces* intent on preserving the piping and metering mentality to energy distribution for oil, gas, hydrogen & electricity.

Enemy Eight is all those centralising forces opposed to *Real Subsidiarity*. *National* and *International Piping Grids* for energy, water, telephones, information - indeed for anything - are centralising and controlling devices. But to determine a policy response it is necessary to specify the *Nexus of Power* and to establish administrative structures at this level. Dismantling the *National Piped Energy Grids* means closing the valves to the international

grids, phasing out national piping infrastructures and building out local piping grids. During the transition access arrangements to the *Channel Tunnel* cables to *France's Nuclear Electricity* and the *North Sea* pipelines to *Norway's* gas fields would make sense.

The *Peacetime* equivalent of *Wartime Mobilization* will be needed - a task I would give to the *English Counties* - not by throwing money at *County Councils* but by empowering the *Lord Lieutenants*. Establishing a *Lord Lieutenant Department* with *Cabinet* status would be the best way - with Prince Charles as the *Cabinet Minister* heading up the department and doing the head-banging necessary to set *County Disconnection Dates*.

But there is another reason to set up a *Parallel County Structure* separated from all existing *Administrative Channels*.

Enemy Nine is the *Money Power* comprising the international network of 125 *Central Banks*, the *Central Banking Debt-Usury Mechanism* and the *Commercial Banking System* while *Enemy Ten* is the *Merchants* and their *Poodle Parliaments*. Existing *National Power Structures* will do everything in their power to sabotage this *Energy Policy*.

It is not because of any *Ecclesiastic*, *Royalist* or *Republican Leanings* that the *Church* and the *Monarchy* are being resurrected to mobilise the country and deliver a completely new 21st *Century Energy Infrastructure* but because it is the best way to introduce the *Countervailing Power* that will be needed. Existing structures are incapable of

implementing the *Energy Policy* the country needs.

The only way *We The People* can outflank the *Ten Public Enemies* who will coalesce as *Saboteurs* and *Conspirators* to retain their *Centrally-controlled Piped Energy Infrastructure* - howbeit with ever decreasing carbon-content in their pipes paid for by the *Public Purse* - is to strip them of their power.

Their power originates in two crucial *Social Mechanisms* - money and people. Issuing money in *England* must be removed from the *Central* and *Commercial Banking Mechanism* and returned to *County Banks* and *Local Mints*.

Handled creatively at the county level recruiting people for the task ahead offers opportunities for creative *Public Policy*. *Direct Barter* without *Money Middling* of *A Good Day's Work for a Good Day's Pay* could take the form of a *Home Free and Clear* after a certain number of days work on the *County Energy Agenda*.

At a stroke such a policy at county level would remove much of the *Financial Shenanigans* from the *Residential Housing Markets* and provide a means of outmanoeuvring the key mechanism used in *England* to control work and job choices.

THE END

Shepherd on Climate

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Politics

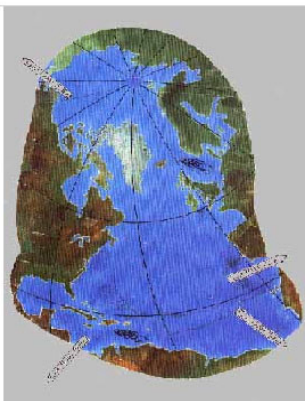
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