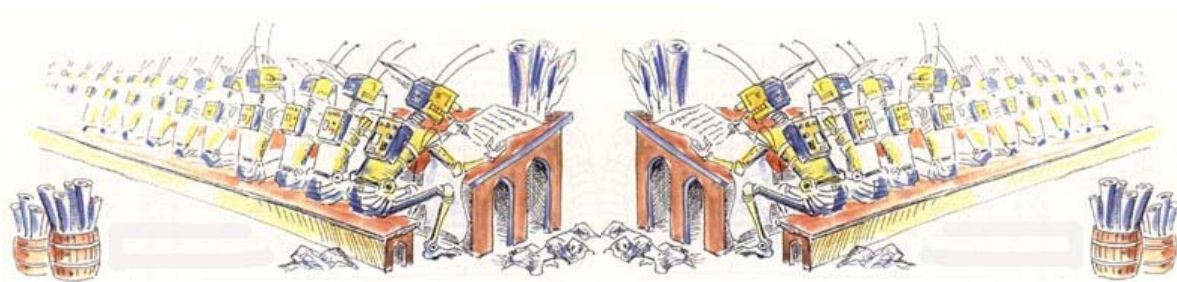


Thirteen to the Dozen

from the cesc news desk of

William Franklin

The Cliff's Edge Signalling Company



Thirteen to the Dozen

William Franklin is a regular contributor to the Cliff's Edge Signalling Company

Obama's Secret War	3
After Bobby Kennedy	4
Weather Warfare	6
Why the Right Loves a Disaster	7
Climate of Fear	9
The Deceit Behind Global Warming	10
You Know Your Empire is Collapsing When	12
A Global Democratic Movement	15
Greener Power to the People	17
Germany's Cities Show Britain How	18
Making Gasoline from Bacteria	19
Liquid Electricity & Kilowatt Cards	20
Oil Wars	22
<i>Credit Crunch Myth</i>	23
<i>Early Day Motion 408</i>	23
<i>Public Credit Petition</i>	24



Summer Solstice 2008

EARLY DRAFT FOR RESTRICTED CIRCULATION

A Few Words from the Editor

This issue of *Thirteen to the Dozen* includes pieces by Greg Palast, John Pilger, Michael Chossudovsky, Naomi Klein, Christopher Booker, Kirkpatrick Sale and Paul Hawken, journalists who are dedicating their working lives to illuminating the hidden ways of wealth and power. The task of our age is to design strategies to divert the adventure of civilisation away from its hyperexpansionist path of the past few hundred years towards a sane humane ecological future where truth and justice prevail, and hope overcomes tragedy to allow people to live gracious and honourable lives in pursuit of happiness and beauty.

*William Franklin
Totnes, Devon
21st June 2008*

Obama's Secret War on Profiteering by Greg Palast

I can't make this up. In a hotel room in Brussels, the chief executives of the world's top oil companies unrolled a huge map of the Middle East, drew a fat, red line around Iraq and signed their names to it. The map, the red line, the secret signatures. It explains this war. It explains this week's rocketing of the price of oil to \$134 a barrel. It happened on July 31, 1928, but the bill came due now. Barack Obama knows this. Or, just as important, those crafting his policies seem to know this. Same for Hillary Clinton's team. There could be no more vital difference between the Republican and Democratic candidacies. And you won't learn a thing about it on the news from the Fox-holes. Let me explain.

In 1928, oil company chieftains (from *Anglo-Persian Oil*, now *British Petroleum*, from *Standard Oil*, now *Exxon*, and their Continental counterparts) were faced with a crisis: falling prices due to rising supplies of oil; the same crisis faced by their successors during the Clinton years, when oil traded at \$22 a barrel. The solution then, as now: stop the flow of oil, squeeze the market, raise the price. The method: put a red line around Iraq and declare that virtually all the oil under its sands would remain there, untapped. Their plan: choke supply, raise prices rise, boost profits. That was the program for 1928. For 2003. For 2008.

Again and again, year after year, the world price of oil has been boosted artificially by keeping a tight limit on Iraq's oil output. Methods varied. The 1928 'Redline' agreement held, in various forms, for over three decades. It was replaced in 1959 by quotas imposed by President Eisenhower. Then Saudi Arabia and *OPEC* kept Iraq, capable of producing over 6 million barrels a day, capped at half that, given an export quota equal to Iran's lower output. In 1991, output was again limited, this time by a new red line: B-52 bombings by Bush Senior's air force. Then came the *Oil Embargo* followed by the '*Food for Oil*' program. Not much food for them, not much oil for us.

In 2002, after Bush Junior took power, the top ten oil companies took in a nice \$31 billion in profits. But then, a miracle fell from the sky. Or, more precisely, the 101st Airborne landed. Bush declared, "Bring'm on!" and, as the dogs of war chewed up the world's second largest source of oil, crude doubled in two years to an astonishing \$40 a barrel and those same oil companies saw their profits triple to \$87 billion. In response, Senators Obama and Clinton propose something wrongly called a 'windfall' profits tax on oil. But oil industry profits didn't blow in on a breeze. It is war, not wind, that fills their coffers. The beastly leap in prices is nothing but war profiteering, hiking prices to take cruel advantage of oil fields shut by bullets and blood. I wish to hell the Democrats would call their plan what it is: A war profiteering tax. War is profitable business - if you're an oil man. But somehow, the public pays the price, at the pump and at the funerals, and the oil companies reap the benefits.

Indeed, the recent engorgement in oil prices and profits goes right back to Bush-McCain 'surge'. The Iraq government attack on a Basra militia was really nothing more than Baghdad's leaping into a gang war over control of Iraq's Southern oil fields and oil-loading docks. Moqtada al-Sadr's gangsters and the government-sponsored greedsters of *SCIRI* (the *Supreme Council For Islamic Revolution In Iraq*) are battling over an estimated \$5 billion a year in oil shipment kickbacks, theft and protection fees. The *Wall Street Journal* reported that the surge-backed civil warring has cut Iraq's exports by up to a million barrels a day. And that translates to slashing *OPEC* excess crude capacity by nearly half.

Result: ka-BOOM in oil prices and ka-ZOOM in oil profits. For 2007, *Exxon* recorded the highest annual profit, \$40.6 billion, of any enterprise since the building of the pyramids. And that was before the war surge and price surge to over \$100 a barrel. It's been a good war for *Exxon* and friends. Since George Bush began to beat the war-drum for an invasion of Iraq, the value of *Exxon's* reserves has risen - are you ready for this? - by \$2 trillion.

Obama's war profiteering tax, or 'oil windfall profits' tax, would equal just 20% of the industry's charges in excess of \$80 a barrel. It's embarrassingly small actually, smaller than every windfall tax charged by every other nation. (Ecuador, for example, captures up to 99% of the higher earnings).

Nevertheless, oilman George W. Bush opposes it as does Bush's man McCain. Senator McCain admonishes us that the po' widdle oil companies need more than 80% of their windfall so they can explore for more oil. When pigs fly, Senator. Last year, *Exxon* spent \$36 billion of its \$40 billion income on dividends and special payouts to stockholders in tax-free buy-backs. Even the *Journal* called *Exxon's* capital investment spending 'stingy'.

At today's prices Obama's windfall tax, teeny as it is, would bring in nearly a billion dollars a day for the *US Treasury*. Clinton's plan is similar. Yet the press' entire discussion of gas prices is shifted to whether the government should knock some sales tax pennies off the oil companies' pillaging at the pump. More important than even the *Democrats'* declaring that oil company profits are undeserved, is their implicit understanding that the profits are the spoils of war. And that's another reason to tax the oil industry's ill-gotten gain. Vietnam showed us that foreign wars don't end when the invader can no longer fight, but when the invasion is no longer profitable.

This article was posted on the Campaign for America's Future blogsite on Thursday 22nd May 2008 by Greg Palast, author of Trillion Dollar Babies in Armed Madhouse and entitled Obama's Secret War Profiteering Tax.

After Bobby Kennedy by John Pilger

Bobby Kennedy's campaign is the model for Barack Obama's current bid to be the Democratic nominee for the White House. Both offer a false hope that they can bring peace and racial harmony to all Americans.

In this season of 1968 nostalgia, one anniversary illuminates today. It is the rise and fall of Robert Kennedy, who would have been elected president of the United States had he not been assassinated in June 1968. Having travelled with Kennedy up to the moment of his shooting at the Ambassador Hotel in Los Angeles on 5 June, I heard The Speech many times. He would "return government to the people" and bestow "dignity and justice" on the oppressed. "As Bernard Shaw once said," he would say, " 'Most men look at things as they are and wonder why. I dream of things that never were and ask: Why not?' " That was the signal to run back to the bus. It was fun until a hail of bullets passed over our shoulders.

Kennedy's campaign is a model for Barack Obama. Like Obama, he was a senator with no achievements to his name. Like Obama, he raised the expectations of young people and minorities. Like Obama, he promised to end an unpopular war, not because he opposed the war's conquest of other people's land and resources, but because it was 'unwinnable'.

Should Obama beat John McCain to the White House in November, it will be liberalism's last fling. In the United States and Britain, liberalism as a war-making, divisive ideology is once again being used to destroy liberalism as a reality. A great many people understand this, as the hatred of Blair and new Labour attest, but many are disoriented and eager for 'leadership' and basic social democracy. In the US, where unrelenting propaganda about American democratic uniqueness disguises a corporate system based on extremes of wealth and privilege, liberalism as expressed through the Democratic Party has played a crucial, compliant role.

In 1968, Robert Kennedy sought to rescue the party and his own ambitions from the threat of real change that came from an alliance of the civil rights campaign and the anti-war movement then commanding the streets of the main cities, and which Martin Luther King had drawn together until he was assassinated in April that year. Kennedy had supported the war in Vietnam and continued to support it in private, but this was skilfully suppressed as he competed against the maverick Eugene McCarthy, whose surprise win in the New Hampshire primary on an anti-war ticket had forced President Lyndon Johnson to abandon the idea of another term. Using the memory of his martyred brother, Kennedy assiduously exploited the electoral power of delusion among people hungry for politics that represented them, not the rich.

"These people love you," I said to him as we left Calexico, California, where the immigrant population lived in abject poverty and people came like a great wave and swept him out of his car, his hands fastened to their lips.

"Yes, yes, sure they love me," he replied. "I love *them!*" I asked him how exactly he would lift them out of poverty: just what was his political philosophy? "Philosophy? Well, it's based on a faith in this country and I believe that many Americans have lost this faith and I want to give it back to them, because we are the last and the best hope of the world, as Thomas Jefferson said."

"That's what you say in your speech. Surely the question is: How?"

"How...by charting a new direction for America."

The vacuities are familiar. Obama is his echo. Like Kennedy, Obama may well 'chart a new direction for America' in specious, media-honed language, but in reality he will secure, like every president, the best damned democracy money can buy.

Embarrassing truth

As their contest for the White House draws closer, watch how, regardless of the inevitable personal smears, Obama and McCain draw nearer to each other. They already concur on America's divine right to control all before it. "We lead the world in battling immediate evils and promoting the ultimate good," said Obama. "We must lead by building a 21st-century military...to advance the security of *all people* [emphasis added]." McCain agrees. Obama says in pursuing 'terrorists' he would attack Pakistan. McCain wouldn't quarrel.

Both candidates have paid ritual obeisance to the regime in Tel Aviv, unquestioning support for which defines all presidential ambition. In opposing a UN Security Council resolution implying criticism of Israel's starvation of the people of Gaza, Obama was ahead of both McCain and Hillary Clinton. In January, pressured by the Israel lobby, he massaged a statement that "nobody has suffered more than the Palestinian people" to now read: "Nobody has suffered more than the Palestinian people *from the failure of the Palestinian leadership to recognise Israel* [emphasis added]."

Such is his concern for the victims of the longest, illegal military occupation of modern times. Like all the candidates, Obama has furthered Israeli/Bush fictions about Iran, whose regime, he says absurdly, "is a threat to all of us".

On the war in Iraq, Obama the dove and McCain the hawk are almost united. McCain now says he wants US troops to leave in five years (instead of '100 years', his earlier option). Obama has now 'reserved the right' to change his pledge to get troops out next year. "I will listen to our commanders on the ground," he now says, echoing Bush. His adviser on Iraq, Colin Kahl, says the US should maintain up to 80,000 troops in Iraq until 2010. Like McCain, Obama has voted repeatedly in the Senate to support Bush's demands for funding of the occupation of Iraq; and he has called for more troops to be sent to Afghanistan. His senior advisers embrace McCain's proposal for an aggressive 'league of democracies', led by the United States, to circumvent the United Nations.

Amusingly, both have denounced their 'preachers' for speaking out. Whereas McCain's man of God praised Hitler, in the fashion of lunatic white holy-rollers, Obama's man, Jeremiah Wright, spoke an embarrassing truth. He said that the attacks of 11 September 2001 had taken place as a consequence of the violence of US power across the world. The media demanded that Obama disown Wright and swear an oath of loyalty to the Bush lie that "terrorists attacked America because they hate our freedoms". So he did. The conflict in the Middle East, said Obama, was rooted not "primarily in the actions of stalwart allies like Israel", but in "the perverse and hateful ideologies of radical Islam". Journalists applauded. Islamophobia is a liberal speciality.

The American media love both Obama and McCain. Reminiscent of mating calls by *Guardian* writers to Blair more than a decade ago, Jann Wenner, founder of the liberal *Rolling Stone*, wrote: "There is a sense of dignity, even majesty, about him, and underneath that ease lies a resolute discipline... Like Abraham Lincoln, Barack Obama challenges America to rise up, to do what so many of us long to do: to summon 'the better angels of our nature'." At the liberal *New Republic*, Charles Lane confessed: "I know it shouldn't be happening, but it is. I'm falling for John McCain." His colleague Michael Lewis had gone further. His feelings for McCain, he wrote, were like "the war that must occur inside a 14-year-old boy who discovers he is more sexually attracted to boys than to girls".

The objects of these uncontrollable passions are as one in their support for America's true deity, its corporate oligarchs. Despite claiming that his campaign wealth comes from small individual donors, Obama is backed by the biggest Wall Street firms: *Goldman Sachs*, *UBS AG*, *Lehman Brothers*, *J P Morgan Chase*, *Citigroup*, *Morgan Stanley* and *Credit Suisse*, as well as the huge hedge fund *Citadel Investment Group*. "Seven of the Obama campaign's top 14 donors," wrote the investigator Pam Martens, "consisted of officers and employees of the same Wall Street firms charged time and again with looting the public and newly implicated in originating and/or bundling fraudulently made mortgages."

A report by *United for a Fair Economy*, a non-profit group, estimates the total loss to poor Americans of colour who took out sub-prime loans as being between \$164bn and \$213bn: the greatest loss of wealth ever recorded for people of colour in the United States. "Washington lobbyists haven't funded my campaign," said Obama in January, "they won't run my White House and they will not drown out the voices of working Americans when I am president." According to files held by the *Centre for Responsive Politics*, the top five contributors to the Obama campaign are registered corporate lobbyists.

What is Obama's attraction to big business? Precisely the same as Robert Kennedy's. By offering a 'new', young and apparently progressive face of the *Democratic Party* - with the bonus of being a member of the black elite - he can blunt and divert real opposition. That was Colin Powell's role as Bush's secretary of state. An Obama victory will bring intense pressure on the US anti-war and social justice movements to accept a Democratic administration for all its faults. If that happens, domestic resistance to rapacious America will fall silent.

Piracies and dangers

America's war on Iran has already begun. In December, Bush secretly authorised support for two guerrilla armies inside Iran, one of which, the military arm of Mujahedin-e Khalq, is described by the state department as terrorist. The US is also engaged in attacks or subversion against Somalia, Lebanon, Syria, Afghanistan, India, Pakistan, Bolivia and Venezuela. A new military command, Africom, is being set up to fight proxy wars for control of Africa's oil and other riches. With US missiles soon to be stationed provocatively on Russia's borders, the Cold War is back. None of these piracies and dangers has raised a whisper in the presidential campaign, not least from its great liberal hope.

Moreover, none of the candidates represents so-called mainstream America. In poll after poll, voters make clear that they want the normal decencies of jobs, proper housing and health care. They want their troops out of Iraq and the Israelis to live in peace with their Palestinian neighbours. This is a remarkable testimony, given the daily brainwashing of ordinary Americans in almost everything they watch and read.

On this side of the Atlantic, a deeply cynical electorate watches British liberalism's equivalent last fling. Most of the 'philosophy' of new Labour was borrowed wholesale from the US. Bill Clinton and Tony Blair were interchangeable. Both were hostile to traditionalists in their parties who might question the corporate-speak of their class-based economic policies and their relish for colonial conquests. Now the British find themselves spectators to the rise of new Tory, distinguishable from Blair's new Labour only in the personality of its leader, a former corporate public relations man who presents himself as Tonier than thou. We all deserve better.

This article was first picked up in May 2008 from the International Clearing House. Available from www.johnpilger.com

Weather warfare by Michel Chossudovsky

Rarely acknowledged in the debate on global climate change, the world's weather can now be modified as part of a new generation of sophisticated electromagnetic weapons. Both the US and Russia have developed capabilities to manipulate the climate for military use. Environmental modification techniques have been applied by the US military for more than half a century. US mathematician John von Neumann, in liaison with the *US Department of Defense*, started his research on weather modification in the late 1940s at the height of the Cold War and foresaw 'forms of climatic warfare as yet unimagined'. During the Vietnam war, cloud-seeding techniques were used, starting in 1967 under *Project Popeye*, the objective of which was to prolong the monsoon season and block enemy supply routes along the Ho Chi Minh Trail.

The US military has developed advanced capabilities that enable it selectively to alter weather patterns. The technology, which is being perfected under the *High-frequency Active Auroral Research Program (HAARP)*, is an appendage of the *Strategic Defense Initiative - 'Star Wars'*. From a military standpoint, *HAARP* is a weapon of mass destruction, operating from the outer atmosphere and capable of destabilising agricultural and ecological systems around the world.

Weather-modification, according to the *US Air Force* document *AF 2025 Final Report*, 'offers the war fighter a wide range of possible options to defeat or coerce an adversary', capabilities, it says, extend to the triggering of floods, hurricanes, droughts and earthquakes: 'Weather modification will become a part of domestic and international security and could be done unilaterally... It could have offensive and defensive applications and even be used for deterrence purposes. The ability to generate precipitation, fog and storms on earth or to modify space weather... and the production of artificial weather all are a part of an integrated set of [military] technologies.'

In 1977, an international convention was ratified by the *UN General Assembly* which banned 'military or other hostile use of environmental modification techniques having widespread, long-lasting or severe effects.' It defined 'environmental modification techniques' as 'any technique for changing - through the deliberate manipulation of natural processes - the dynamics, composition or structure of the earth, including its biota, lithosphere, hydrosphere and atmosphere, or of outer space.'

While the substance of the *1977 Convention* was reasserted in the *UN Framework Convention on Climate Change (UNFCCC)* signed at the *1992 Earth Summit* in Rio, debate on weather modification for military use has become a scientific taboo. Military analysts are mute on the subject. Meteorologists are not investigating the matter and environmentalists are focused on greenhouse gas emissions under the *Kyoto Protocol*. Neither is the possibility of climatic or environmental manipulations as part of a military and intelligence agenda, while tacitly acknowledged, part of the broader debate on climate change under *UN* auspices.

The HAARP Programme

Established in 1992, *HAARP*, based in Gokona, Alaska, is an array of high-powered antennas that transmit, through high-frequency radio waves, massive amounts of energy into the ionosphere (the upper layer of the atmosphere). Their construction was funded by the *US Air Force*, the *US Navy* and the *Defense Advanced Research Projects Agency (DARPA)*. Operated jointly by the *Air Force Research Laboratory* and the *Office of Naval Research*, *HAARP* constitutes a system of powerful antennas capable of creating 'controlled local modifications of the ionosphere'. According to its official website, www.haarp.alaska.edu, *HAARP* will be used 'to induce a small, localized change in ionospheric temperature so physical reactions can be studied by other instruments located either at or close to the *HAARP* site'.

But Rosalie Bertell, president of the *International Institute of Concern for Public Health*, says *HAARP* operates as 'a gigantic heater that can cause major disruptions in the ionosphere, creating not just holes, but long incisions in the protective layer that keeps deadly radiation from bombarding the planet'. Physicist Dr Bernard Eastlund called it 'the largest ionospheric heater ever built'.

HAARP is presented by the *US Air Force* as a research programme, but military documents confirm its main objective is to 'induce ionospheric modifications' with a view to altering weather patterns and disrupting communications and radar.

According to a report by the *Russian State Duma*: ‘The US plans to carry out large-scale experiments under the *HAARP* programme [and] create weapons capable of breaking radio communication lines and equipment installed on spaceships and rockets, provoke serious accidents in electricity networks and in oil and gas pipelines, and have a negative impact on the mental health of entire regions.’

An analysis of statements emanating from the *US Air Force* points to the unthinkable: the covert manipulation of weather patterns, communications and electric power systems as a weapon of global warfare, enabling the US to disrupt and dominate entire regions. Weather manipulation is the pre-emptive weapon par excellence. It can be directed against enemy countries or ‘friendly nations’ without their knowledge, used to destabilise economies, ecosystems and agriculture. It can also trigger havoc in financial and commodity markets. The disruption in agriculture creates a greater dependency on food aid and imported grain staples from the US and other Western countries.

HAARP was developed as part of an Anglo-American partnership between *Raytheon Corporation*, which owns the *HAARP* patents, and *British Aerospace Systems (BAES)*. The *HAARP* project is one among several collaborative ventures in advanced weapons systems between the two defence giants. The *HAARP* project was initiated in 1992 by *Advanced Power Technologies, Inc. (APTI)*, a subsidiary of *Atlantic Richfield Corporation (ARCO)*. *APTI* (including the *HAARP* patents) was sold by *ARCO* to *E-Systems Inc.* in 1994. *E-Systems*, on contract to the *CIA* and *US Department of Defense*, outfitted the ‘*Doomsday Plan*’, which ‘allows the President to manage a nuclear war’. Subsequently acquired by *Raytheon Corporation*, it is among the largest intelligence contractors in the World.

BAES was involved in the development of the advanced stage of the *HAARP* antenna array under a 2004 contract with the *Office of Naval Research*. The installation of 132 high frequency transmitters was entrusted by *BAES* to its US subsidiary, *BAE Systems Inc.* The project, according to a July report in *Defense News*, was undertaken by *BAES*’s *Electronic Warfare* division. In September it received *DARPA*’s top award for technical achievement for the design, construction and activation of the *HAARP* array of antennas.

The *HAARP* system is fully operational and in many regards dwarfs existing conventional and strategic weapons systems. While there is no firm evidence of its use for military purposes, Air Force documents suggest *HAARP* is an integral part of the militarisation of space. One would expect the antennas already to have been subjected to routine testing.

Under the *UNFCCC*, the *Intergovernmental Panel on Climate Change (IPCC)* has a mandate ‘to assess scientific, technical and socioeconomic information relevant for the understanding of climate change’. This mandate includes environmental warfare. ‘Geo-engineering’ is acknowledged, but the underlying military applications are neither the object of policy analysis or scientific research in the thousands of pages of *IPCC* reports and supporting documents, based on the expertise and input of some 2,500 scientists, policymakers and environmentalists. ‘Climatic warfare’ potentially threatens the future of humanity, but has casually been excluded from the reports for which the *IPCC* received the 2007 *Nobel Peace Prize*.

Michel Chossudovsky is a Professor of Economics at the University of Ottawa and an editor at the Centre for Research on Globalization, www.globalresearch.ca. This article arrived in the cesc inray in May 2008.

Why The Right Loves A Disaster by Naomi Klein

Moody’s, the credit-rating agency, claims the key to solving the United States’ economic woes is slashing spending on *Social Security*. The *National Association of Manufacturers* says the fix is for the federal government to adopt the organization’s wish-list of new tax cuts. For *Investor’s Business Daily*, it is oil drilling in the *Arctic National Wildlife Refuge*, “perhaps the most important stimulus of all.”

But of all the cynical scrambles to package pro-business cash grabs as ‘economic stimulus’, the prize has to go to Lawrence B. Lindsey, formerly President Bush’s assistant for economic policy and his advisor during the 2001 recession. Lindsey’s plan is to solve a crisis set off by bad lending by extending lots more questionable credit. “One of the easiest things to do would be to allow manufacturers and retailers” - notably *Wal-Mart* - “to open their own financial institutions, through which they could borrow and lend money,” he wrote recently in the *Wall Street Journal*.

Never mind that that an increasing number of Americans are defaulting on their credit card payments, raiding their 401(k) accounts and losing their homes. If Lindsey had his way, *Wal-Mart*, rather than lose sales, could just loan out money to keep its customers shopping, effectively turning the big-box chain into an old-style company store to which Americans can owe their souls.

If this kind of crisis opportunism feels familiar, it's because it is. Over the last four years, I have been researching a little-explored area of economic history: the way that crises have paved the way for the march of the right-wing economic revolution across the globe. A crisis hits, panic spreads and the ideologues fill the breach, rapidly reengineering societies in the interests of large corporate players. It's a maneuver I call *Disaster Capitalism*.

Sometimes the enabling national disasters have been physical blows to countries: wars, terrorist attacks, natural disasters. More often they have been economic crises: debt spirals, hyperinflation, currency shocks, recessions.

More than a decade ago, economist Dani Rodrik, then at *Columbia University*, studied the circumstances in which governments adopted free-trade policies. His findings were striking: "No significant case of trade reform in a developing country in the 1980s took place outside the context of a serious economic crisis." The 1990s proved him right in dramatic fashion. In Russia, an economic meltdown set the stage for fire-sale privatizations. Next, the Asian crisis in 1997-98 cracked open the *Asian Tigers* to a frenzy of foreign takeovers, a process the *New York Times* dubbed "the world's biggest going-out-of-business sale."

To be sure, desperate countries will generally do what it takes to get a bailout. An atmosphere of panic also frees the hands of politicians to quickly push through radical changes that would otherwise be too unpopular, such as privatization of essential services, weakening of worker protections and free-trade deals. In a crisis, debate and democratic process can be handily dismissed as unaffordable luxuries.

Do the free-market policies packaged as emergency cures actually fix the crises at hand? For the ideologues involved, that has mattered little. What matters is that, as a political tactic, *Disaster Capitalism* works. It was the late free-market economist Milton Friedman, writing in the preface to the 1982 reissue of his manifesto, *Capitalism and Freedom*, who articulated the strategy most succinctly. "Only a crisis - actual or perceived - produces real change. When that crisis occurs, the actions that are taken depend on the ideas that are lying around. That, I believe, is our basic function: to develop alternatives to existing policies, to keep them alive and available until the politically impossible becomes politically inevitable."

A decade later, John Williamson, a key advisor to the *International Monetary Fund* and the *World Bank* (and who coined the phrase *The Washington Consensus*), went even further. He asked a conference of top-level policymakers "whether it could conceivably make sense to think of deliberately provoking a crisis so as to remove the political logjam to reform."

Again and again, the Bush administration has seized on crises to break logjams blocking the more radical pieces of its economic agenda. First, a recession provided the excuse for sweeping tax cuts. Next, the *War on Terror* ushered in an era of unprecedented military and homeland security privatization. After *Hurricane Katrina*, the administration handed out tax holidays, rolled back labor standards, closed public housing projects and helped turn New Orleans into a laboratory for *Charter Schools* - all in the name of disaster 'reconstruction'.

Given this track record, Washington lobbyists had every reason to believe that the current recession fears would provoke a new round of corporate gift-giving. Yet it seems that the public is getting wise to the tactics of *Disaster Capitalism*. Sure, the proposed \$150-billion economic stimulus package is little more than a dressed-up tax cut, including a new batch of 'incentives' to business. But the Democrats nixed the more ambitious GOP attempt to leverage the crisis to lock in the Bush tax cuts and go after *Social Security*. For the time being, it seems that a crisis created by a dogged refusal to regulate markets will not be 'fixed' by giving *Wall Street* more public money with which to gamble.

Yet while managing (barely) to hold the line, the House Democrats appear to have given up on extending unemployment benefits and increasing funding for food stamps and *Medicaid* as part of the stimulus package. More important, they are failing utterly to use the crisis to propose alternative solutions to a status quo marked by serial crises, whether environmental, social or economic.

The problem is not a lack of ideas 'alive and available' - to borrow Friedman's phrase. There are plenty available, from single-payer healthcare to legislating a living wage. Hundreds of thousands of jobs can be created by rebuilding the ailing public infrastructure and making it more friendly to public transit and renewable energy. Need start-up funds? Close the loophole that lets billionaire hedge fund managers pay 15% capital gains instead of 35% income tax, and adopt a long-proposed tax on international currency trading. The bonus? A less volatile, crisis-prone market.

The way we respond to crises is always highly political, a lesson progressives appear to have forgotten. There's a historical irony to that: Crises have ushered in some of America's great progressive policies. Most notably, after the dramatic market failure of 1929, the left was ready and waiting with its ideas - full employment, huge public works, mass union drives. The *Social Security* system that *Moody's* is so eager to dismantle was a direct response to the *Depression*.

Every crisis is an opportunity; someone will exploit it. The question we face is this: Will the current turmoil become an excuse to transfer yet more public wealth into private hands, to wipe out the last vestiges of the welfare state, all in the name of economic growth? Or will this latest failure of unfettered markets be the catalyst that is needed to revive a spirit of public interest, to get serious about the pressing crises of our time, from gaping inequality to global warming to failing infrastructure?

The disaster capitalists have held the reins for three decades. The time has come, once again, for disaster populism.

Naomi Klein is the author of The Shock Doctrine. This article was first published on January 27th, 2008 and passed across my desk in May 2008.

Climate of Fear by Richard Lindzen

Global-warming alarmists intimidate dissenting scientists into silence.

There have been repeated claims that this past year's hurricane activity was another sign of human-induced climate change. Everything from the heat wave in Paris to heavy snows in Buffalo has been blamed on people burning gasoline to fuel their cars, and coal and natural gas to heat, cool and electrify their homes. Yet how can a barely discernible, one-degree increase in the recorded global mean temperature since the late 19th century possibly gain public acceptance as the source of recent weather catastrophes? And how can it translate into unlikely claims about future catastrophes?

The answer has much to do with misunderstanding the science of climate, plus a willingness to debase climate science into a triangle of alarmism. Ambiguous scientific statements about climate are hyped by those with a vested interest in alarm, thus raising the political stakes for policy makers who provide funds for more science research to feed more alarm to increase the political stakes. After all, who puts money into science - whether for *AIDS*, or space, or climate - where there is nothing really alarming? Indeed, the success of climate alarmism can be counted in the increased federal spending on climate research from a few hundred million dollars pre-1990 to \$1.7 billion today. It can also be seen in heightened spending on solar, wind, hydrogen, ethanol and clean coal technologies, as well as on other energy-investment decisions.

But there is a more sinister side to this feeding frenzy. Scientists who dissent from the alarmism have seen their grant funds disappear, their work derided, and themselves libeled as industry stooges, scientific hacks or worse. Consequently, lies about climate change gain credence even when they fly in the face of the science that supposedly is their basis.

To understand the misconceptions perpetuated about climate science and the climate of intimidation, one needs to grasp some of the complex underlying scientific issues. First, let's start where there is agreement. The public, press and policy makers have been repeatedly told that three claims have widespread scientific support: Global temperature has risen about a degree since the late 19th century; levels of CO₂ in the atmosphere have increased by about 30% over the same period; and CO₂ should contribute to future warming. These claims are true.

However, what the public fails to grasp is that the claims neither constitute support for alarm nor establish man's responsibility for the small amount of warming that has occurred. In fact, those who make the most outlandish claims of alarm are actually demonstrating skepticism of the very science they say supports them. It isn't just that the alarmists are trumpeting model results that we know must be wrong. It is that they are trumpeting catastrophes that couldn't happen *even if the models were right* as justifying costly policies to try to prevent global warming.

If the models are correct, global warming reduces the temperature differences between the poles and the equator. When you have less difference in temperature, you have less excitation of extra-tropical storms, not more. And, in fact, model runs support this conclusion. Alarmists have drawn some support for increased claims of tropical storminess from a casual claim by Sir John Houghton of the *U.N.'s Intergovernmental Panel on Climate Change (IPCC)* that a warmer world would have more evaporation, with latent heat providing more energy for disturbances. The problem with this is that the ability of evaporation to drive tropical storms relies not only on temperature but humidity as well, and calls for drier, less humid air. Claims for starkly higher temperatures are based upon there being more humidity, not less - hardly a case for more storminess with global warming.

So how is it that we don't have more scientists speaking up about this junk science? It's my belief that many scientists have been cowed not merely by money but by fear. An example: Earlier this year, Texas Rep. Joe Barton issued letters to paleoclimatologist Michael Mann and some of his co-authors seeking the details behind a taxpayer-funded analysis that claimed the 1990s were likely the warmest decade and 1998 the warmest year in the last millennium.

Mr. Barton's concern was based on the fact that the *IPCC* had singled out Mr. Mann's work as a means to encourage policy makers to take action. And they did so before his work could be replicated and tested - a task made difficult

because Mr. Mann, a key *IPCC* author, had refused to release the details for analysis. The scientific community's defense of Mr. Mann was, nonetheless, immediate and harsh. The president of the *National Academy of Sciences* - as well as the *American Meteorological Society* and the *American Geophysical Union* - formally protested, saying that Rep. Barton's singling out of a scientist's work smacked of intimidation.

All of which starkly contrasts to the silence of the scientific community when anti-alarmists were in the crosshairs of then - Sen. Al Gore. In 1992, he ran two congressional hearings during which he tried to bully dissenting scientists, including myself, into changing our views and supporting his climate alarmism. Nor did the scientific community complain when Mr. Gore, as vice president, tried to enlist Ted Koppel in a witch hunt to discredit anti-alarmist scientists - a request that Mr. Koppel deemed publicly inappropriate. And they were mum when subsequent articles and books by Ross Gelbspan libelously labeled scientists who differed with Mr. Gore as stooges of the fossil-fuel industry.

Sadly, this is only the tip of a non-melting iceberg. In Europe, Henk Tennekes was dismissed as research director of the *Royal Dutch Meteorological Society* after questioning the scientific underpinnings of global warming. Aksel Winn-Nielsen, former director of the U.N.'s *World Meteorological Organization*, was tarred by Bert Bolin, first head of the *IPCC*, as a tool of the coal industry for questioning climate alarmism. Respected Italian professors Alfonso Sutera and Antonio Speranza disappeared from the debate in 1991, apparently losing climate-research funding for raising questions.

And then there are the peculiar standards in place in scientific journals for articles submitted by those who raise questions about accepted climate wisdom. At *Science* and *Nature*, such papers are commonly refused without review as being without interest. However, even when such papers are published, standards shift. When I, with some colleagues at *NASA*, attempted to determine how clouds behave under varying temperatures, we discovered what we called an "Iris Effect," wherein upper-level cirrus clouds contracted with increased temperature, providing a very strong negative climate feedback sufficient to greatly reduce the response to increasing CO₂.

Normally, criticism of papers appears in the form of letters to the journal to which the original authors can respond immediately. However, in this case (and others) a flurry of hastily prepared papers appeared, claiming errors in our study, with our responses delayed months and longer. The delay permitted our paper to be commonly referred to as "discredited." Indeed, there is a strange reluctance to actually find out how climate really behaves. In 2003, when the draft of the *U.S. National Climate Plan* urged a high priority for improving our knowledge of climate sensitivity, the *National Research Council* instead urged support to look at the *impacts* of the warming - not whether it would *actually happen*.

Alarm rather than genuine scientific curiosity, it appears, is essential to maintaining funding. And only the most senior scientists today can stand up against this alarmist gale, and defy the iron triangle of climate scientists, advocates and policymakers.

Mr. Lindzen is Alfred P. Sloan Professor of Atmospheric Science at MIT. This article appeared in The Wall Street Journal on Wednesday, April 12, 2006

The Deceit Behind Global Warming by Christopher Booker

No one can deny that in recent years the need to "save the planet" from global warming has become one of the most pervasive issues of our time. As Tony Blair's chief scientific adviser, Sir David King, claimed in 2004, it poses "a far greater threat to the world than international terrorism", warning that by the end of this century the only habitable continent left will be Antarctica.

Inevitably, many people have been bemused by this somewhat one-sided debate, imagining that if so many experts are agreed, then there must be something in it. But if we set the story of how this fear was promoted in the context of other scares before it, the parallels which emerge might leave any honest believer in global warming feeling uncomfortable.

The story of how the panic over climate change was pushed to the top of the international agenda falls into five main stages. Stage one came in the 1970s when many scientists expressed alarm over what they saw as a disastrous change in the earth's climate. Their fear was not of warming but global cooling, of "a new *Ice Age*".

For three decades, after a sharp rise in the interwar years up to 1940, global temperatures had been falling. The one thing certain about climate is that it is always changing. Since we began to emerge from the last *Ice Age* 20,000 years ago, temperatures have been through significant swings several times. The hottest period occurred around 8,000 years ago and was followed by a long cooling. Then came what is known as the *Roman Warming*, coinciding with the Roman empire. Three centuries of cooling in the *Dark Ages* were followed by the *Mediaeval Warming*, when the evidence agrees the world was hotter than today.

Around 1300 began the *Little Ice Age*, that did not end until 200 years ago, when we entered what is known as the *Modern Warming*. But even this has been chequered by colder periods, such as the *Little Cooling* between 1940 and 1975. Then, in the late 1970s, the world began warming again.

A scare is often set off - as we show in our book with other examples - when two things are observed together and scientists suggest one must have been caused by the other. In this case, thanks to readings commissioned by Dr Roger Revelle, a distinguished American oceanographer, it was observed that since the late 1950s levels of carbon dioxide in the earth's atmosphere had been rising. Perhaps it was this increase that was causing the new warming in the 1980s?

Stage two of the story began in 1988 when, with remarkable speed, the global warming story was elevated into a ruling orthodoxy, partly due to hearings in Washington chaired by a youngish senator, Al Gore, who had studied under Dr Revelle in the 1960s.

But more importantly global warming hit centre stage because in 1988 the *UN* set up its *Intergovernmental Panel on Climate Change (the IPCC)*. Through a series of reports, the *IPCC* was to advance its cause in a rather unusual fashion. First it would commission as many as 1,500 experts to produce a huge scientific report, which might include all sorts of doubts and reservations. But this was to be prefaced by a *Summary for Policymakers*, drafted in consultation with governments and officials - essentially a political document - in which most of the caveats contained in the experts' report would not appear.

This contradiction was obvious in the first report in 1991, which led to the *Rio Conference on Climate Change* in 1992. The second report in 1996 gave particular prominence to a study by an obscure US government scientist claiming that the evidence for a connection between global warming and rising CO₂ levels was now firmly established. This study came under heavy fire from various leading climate experts for the way it manipulated the evidence. But this was not allowed to stand in the way of the claim that there was now complete scientific consensus behind the CO₂ thesis, and the *Summary for Policy-makers*, heavily influenced from behind the scenes by Al Gore, by this time US Vice-President, paved the way in 1997 for the famous *Kyoto Protocol*.

Kyoto initiated stage three of the story, by formally committing governments to drastic reductions in their CO₂ emissions. But the treaty still had to be ratified and this seemed a good way off, not least thanks to its rejection in 1997 by the *US Senate*, despite the best attempts of Mr Gore.

Not the least of his efforts was his bid to suppress an article co-authored by Dr Revelle just before his death. Gore didn't want it to be known that his guru had urged that the global warming thesis should be viewed with more caution.

One of the greatest problems Gore and his allies faced at this time was the mass of evidence showing that in the past, global temperatures had been higher than in the late 20th century.

In 1998 came the answer they were looking for: a new temperature chart, devised by a young American physicist, Michael Mann. This became known as the *hockey stick* because it showed historic temperatures running in an almost flat line over the past 1,000 years, then suddenly flicking up at the end to record levels. Mann's *hockey stick* was just what the *IPCC* wanted. When its 2001 report came out it was given pride of place at the top of page 1. The *Mediaeval Warming*, the *Little Ice Age*, the 20th century *Little Cooling*, when CO₂ had already been rising, all had been wiped away.

But then a growing number of academics began to raise doubts about Mann and his graph. This culminated in 2003 with a devastating study by two Canadians showing how Mann had not only ignored most of the evidence before him but had used an algorithm that would produce a hockey stick graph whatever evidence was fed into the computer. When this was removed, the graph re-emerged just as it had looked before, showing the *Middle Ages* as hotter than today.

It is hard to recall any scientific thesis ever being so comprehensively discredited as the *hockey stick*. Yet the global warming juggernaut rolled on regardless, now led by the *European Union*. In 2004, thanks to a highly dubious deal between the *EU* and Putin's Russia, stage four of the story began when the *Kyoto Treaty* was finally ratified.

In the past three years, we have seen the *EU* announcing every kind of measure geared to fighting climate change, from building ever more highly-subsidised wind turbines, to a commitment that by 2050 it will have reduced carbon emissions by 60 per cent. This is a pledge that could only be met by such a massive reduction in living standards that it is impossible to see the peoples of Europe accepting it. All this frenzy has rested on the assumption that global temperatures will continue to rise in tandem with CO₂ and that, unless mankind takes drastic action, our planet is faced with the apocalypse so vividly described by Al Gore in his Oscar-winning film *An Inconvenient Truth*.

Yet recently, stage five of the story has seen all sorts of question marks being raised over Gore's alleged consensus. For instance, he claimed that by the end of this century world sea levels will have risen by 20 ft when even the *IPCC* in its

latest report, only predicts a rise of between four and 17 inches. There is also of course the harsh reality that, wholly unaffected by Kyoto, the economies of China and India are now expanding at nearly 10 per cent a year, with China likely to be emitting more CO₂ than the US within two years.

More serious, however, has been all the evidence accumulating to show that, despite the continuing rise in CO₂ levels, global temperatures in the years since 1998 have no longer been rising and may soon even be falling. It was a telling moment when, in August, Gore's closest scientific ally, James Hansen of the *Goddard Institute for Space Studies*, was forced to revise his influential record of US surface temperatures showing that the past decade has seen the hottest years on record. His graph now concedes that the hottest year of the 20th century was not 1998 but 1934, and that four of the 10 warmest years in the past 100 were in the 1930s.

Furthermore, scientists and academics have recently been queuing up to point out that fluctuations in global temperatures correlate more consistently with patterns of radiation from the sun than with any rise in CO₂ levels, and that after a century of high solar activity, the sun's effect is now weakening, presaging a likely drop in temperatures.

If global warming does turn out to have been a scare like all the others, it will certainly represent as great a collective flight from reality as history has ever recorded. The evidence of the next 10 years will be very interesting.

Christopher Booker is co-author with Richard North of Scared to Death: From BSE To Global Warming - How Scares Are Costing Us The Earth by (Continuum, £16.99, £14.99).

You Know Your Empire Is Collapsing When...by Kirkpatrick Sale

I want to start out with a little game, called "How Do You Know When Your Empire Is Collapsing?" - invented in a little different form by a political scientist on Long Island. Let me give you a few examples of how it works.

Let's say for starters, you know your empire is collapsing when the empire that is your fiercest rival buys up a total of 26 percent of three of your major Wall Street firms for \$9 billion, and declares that it has another \$200 billion that it is looking to invest.¹

Next, you might figure your empire is collapsing when its total debt obligations amount to \$50.5 trillion. That is so big that it's about the same as the total household income of everyone in the country, including the billionaires. In other words, we owe almost more than we make.

Or, take one more: You know your empire is collapsing when you start a war half the world away, on complete fabrications and in total ignorance, slog on for five years with no success (2007, you may have noticed, had more people in uniform killed than at any time since the war began) with an army half of which are lawless mercenaries and the rest are under-trained, ill-equipped, and unmotivated youth, and whose presence is not only making your homeland less secure but is damaging your reputation around the rest of the world.

Just like Nineveh, just like Tyre. In fact, it's classic - just like all the empires that have preceded it, from Akkad to Hapsburg, from Babylonian to Dutch, from Persian to Ottoman, from Roman to Soviet, the American empire is collapsing, collapsing around us, and the consequences will not be pleasant.

You know your empire is collapsing when the *UN*, comparing a number of measures of child well-being in the industrial world, ranks you twentieth out of 21, behind Poland, Portugal, and Hungary, ahead only of Britain. Or when the *World Health Organization* ranks your healthcare system overall as thirty-seventh in the world, below Cyprus, Colombia, Morocco, and Costa Rica, just above...Slovenia. Or when scholars, measuring worldwide standards of living, including health, wealth, happiness, and stability, give Norway a rating of 37, the highest, followed by Iceland at 35, Sweden at 30, and the Netherlands at 27 - and give the US 19. In other words, by this ranking the best country in the world is twice as good as America.

I have studied empires pretty carefully over the last few years, and I have figured out the basic nature of these systems and concluded that all empires collapse, and usually within less than a century, because of their inherent nature. They not only make mistakes but usually the same set of mistakes, simply because of the inevitable character of the imperial

¹ Since we're going to be doing some numbers here, I should pause to give a little reference for the concept 'billion'. A billion seconds ago was...1959, which means some of you here haven't yet lived a billion seconds. A billion minutes ago Jesus was walking along the Sea of Galilee - more than 2 millennia ago. A billion hours ago, about 100,000 years before the present, the classic Neanderthal peoples were wandering Europe and the Middle East, and *Homo sapiens* started to move out of Africa. We throw the term around a lot, but a billion is a big, big number - either a thousand million [US] or a million million [UK] ...

structure, which ultimately fails because of its size, complexity, territorial reach, social stratification, economic disparities, heterogeneity, domination of people and nature, hierarchy, and environmental ignorance. There are, to my reading, four basic reasons that empires collapse, and I'd like to set them out, particularly in reference to the modern American empire.

First, *environmental degradation*. Empires end by destroying the lands and waters they depend on for survival, largely because they build and farm and grow without a sense of limits. As Sumeria collapsed when its irrigation systems drained and salinated its waters, as the Roman collapsed when it turned the fruitful African littoral into the Sahara Desert, so the American is engaged in the massive destruction and pollution of its environment, worldwide.

Science is in agreement that all the important systems upon which human life depends are in decline and have been for decades: the erosion of topsoils and beaches, overfishing of every ocean fishery, deforestation, freshwater and aquifer depletion, pollution of water, soil, air, and food, overpopulation, over consumption, depletion of oil and minerals, introduction of new diseases and invigoration of old ones, extreme weather, global warming, rising sea levels, species extinctions, human overuse of the earth's photosynthetic capacity.

A lengthy *Defense Department* study two years ago predicted "abrupt climate change" was likely to occur within a decade, will lead to "catastrophic" shortages of water and energy, endemic "disruption and conflict," and a "significant drop in the planet's ability to sustain its present population." The Harvard biologist E.O. Wilson said it more simply: our "ecological footprint is already too large for the planet to sustain, and is getting larger." That way to end of empire, for sure, maybe end of civilization.

Second, *economic meltdown*. Empires always depend on excessive resource exploitation, in their heartlands and then in colonies farther and farther away from the center, because their populations become large and their armies too extensive. And when the resources fail, the economy fails. In addition, imperial trade systems are so widespread that they are not well controlled, with many booms and busts, and it is the imperial elites who prosper at the expense of merchants and farmers. As Teotihuacán collapsed in the 7th century AD because it deforested its hills for building and agriculture, as the Byzantine empire failed when it used up resources and found its economy eroded by inflation and its unpaid armies in revolt, so the American empire has built a fragile imperial economy that is unsustainable and is already on the verge of crumbling, as the recent stock crashes attest.

Unsustainable? We have a trade deficit of \$763 billion. And crumbling? The dollar has lost value everywhere - it is down by nearly 40 percent since 2000 - and the credit crisis is so vast that it is only by the most extraordinary financial contortions that anyone keeps any faith in the dollar at all. It will not take long before the oil states will no longer want to operate in that currency and the petro-euro will supplant the petro-dollar; and it won't take long for China to dump its worthless dollars, as it is already starting to do, in the process of buying up our banks. [You know your empire is collapsing when those who have lost faith in its currency bid the price of an ounce of gold to a record high in January of \$901, and you have to dump gold from your reserves to get it down.]

Add peak oil. You know your empire is collapsing when it is willing to pay \$100 a barrel for the oil it has unwisely built its whole economy on, can't find a way to limit consumption (and slaps down those who try), and has about as much clue on how to develop an alternative as the Norse in Greenland did when they knew their herds were destroying the land but kept on using them until that society collapsed in the 15th century.

Third, *military overstretch*. Empires are by definition colonizers, and trying to keep control over hostage peoples by force inevitably leads to large and often uncontrollable armies, massive drains on the economy, and ultimately rebellion on the periphery. As the Roman empire collapsed when the "barbarians" at its frontiers revolted and the Roman legions, stretched from Germany to Africa to Persia and grown unruly and corrupt, were defeated, as the Persian empire fell in the 5th century BC because it was unable to maintain the colonies it had established from India to Africa and the peripheries rose in revolt, so the American empire is overextended, weakened at the peripheries, forced to use ill-equipped and under-trained troops to maintain it, and even the generals admit that it can't be sustained.

We have 547,000 - more than half a million - active troops, based at (this is amazing and little understood) more than 725 admitted military bases in at least 40 countries around the world, plus a formal "military presence" in no less than 153 countries, on every continent but Antarctica, and nearly a dozen fully armed carrier and missile fleets on all the seven seas. We are now fighting in four admitted wars from Eritrea to the Philippines and winning none of them.

The cost is enormous and draining the treasury at \$3 billion a week - total cost an estimated \$609 billion so far, another \$200 billion next year, and a projected \$2.1 trillion even if some troops are withdrawn by 2013. And that does not include the mercenary budget, for the *Blackwaters* and such, paid by the *State Department*, estimated at \$100 billion a year, or the troops run by the *CIA* out of its unknown black budget.

It is a cost that is putting a severe strain on the *American Treasury*, whether we acknowledge it or not, and its effect of undercutting all other domestic discretionary spending - for example, on education, infrastructure, homeland security, and food and drug inspections - has already had severe social consequences and will continue to have more. [You know your empire is collapsing when you spend billions of dollars that you don't have, to create a missile system that doesn't work, to use against an enemy that you don't have either.]

And all of that to try to maintain an empire that is already shrinking. Latin America, which used to have US colonies from Cuba to Argentina, has thrown off most American influence, installed governments hostile to America and welcoming to the Chinese, and mostly refused to bow down to the 'structural adjustments' that the *World Bank* used to be able to use to manipulate their economies. [You know your empire is collapsing when the leader of one of those South American countries that we used to have in our pocket, and whom we couldn't pull off a coup to oust, comes to the *United Nations* and makes fun of your emperor, saying he smells sulphur where the emperor just was standing.]

All of the Moslem world is hostile to American interests and policies, including the Saudis leading the jack-up of oil prices; so is much of South Asia, and American prestige and influence has fallen considerably in Europe, central Asia, and Japan. We are good friends with Slovenia, Tajikistan, and Kyrgyzstan, that's about it. For all of our 725 bases, we no longer control the world, and our attempt to do so has been a disaster.

Fourth: empires fall because of *domestic dissent and upheaval*. Crashing economies, food shortages, political repression, military rain, and increasing disparities between the rich and poor create domestic discontents that, lasting long enough, lead to rebellion and civil war. As the Mughal empire of India collapsed when excessive axes to support the military led to armed resistance, as the Aztec Empire collapsed when its population showed no interest in defending the central government that had been bleeding them of tribute when the Spanish arrived, so the American empire faces a prospect of increasing dissent and division, malaise and disaffection - even a growing movement toward outright secession, now with organizations in at least 0 of the 50 states. It is not yet revolt and rebellion, but the institutions of this nation - presidency, vice presidency, *Pentagon*, *Congress*, the lot - are held in greater disdain and disrepute today than any time since opinion polls began to measure this, and rightly so. [You know your empire is collapsing when, according to a poll taken in the fall of 2006 by the Opinion Research Corporation and broadcast by CNN on October 23, 71 percent of your citizens agree that our system of government is broken and cannot be fixed," and another 7 percent agree it is broken but "hoped" it could be fixed.]

Get out while there's time Well it's not rebellion, thanks to the increasing sweeping and illegal repression of dissent by the Bush regime - leading up to, by the way, the vicious McCarthyistic House resolution 1955 passed 404 to 5 and sent to the Senate, the *Violent Radicalization and Homegrown Terrorism Prevention Act*, nothing less than the establishment of thought police to find and jail anybody that thinks unpleasant and subversive thoughts about this nation. Thanks also, I should note, to the success of the system's modern version of bread and circuses, a unique combination of entertainment, sports, television, internet sex and games, consumption, drugs, liquor, and religion that has so far successfully deadened most of the general public into apathetic stupor.

But it is hard to believe that a nation that is, first, so thoroughly corrupt as this - in all its fundamental institutions, its boughten parties, military contractors, academies, corporations, banks, brokerages, accountants, governments - and, second, so thoroughly economically unequal (2005 figures show that the income of the 3 million Americans at the top was equal to that of the 166 million at the bottom) can survive without revolt.

The Bush Administration has shown, in fact, that it is not capable of governing a population of this size and complexity - Katrina above all, energy deregulation (Enron etc.), subprime credit collapse, unregulated housing boom, gasoline mileage, FDA inspections, mine-safety inspections, no-bid contracts to favorites, misuse of wiretapping, Abramoff-Delay bribery, consumer product safety...the list of failures go on - and there's no imaginable successor that could; the empire is too vast and intricate, the homeland is too immense and diverse, the systems are too complicated and fragile.

The citizens will someday rise in protest, I predict. Those four processes by which empires inevitably fall - environmental, economic, military, and civil - are inescapably operative now, in this latest empire. I would be willing to make a sizeable bet that a combination of several or all of them will bring about its collapse within the next 10 years. The lesson from *Jared Diamond's* recent book *Collapse* is that almost no society is capable of escaping the kinds of peril that an empire like this faces. Unless you secede from it, and the sooner the better. You know your empire is collapsing when that idea just makes plain good sense.

Kirkpatrick Sale's article first passed across my desk in May 2008. It can be found on the website of the Vermont Secession Movement at <http://www.vtcommons.org/journal/2008/03/kirkpatrick-sale-you-know-your-empire-collapsing-when>

A Global Democratic Movement Is About to Pop by Paul Hawken,*Orion Magazine Posted on May 1, 2007, Printed on May 1, 2007*

I have given nearly one thousand talks about the environment in the past fifteen years, and after every speech a smaller crowd gathered to talk, ask questions, and exchange business cards. The people offering their cards were working on the most salient issues of our day: climate change, poverty, deforestation, peace, water, hunger, conservation, human rights, and more. They were from the non-profit and nongovernmental world, also known as civil society. They looked after rivers and bays, educated consumers about sustainable agriculture, retrofitted houses with solar panels, lobbied state legislatures about pollution, fought against corporate-weighted trade policies, worked to green inner cities, or taught children about the environment. Quite simply, they were trying to safeguard nature and ensure justice.

After being on the road for a week or two, I would return with a couple hundred cards stuffed into various pockets. I would lay them out on the table in my kitchen, read the names, look at the logos, envisage the missions, and marvel at what groups do on behalf of others. Later, I would put them into drawers or paper bags, keepsakes of the journey. I couldn't throw them away.

Over the years the cards mounted into the thousands, and whenever I glanced at the bags in my closet, I kept coming back to one question: did anyone know how many groups there were? At first, this was a matter of curiosity, but it slowly grew into a hunch that something larger was afoot, a significant social movement that was eluding the radar of mainstream culture. I began to count. I looked at government records for different countries and, using various methods to approximate the number of environmental and social justice groups from tax census data, I initially estimated that there were thirty thousand environmental organizations strung around the globe; when I added social justice and indigenous organizations, the number exceeded one hundred thousand. I then researched past social movements to see if there were any equal in scale and scope, but I couldn't find anything.

The more I probed, the more I unearthed, and the numbers continued to climb. In trying to pick up a stone, I found the exposed tip of a geological formation. I discovered lists, indexes, and small databases specific to certain sectors or geographic areas, but no set of data came close to describing the movement's breadth. Extrapolating from the records being accessed, I realized that the initial estimate of a hundred thousand organizations was off by at least a factor of ten. I now believe there are over one million organizations working toward ecological sustainability and social justice. Maybe two.

By conventional definition, this is not a movement. Movements have leaders and ideologies. You join movements, study tracts, and identify yourself with a group. You read the biography of the founder(s) or listen to them perorate on tape or in person. Movements have followers, but this movement doesn't work that way. It is dispersed, inchoate, and fiercely independent. There is no manifesto or doctrine, no authority to check with. I sought a name for it, but there isn't one.

Historically, social movements have arisen primarily because of injustice, inequalities, and corruption. Those woes remain legion, but a new condition exists that has no precedent: the planet has a life-threatening disease that is marked by massive ecological degradation and rapid climate change. It crossed my mind that perhaps I was seeing something organic, if not biologic. Rather than a movement in the conventional sense, is it a collective response to threat? Is it splintered for reasons that are innate to its purpose? Or is it simply disorganized? More questions followed. How does it function? How fast is it growing? How is it connected? Why is it largely ignored?

After spending years researching this phenomenon, including creating with my colleagues a global database of these organizations, I have come to these conclusions: this is the largest social movement in all of history, no one knows its scope, and how it functions is more mysterious than what meets the eye. What does meet the eye is compelling: tens of millions of ordinary and not-so-ordinary people willing to confront despair, power, and incalculable odds in order to restore some semblance of grace, justice, and beauty to this world.

Clayton Thomas-Muller speaks to a community gathering of the Cree nation about waste sites on their native land in Northern Alberta, toxic lakes so big you can see them from outer space. Shi Lihong, founder of *Wild China Films*, makes documentaries with her husband on migrants displaced by construction of large dams. Rosalina Tuyuc Velásquez, a member of the Maya-Kaqchikel people, fights for full accountability for tens of thousands of people killed by death squads in Guatemala. Rodrigo Baggio retrieves discarded computers from New York, London, and Toronto and installs them in the favelas of Brazil, where he and his staff teach computer skills to poor children. Biologist Janine Benyus speaks to twelve hundred executives at a business forum in Queensland about biologically inspired industrial development. Paul Sykes, a volunteer for the *National Audubon Society*, completes his fifty-second Christmas Bird Count in Little Creek, Virginia, joining fifty thousand other people who tally 70 million birds on one day. Sumita Dasgupta leads students, engineers, journalists, farmers, and Adivasis (tribal people) on a ten-day trek through Gujarat exploring the rebirth of ancient rainwater harvesting and catchment systems that bring life back to drought-prone areas

of India. Silas Kpanan'AYoung Siakor, who exposed links between the genocidal policies of former president Charles Taylor and illegal logging in Liberia, now creates certified, sustainable timber policies.

These eight, who may never meet and know one another, are part of a coalescence comprising hundreds of thousands of organizations with no center, codified beliefs, or charismatic leader. The movement grows and spreads in every city and country. Virtually every tribe, culture, language, and religion is part of it, from Mongolians to Uzbeks to Tamils. It is comprised of families in India, students in Australia, farmers in France, the landless in Brazil, the bananeras of Honduras, the 'poors' of Durban, villagers in Irian Jaya, indigenous tribes of Bolivia, and housewives in Japan. Its leaders are farmers, zoologists, shoemakers, and poets.

The movement can't be divided because it is atomized - small pieces loosely joined. It forms, gathers, and dissipates quickly. Many inside and out dismiss it as powerless, but it has been known to bring down governments, companies, and leaders through witnessing, informing, and massing. The movement has three basic roots: the environmental and social justice movements, and indigenous cultures' resistance to globalization - all of which are intertwining. It arises spontaneously from different economic sectors, cultures, regions, and cohorts, resulting in a global, classless, diverse, and embedded movement, spreading worldwide without exception. In a world grown too complex for constrictive ideologies, the very word movement may be too small, for it is the largest coming together of citizens in history. There are research institutes, community development agencies, village- and citizen-based organizations, corporations, networks, faith-based groups, trusts, and foundations. They defend against corrupt politics and climate change, corporate predation and the death of the oceans, governmental indifference and pandemic poverty, industrial forestry and farming, depletion of soil and water.

Describing the breadth of the movement is like trying to hold the ocean in your hand. It is that large. When a part rises above the waterline, the iceberg beneath usually remains unseen. When Wangari Maathai won the *Nobel Peace Prize*, the wire service stories didn't mention the network of six thousand different women's groups in Africa planting trees. When we hear about a chemical spill in a river, it is never mentioned that more than four thousand organizations in North America have adopted a river, creek, or stream. We read that organic agriculture is the fastest-growing sector of farming in America, Japan, Mexico, and Europe, but no connection is made to the more than three thousand organizations that educate farmers, customers, and legislators about sustainable agriculture.

This is the first time in history that a large social movement is not bound together by an 'ism'. What binds it together is ideas, not ideologies. This unnamed movement's big contribution is the absence of one big idea; in its stead it offers thousands of practical and useful ideas. In place of isms are processes, concerns, and compassion. The movement demonstrates a pliable, resonant, and generous side of humanity. And it is impossible to pin down. Generalities are largely inaccurate. It is nonviolent, and grassroots; it has no bombs, armies, or helicopters. A charismatic male vertebrate is not in charge. The movement does not agree on everything nor will it ever, because that would be an ideology. But it shares a basic set of fundamental understandings about the Earth, how it functions, and the necessity of fairness and equity for all people partaking of the planet's life-giving systems.

The promise of this unnamed movement is to offer solutions to what appear to be insoluble dilemmas: poverty, global climate change, terrorism, ecological degradation, polarization of income, loss of culture. It is not burdened with a syndrome of trying to save the world; it is trying to remake the world. There is fierceness here. There is no other explanation for the raw courage and heart seen over and over again in the people who march, speak, create, resist, and build. It is the fierceness of what it means to know we are human and want to survive.

This movement is relentless and unafraid. It cannot be mollified, pacified, or suppressed. There can be no *Berlin Wall Moment*, no treaty-signing, no morning to awaken when the superpowers agree to stand down. The movement will continue to take myriad forms. It will not rest. There will be no Marx, Alexander, or Kennedy. No book can explain it, no person can represent it, no words can encompass it, because the movement is the breathing, sentient testament of the living world. And I believe it will prevail. I don't mean defeat, conquer, or cause harm to someone else. And I don't tender the claim in an oracular sense. I mean the thinking that informs the movement's goal - to create a just society conducive to life on Earth - will reign. It will soon suffuse and permeate most institutions. But before then, it will change a sufficient number of people so as to begin the reversal of centuries of frenzied self-destruction.

Inspiration is not garnered from litanies of what is flawed; it resides in humanity's willingness to restore, redress, reform, recover, reimagine, and reconsider. Healing the wounds of the Earth and its people does not require saintliness or a political party. It is not a liberal or conservative activity. It is a sacred act.

This article appeared in the May/June 2007 issue of Orion magazine, 187 Main Street, Great Barrington, MA 01230, 888/909-6568. His forthcoming book Blessed Unrest is to be published by Viking Press...see <http://www.alternet.org/story/51088/>.

Greener Power to the People by Geoffrey Lean

British householders can produce their own energy, but UK official policy lags behind the best of Europe.

Ministers could avoid building nuclear reactors by encouraging families to fit solar panels and other renewable energy equipment to their homes, a startling official report concludes. The government-backed report, to be published tomorrow, says that, with changed policies, the number of British homes producing their own clean energy could multiply to one million - about one in every three - within 12 years. These would produce enough power to replace five large nuclear power stations, tellingly at about the same time as the first of the much-touted new generation of reactors is likely to come on stream. And, it adds, by 2030, such 'microgeneration' would save the same amount of emissions of carbon dioxide - the main cause of global warming - as taking all Britain's lorries and buses off the road.

The conclusions of the report - approved and partly financed by the *Department of Business, Enterprise and Regulatory Reform (DBERR)* - sharply contrast with initiatives hurriedly launched by Gordon Brown last week in reaction to the lorry drivers' fuel-price protests. In his most pro-nuclear announcement to date, the Prime Minister indicated that he wanted greatly to increase the number of atomic power stations to be built in Britain. And he met oil executives in Scotland to urge them to pump more of the black gold from the North Sea's fast-declining fields - even though his own energy minister, Malcolm Wicks, admitted that this would do nothing to reduce the price of fuel.

Even more embarrassingly for the embattled Mr Brown, the report closely mirrors policies announced by the *Conservative Party* six months ago to start "a decentralised energy revolution" by "enabling every small business, every local school, every local hospital, and every household in the country to generate electricity". Yesterday Peter Ainsworth, the shadow *Environment Secretary*, said: "We have found that there are huge economic, social and environmental gains to be made by doing this. It is good that, at last, part of the Government seems belatedly to be coming to the same conclusion, and we can only hope that the Prime Minister can rise above his panic-stricken clutching at old technologies and grasp the opportunities microgeneration offers for clean and more secure energy supplies."

The 130-page report, due to be launched by Mr Wicks, has been produced by a consultancy, *Element Energy*, after a wide-ranging survey of public attitudes on installing household renewable energy systems. It has been financed, and steered by, 14 official and other bodies including *DBERR*, the official *Energy Savings Trust*, five regional development agencies, *British Gas*, the *Micropower Council* and the *Ashden Trust*.

The department's approval marks something of a revolution in itself, since its predecessor, the *Department of Trade and Industry*, was for decades hostile to renewable energy and microgeneration. Its mandarins hated the thought of allowing millions of ordinary people to affect energy supplies by generating their own heat and power. As a result, Britain is almost bottom of the European league for exploiting renewables - above only Luxembourg and Malta - despite having the best resources in the entire continent.

Though ministers claim their efforts have been 'highly successful' in boosting these clean sources of energy, they now account for only about 4 per cent of electricity - compared, for example, with 14 per cent in Germany. Ministers also boast that 100,000 British homes now have microgeneration, mainly solar thermal panels that heat water - but in Germany they adorn more than a million roofs. Last year just 270 solar photovoltaic panels, which produce electricity, were put on Britain's homes, compared with 130,000 in Germany. At this rate, David Orr, chief executive of the *National Housing Federation* told MPs last month, it would take the UK 1,500 years to equal the number Germany has. Britain's only manufacturer of the panels, *Sharp*, calculates that less than a week of its year-round production actually gets installed in this country, with the rest exported to the continent.

The new report shows that, unlike in Germany, government incentives to householders fail to persuade them to invest in renewable energy. It concludes that they are daunted by the high initial cost of buying and installing them and want to see returns within three years. The Government gives grants to help with the initial costs, but these are too small and too restricted to be effective. Indeed, ministers deliberately cut them back at the very point when they looked as if they were inspiring a rooftop revolution.

When first launched two years ago, the grants - which, for example offered up to £7,500 to install photovoltaic panels - were an instant hit. Payments soared to £1.4m in November 2006 alone, exceeding expectations more than four times over. But instead of welcoming it, ministers determined to dampen down the soaring demand. First they rationed payments to just £500,000 a month - with the result that, in February 2007, this entire allocation was used up in just two hours. When this was ridiculed, they suspended the scheme altogether, relaunching it with the grant for photovoltaic panels slashed by two-thirds, and the one for wind turbines cut in half. Demand duly slumped.

For the past year, payments have been running at just £200,000 a month, far beneath the original target. But in April ministers rejected pleas from environmentalists and the renewable energy industry to increase the grants. Statistics to be

released tomorrow will show that, partly as a result, only 18,000 new microgeneration installations have been completed over the past four years.

The new report instead suggests that Britain adopt the same approach as has been successful in Germany, which pays householders for feeding the electricity they produce from microgeneration into the national grid; the rate of these "feed-in tariffs" for photovoltaic panels is especially generous, fuelling their rapid expansion. At least 15 other European countries have also adopted them. Last November, Gordon Brown appeared to back them, indicating that it should be "made easier for people to generate their own energy through microgeneration, and sell it on to the grid". But little has happened since, with ministers promising only to 'look' at feed-in tariffs. They failed to include them in the *Government's Energy Bill*, sparking the biggest rebellion of Mr Brown's premiership, when 33 Labour MPs last month defied the whips. A staggering 278 MPs have now signed an early-day motion calling on the Government to adopt them. Yet, last Wednesday, speaking for the Government in a *House of Lords* debate, Lord Jones, a junior *DBERR* minister, called feed-in tariffs "a regulatory nightmare and extremely expensive". He added: "If we were to change now we would destroy the consistency and stability that business craves and private sector investors need."

The report also gives a fair wind to a proposal by the *Micropower Council* to set statutory targets for household renewables, to give the industry the certainty it needs to expand. The confusion in Government over micropower echoes the chaos of its entire energy policy on display last week. Ministers panicked at the fuel price protests, which blocked the A40 on Wednesday, just as they did seven years ago when larger protests paralysed the country. Then Gordon Brown, as Chancellor, rapidly backed away from green taxes, despite having promised to put "the environment at the core of the Government's objectives for the tax system". Last week he and his ministers were scrambling over themselves to react to the new protests, contradicting each other over whether they would perform U-turns over plans to raise fuel duty by 2p, and increase road tax disproportionately on bigger cars.

The Prime Minister also increased his backing for nuclear power. Previously he had only suggested that new reactors should be built in place of old ones as they were closed down. But on Wednesday he said he would be "more ambitious", adding: "We are pretty clear that we will have to do more than simply replace existing nuclear capacity in Britain."

The report offers a very different future, as do the Tories, who see microgeneration as central to their philosophy of redirecting power to individuals. David Cameron sees 'decentralised energy' as "a key part of our political vision, energy for the post-bureaucratic age". He believes microgeneration could make Britain, and individual communities, 'self-sufficient in energy'.

This article was published in the mainstream UK media on Sunday, 1 June 2008

Germany's Cities Show Britain How to Do Green by John Booth

After a week in green Germany, returning to Britain brings more than the usual end-of-holiday bump. It feels like leaving a society humanely and intelligently engaged with the 21st century to one still groping its way through the last one. This isn't being down on my home country: it's hard to be easily impressed by anywhere else after savouring a stretch of the *Pennine Cycleway* as I did earlier this year.

When you take your bike off the train at Appleby-in-Westmorland and pedal with the prevailing wind to Berwick, it's hard to think there are better places in the world. But the sturdy efforts of underfunded *Sustrans* to provide safe and attractive cycling options seem paltry when taking to the bike in Germany.

Cycling routes criss-cross Berlin, linking seamlessly into the rest of the transport network, spectacularly so in the capital's new main rail station. The *S-Bahn* and *U-Bahn* networks there and in other cities I visited readily accommodate cyclists. On Thursday I spent hours with a friend's two-year-old as he rode his pedal-less bike safely and happily around suburban Hamburg. In how many British cities would that be possible?

Traverse the country and wind turbines are a routine part of the scenery as increasingly seems to be the use of solar energy. The sense one has is of a country whose environmental concern is not just civilised and eco-friendly but hard-headed and businesslike, too. Investing in the technology to develop renewable energy sources plays an important part in the German economy.

In Britain, what's left of manufacturing seems ridiculously dependent on the arms trade. Between Berwick and Berlin I heard one of the drivers of this German revolution, the Social Democratic MP Hermann Scheer, speak in a large but crowded *Commons* committee room. Scheer - styled by Time magazine as one of its five "Heroes for the Green

Century" - had just five MPs in that audience. Two of them - both Labour MPs - shared the platform and his enthusiasm. Neither will be standing at the next election.

This article was published in the mainstream UK media on Sunday, 1 June 2008

Making Gasoline from Bacteria by Neil Savage

a biotech startup wants to coax fuels from engineered microbes.

The biofuel of the future could well be gasoline. That's the hope of one biotech startup that on Monday described for the first time how it is coaxing bacteria into producing hydrocarbons that could be processed into fuels like those made from petroleum.

LS9, a company based in San Carlos, CA, and founded by geneticist George Church, of Harvard Medical School, and plant biologist Chris Somerville, of *Stanford University*, had previously said that it was working on what it calls "renewable petroleum." But at a *Society for Industrial Microbiology* conference on Monday, the company began speaking more openly about what it has accomplished: it has genetically engineered various bacteria, including *E. coli*, to custom-produce hydrocarbon chains.

To do this, the company is employing tools from the field of synthetic biology to modify the genetic pathways that bacteria, plants, and animals use to make fatty acids, one of the main ways that organisms store energy. Fatty acids are chains of carbon and hydrogen atoms strung together in a particular arrangement, with a carboxylic acid group made of carbon, hydrogen, and oxygen attached at one end. Take away the acid, and you're left with a hydrocarbon that can be made into fuel.

"I am very impressed with what they're doing," says James Collins, co-director of the *Center for Advanced Biotechnology at Boston University*. He calls the company's use of synthetic biology and systems biology to engineer hydrocarbon-producing bacteria "cutting edge."

In some cases, LS9's researchers used standard recombinant DNA techniques to insert genes into the microbes. In other cases, they redesigned known genes with a computer and synthesized them. The resulting modified bacteria make and excrete hydrocarbon molecules that are the length and molecular structure the company desires.

Stephen del Cardayre, a biochemist and LS9's vice president for research and development, says the company can make hundreds of different hydrocarbon molecules. The process can yield crude oil without the contaminating sulfur that much petroleum out of the ground contains. The crude, in turn, would go to a standard refinery to be processed into automotive fuel, jet fuel, diesel fuel, or any other petroleum product that someone wanted to make.

Next year LS9 will build a pilot plant in California to test and perfect the process, and the company hopes to be selling improved biodiesel and providing synthetic biocrudes to refineries for further processing within three to five years. But LS9 isn't the only company in this game.

Amyris Biotechnologies, of Emeryville, CA, is also using genes from plants and animals to make microbes produce designer fuels. Neil Renninger, senior vice president of development and one of the company's cofounders, says that Amyris has also created bacteria capable of supplying renewable hydrocarbon-based fuels. The main difference between the companies, Renninger says, is that while LS9 is working on a biocrude that would be processed in a refinery, Amyris is working on directly producing fuels that would need little or no further processing.

Amyris is also working on a pilot production plant that it expects to complete by the end of next year, and it also hopes to have commercial products available within three or four years. Both companies say they want to further engineer their bacteria to be more efficient, and they're working to optimize the overall production process. "The potential for biofuels is huge, and I think theirs [LS9's] is one possible solution," Renninger says.

Indeed, many technology approaches are needed, says Craig Venter, cofounder and CEO of *Synthetic Genomics*, of Rockland, MD, which is also applying biotechnology to fuel production. "We need a hundred, a thousand solutions, not just one," he says. "I know at least a dozen groups and labs trying to make biofuels from bacteria with sugar."

Venter's company is also working on engineering microbes to produce fuel. The company recently received a large investment from the oil giant BP to study the microbes that live on underground oil supplies; the idea is to see if the microbes can be engineered to provide cleaner fuel. Another project aims to tinker with the genome of palm trees--the most productive source of oil for biodiesel--to make them a less environmentally damaging crop.

LS9's current work uses sugar derived from corn kernels as the food source for the bacteria--the same source used by ethanol-producing yeast. To produce greater volumes of fuel, and to not have energy competing with food, both approaches will need to use cellulosic biomass, such as switchgrass, as the feedstock. Del Cardayre estimates that cellulosic biomass could produce about 2,000 gallons of renewable petroleum per acre.

Producing hydrocarbon fuels is more efficient than producing ethanol, del Cardayre adds, because the former packs about 30 percent more energy per gallon. And it takes less energy to produce, too. The ethanol produced by yeast needs to be distilled to remove the water, so ethanol production requires 65 percent more energy than hydrocarbon production does.

The *US Department of Energy* has set a goal of replacing 30 percent of current petroleum use with fuels from renewable biological sources by 2030, and del Cardayre says he feels that's easily achievable.

This article first appeared in MIT's Technology Review on Wednesday, 1st August 2007.

Liquid Electricity

Re-charging your electric car in the same amount of time it would take to fill your tank with petrol or diesel. That is the only realistic option for 'electrifying' road transport. Scientists worldwide agree that electric transport will be inevitable in the long run, but so far it has proved impractical. A Dutch government think tank, the *Innovation Network* in the city of Utrecht, is working on a solution: liquid electricity you can buy at photon farms. And the best part is that farmers across the globe can make some money from it.

George Ginting is en route to his parents to celebrate the *Sugar Feast*. George is immensely proud of his new car; a brand new shiny *Honda Volta*. Just like all other cars, the *Honda* is electrically powered, the result of a series of environmental agreements concluded since the *2007 Bali Climate Conference*.

Suddenly, the dashboard emits a beeping sound, indicating the car's batteries are running low. George presses a button of his navigation system which tells him there are four farmers selling power in the area. Tea farmer Widjaja is nearest, and within minutes the *Honda* will be filled up again.

The main problem with the current generation of electric cars is the amount of time it takes to charge the batteries. Even the best electric car has a radius of only a few hundred kilometres, after which the car has to remain stationary for hours to recharge the batteries for the next drive. This is the one and only major obstacle preventing the large-scale introduction of electric transport.

The *Dutch Innovation Network* has come up with an idea that radically changes the situation. In future, electric cars will no longer need to be charged for hours, but will be filled up with pre-charged battery fluid; let's call it liquid electricity. Farmers across the world will then be in a position to generate additional income by using wind, biomass or solar power to pre-charge battery fluid and sell it to passing motorists.

Project Manager Peter Oei of the *Innovation Network* explains why it is so important that in future cars should be electrically powered. "Electric cars are very clean: they don't emit fine dust or carbon dioxide from their exhaust pipes, what is more, they don't even have exhaust pipes. In addition, an electrical car produces no noise, which is of course also an environmental problem."

However, Peter Oei forgot to mention another important advantage, which is that for cars, electricity is a fundamentally more efficient form of energy than petrol or diesel fuel. Only 20 percent of the energy contained in the gas tank of a normal car ever reaches its wheels in the form of kinetic energy, mainly because of friction and heat losses, whereas 60 percent of the energy stored in the batteries of an electrical car is converted into motion.

These figures show that an electric car is always at least three times as environmentally friendly as a petrol or diesel powered car, even when the electricity is generated by 'dirty' power plants.

But Peter Oei and the *Innovation Network* would much prefer clean power, to ensure 100 percent environmentally neutral electrical cars. Which is why they came up with the idea of photon farmers. The main advantage to power stations in farmyards is that farmers have the necessary space to generate clean power.

US farmer John Macdonald, who owns extensive corn fields in the windy state of Minnesota, could build a wind farm, while coffee farmer Juan Gomez from Columbia could produce electricity by gasifying the coffee-bean husks that he would otherwise discard. And West Javan tea planter Widjaja could place rows of solar panels in between rows of tea bushes.

Of course, this is all still in the future, but Peter Oei and the *Innovation Network* have already started up a research project, the first phase on the road to actual applications. "This type of technology has only recently been developed, and the first phase of research will be stationary, in other words not involving moving vehicles. Wind farms will be built at farms to store power in battery fluid. The electrolyte, as it's officially called, will then preserve the power until the moment it is actually needed."

"All we need to do now is develop the best possible electrolyte. Once we've sorted that out, we will move to the next phase: a filling station for liquid electricity. It sounds fantastic, but the technology already exists, just not for vehicles."

This article appeared in the cesc intray in May 2008.

Kilowatt Cards by Robert W. Hahl

An electricity standard for money which provides fixed-value paper and a non-inflating store of value

You may be interested to learn about *Kilowatt Cards* - gift cards that pay for 10 kilowatt-hours (kWh) of electricity in any residential utility account, anywhere in the world. They demonstrate fixed-value paper. Electric utilities don't accept them - we do, through www.kilowattcards.com - and then send payments directly to the power companies, at the rate they normally charge their residential customers for that exact amount of electricity (including taxes and fees).



Because energy is needed to produce or to use nearly all goods and services today, *the ability to consume energy* is a meaningful definition of wealth. While some people want gold and silver, everybody needs heat or light or transportation. And since 10 kWh is a physical constant the cards have fixed-value. They are supported by a non-profit corporation I founded to help people pay for electricity anywhere in the world.

One can judge intuitively what each *Kilowatt Card* is worth: 10 kWh = 10,000 Watt-hours; enough to run a 100 Watt light bulb for 100 hours (exactly) and roughly enough to drive a *Toyota Prius* for 25 miles. If this system remains sound, *Kilowatt Cards* will provide a non-inflating store of value, worth the same amount of scientific work, regardless of electricity prices in money. In principle *Kilowatt Cards* can also be used for barter and as a medium of exchange because they can be redeemed for residential electricity by any holder, regardless of local prices.

Economist Joseph Stiglitz has spoken about the past failures of the gold standard and the coming failure of the 'dollar standard', speculating that all national currencies may eventually fail due to inflation, and be replaced by private money from competing companies, backed by gold and their reputations. However the gold standard is impractical since there isn't enough gold for six billion people and its value is mainly esthetic. But here is an alternative to gold: electricity.

While the *price* of electricity in dollars is not stable, its *value* to people as a source of light, heat and motion is very stable. If one likes to read at night or travel by train these activities always consume about the same amounts of electricity. So no matter what its price in dollars, electricity always has about the same value to individuals. One ought to be able to save that which has value to people. The idea of backing scrip with kilowatt-hours has been discussed since the 1980's but was not considered practical because any given power grid could be destroyed or unable to obtain fuel. However the delocalized nature of KilowattCards.com shows how that problem has been solved.

I think the social impacts could be positive because having a fixed and objective store-of-value allows people to save without losing wealth to inflation. The ability to save a non-depreciating asset that is less expensive than real estate could reduce the pressures for suburban sprawl. It might even curb the modern drive to consume everything available as quickly as possible in the name of 'growth', since inflation takes value away from anything not growing fast enough.

One of our goals is to show that paper notes can be backed by something useful at low cost to the system. We do not create, protect or deliver any electricity - we just pay for it with national currencies. *Kilowatt Cards* cannot be copied, even though they are printed on plain paper, because value resides in the serial number and the coupon. Before accepting them in trade, anyone with access to kilowattcards.com can 'authenticate' the serial numbers in a process that replaces the existing numbers with new ones. This way they can be traded to anyone and authenticated by anyone without limit.

We are developing this technology with an open-source approach so that others might also issue kilowatt-hour notes. *Kilowatt Cards* are presently being given away as gift cards so they will not be confused with financial securities or private currency. However, other notes could possibly be registered with financial authorities and sold as securities. Once they become familiar, such products could be issued by any reputable organization, especially regional power companies and governments.

This open letter arrived in the cesc in-tray on 18 May, 2008. If you provide a mailing address, the Kilowatt-Hour Card Corp of 121 S. Lee St., Falls Church, VA 22046, (Tel: +1 7039817447; e-mail: 121rhahl@kilowattcards.com) will send you some Kilowatt Cards.

These Wars Are About Oil by Eric Margolis

The ugly truth behind the Iraq and Afghanistan wars finally has emerged. Four major western oil companies, *Exxon Mobil, Shell, BP* and *Total* are about to sign US-brokered no-bid contracts to begin exploiting Iraq's oil fields. Saddam Hussein had kicked these firms out three decades ago when he nationalized Iraq's oil industry. The US-installed Baghdad regime is welcoming them back. Iraq is getting back the same oil companies that used to exploit it when it was a British colony. As former fed chairman Alan Greenspan recently admitted, the Iraq war was all about oil. The invasion was about SUV's, not democracy.

Afghanistan just signed a major deal to launch a long-planned, 1680-km pipeline project expected to cost \$8 billion. If completed, the Turkmenistan-Afghanistan-Pakistan-India pipeline (TAPI) will export gas and later oil from the Caspian basin to Pakistan's coast where tankers will transport it to the West. The Caspian basin located under the Central Asian states of Turkmenistan, Uzbekistan and Kazakhstan, holds an estimated 300 trillion cubic feet of gas and 100-200 billion barrels of oil. Securing the world's last remaining known energy El Dorado is a strategic priority for the western powers. But there are only two practical ways to get gas and oil out of land-locked Central Asia to the sea: Through Iran, or through Afghanistan to Pakistan. Iran is taboo for Washington. That leaves Pakistan, but to get there, the planned pipeline must cross western Afghanistan, including the cities of Herat and Kandahar.

Pipeline Deal

In 1998, the Afghan anti-Communist movement *Taliban* and a western oil consortium led by the US firm *Unocal* signed a major pipeline deal. *Unocal* lavished money and attention on the *Taliban*, flew a senior delegation to Texas, and hired a minor Afghan official, Hamid Karzai. Enter Osama bin Laden. He advised the unworldly *Taliban* leaders to reject the US deal and got them to accept a better offer from an Argentine consortium. Washington was furious and, according to some accounts, threatened the *Taliban* with war.

In early 2001, six or seven months before 9/11, Washington made the decision to invade Afghanistan, overthrow the *Taliban*, and install a client regime that would build the energy pipelines. But Washington still kept sending money to the *Taliban* until four months before 9/11 in an effort to keep it 'onside' for possible use in a war against China.

The 9/11 attacks, about which the *Taliban* knew nothing, supplied the pretext to invade Afghanistan. The initial US operation had the legitimate objective of wiping out Osama bin Laden's al-Qaida. But after its 300 members fled to Pakistan, the US stayed on, built bases - which just happened to be adjacent to the planned pipeline route - and installed former *Unocal* 'consultant' Hamid Karzai as leader.

Washington disguised its energy geopolitics by claiming the Afghan occupation was to fight 'Islamic terrorism', liberate women, build schools and promote democracy. Ironically, the *Soviets* made exactly the same claims when they occupied Afghanistan from 1979-1989. The Iraq cover story was weapons of mass destruction and democracy.

Work will begin on the TAPI once *Taliban* forces are cleared from the pipeline route by US, Canadian and NATO forces. As American analyst Kevin Phillips writes, the US military and its allies have become an *Energy Protection Force*.

Added Benefit

From Washington's viewpoint, the TAPI deal has the added benefit of scuttling another proposed pipeline project that would have delivered Iranian gas and oil to Pakistan and India. India's energy needs are expected to triple over the next

decade. Delhi, which has its own designs on Afghanistan, is cock-a-hoop over the new pipeline plan. Russia, by contrast, is grumpy, having hoped to monopolize Central Asian energy exports. Energy is more important than blood in our modern world. The US is a great power with massive energy needs. Domination of oil is a pillar of America's world power. Let's be realistic. Afghanistan and Iraq are about oil, nothing else.

Published on Sunday, June 22, 2008 in [the Toronto Sun](#)

Copyright © 2008, Canoe Inc.

The Credit Crunch Myth by Peter Etherden

I have added my name to a Petition for *Her Majesty's Treasury Select Committee* to organise an inquiry into the long-term development of this country's money supply.

#	Title	Name	Town/City	S/C/P	Region	Comment	Date
1	Ms	Barbara Panvel			India		Jun 07, 2008
2	Mr	Peter Etherden	Buckfastleigh	Devon	England	View	Jun 13, 2008
3	Lord	Merlin Sudeley			England		Jun 18, 2008

The petition argues that *Her Majesty's Government* should take urgent steps to shift away from its present 99% credit economy towards a sustainable non-interest bearing economy by spending 'cash' into the economy, using:

“...its ability to create 'cash' or 'narrow money' to fuel genuine growth in the real economy to cover pension bills fairly, pay for public services adequately, make public buildings energy-sufficient and to adapt to climate change effectively.”

Click [here](#) or on the link at the foot of this e-memo to read the full text of the petition and add your own name to it.

I added the following 500-word comment alongside my signature:

“We live in the dying embers of an age of great usury; at the end of a thousand year struggle against an invisible army of darkness. For further details of how sound money and fair credit have been destroyed by the guile of international financiers and the neglect of our lords temporal and spiritual, see Henry Swabey's history of this 1000 year war in England at <http://www.cesc.net/serifweb/scholars/swabey/> and read R.H. Tawney's essays on usury at <http://www.cesc.net/serifweb/scholars/tawney/>”.

First released into the public domain on Friday, June 13, 2008 as an email to the Petition Originator Sabine McNeill.

Early Day Motion 408

tabled on 5th December 2006 by Austin Mitchell MP (Grimsby)

“That this house, knowing that enormous sums of money are necessary to improve public services; build a better infrastructure and provide for the well-being of the people; and recognising that further huge additional expenditure will now be necessary to combat global warming, reduce carbon emissions and make public buildings, housing and transport carbon neutral, points out that there is no prospect of raising such huge but necessary sums through normal channels of taxation and borrowing; therefore suggests that the time has come to supplement these by using the power of public credit to increase the amount of publicly-funded money, particularly since this has fallen from 20 per cent of the money supply in 1964 to 3 per cent, because the banks have largely taken the issue of credit and taken the seignorage arising from credit creation for themselves; and calls on the Government to use the power of public credit for public purposes, particularly for the huge expenditure necessary to finance the development of carbon neutrality in a good society.”



Stop the Cash Crumble to Equalize the Credit Crunch

[Signatures](#)



Published by Sabine K McNeill on May 31, 2008

Target: Treasury Select Committee

<http://www.gopetition.co.uk/petitions/stop-the-cash-crumble-to-equalize-the-credit-crunch.html>

Description/History

The *Forum for Stable Currencies* has provided room for debates and discussions between *Parliamentarians* and *Concerned Citizens* regarding our financial system since 1998. With input from the *Christian Council for Monetary Justice*, *Local Exchange Trading Systems* and many likeminded groups internationally, we have covered the full spectrum of monetary, financial and economic causes that are historic and systemic.

We have also covered the effects that range from 'bank victims' and overindebtedness to bankruptcies and suicides. We have attended meetings of the *Monetary Policy Committee* and the *Economic Affairs Committee* at the *House of Lords* and the *Treasury Select Committee* at the *House of Commons*.

We have also made written submissions to these committees. Whilst they were published, we have never been invited to give evidence or been heard in person.

Since the *Treasury Select Committee* sets its own agenda, this petition is our attempt to make 'money supply' the topic of an inquiry.

Petition

We, the undersigned, request an inquiry into the long term development of the money supply, in particular the share of cash and the share of credit in the economy. Since nobody questions who generates the interest necessary to pay for credit, we object to buying into the myth of a 'credit crunch' whilst on-line statistics of the *Bank of England* show that the cash share of the money supply has continually dwindled. The reality is therefore a 'cash crumble'.

A lot of us have studied our financial system over many years and some have taken legal advice resulting in Parliamentary scrutiny via the *Treasury Select Committee*. Others have submitted '*Green Credit for Green Purposes*' in response to the *Committee's* inquiry into the Stern review which was published in February 2008. For an economy with believable inflation rates and the ability to preserve wealth, it is not necessary for the Government to raise taxes or to borrow but to stop the 'cash crumble'.

Given that we all live longer, we request an independent inquiry into the long term money supply as the tap that should fuel our economy sustainably. Wholesale and retail credit have monopolised the supply. To compensate for the imbalance generated, the Government should spend cash into the economy and gradually increase its share for the sake of future generations. Instead of growing the financial economy, it should use its ability to create 'cash' or 'narrow money' to fuel genuine growth in the real economy to cover pension bills fairly, pay for public services adequately, make public buildings energy-sufficient and to adapt to climate change effectively.

Most of us have been victims of rising prices that don't match inflation figures and many of us have experienced practices of banks and other authorities that we don't consider honourable. We are all aware of social problems that are caused by a financial system that is neither sustainable nor fair. We therefore urge the *Treasury Select Committee* to organise an inquiry into the long-term development of the money supply.

[Sign the petition](#)

[Tell a friend](#) | [Signature list](#) | [Contact author](#) | [Forum](#) | [Page Views](#) | [Bookmark](#)