

Anarchism and the Peak oil argument

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Contents

1. An anarchist analysis of what peak oil means for the fight for a free society	3
2. Background to Peak Oil	4
3. What does it all mean?	6
4. The Natural Gas cliff in North America	8
5. Oil a wasted Gift	10
6. Energy and Capitalism	13
7. Cheap Oil and the End of the Show — Reactions	15
8. Roasting the Frog — Making Changes	20
9. Disaster or Sanity — The Road Ahead.	22
10. Cleaning up the Mess.	28
11. Grappling with the Family and Population Growth.	31
12. Did We Miss the Boat in 1936?	33
13. Trying to Get There and The Obstacles	35

1. An anarchist analysis of what peak oil means for the fight for a free society

Peak Oil is a subject that has not been addressed much in the Anarchist community and it's relevance to it. This is something I wish to discuss here and begin what is probably a very important debate and our response to it. Peak Oil is one of the major issues facing humanity and will result in great changes. It interlinks with many subject areas largely because of the ubiquitous role of energy in society. It is essential that Anarchists are aware of and understand this issue and it's far reaching consequences and are not caught off guard and are ready to take advantage of the changes that will occur to bring about a better world, rather than allow society to be led down the destructive path of capitalists and other dominating power structures.

2. Background to Peak Oil

Some of the references that I have seen of Peak Oil in anarchist writings appear to dismiss it as some sort of capitalist inspired shortage or something. The evidence does not indicate this at all. Also in the mainstream press, it tends to be dismissed by economists, who generally have no grounding in any scientific knowledge, readily ignore physical fact and typically claim there is plenty of oil left and the market can always provide anyhow -usually out of thin air. However it would seem that those in power are using the corporate media to confuse the public about it so as not to disturb the status quo or rather disturb the ability to extract as much profit for as long as possible and retain the reins of power. Nevertheless it is a bit disappointing to see pretty much a lack of serious consideration given to it in anarchist writings considering it's importance. Fortunately Peak Oil is getting more attention now due to the dedicated hard work of a number of geologists such as Colin Campbell, Jean Laharrie and many others. Typically these people have had long careers in the oil industry and therefore know and understand the geology and engineering behind this subject area and have access to the relevant facts and figures on the ground or should I say, in it.

On the surface it would appear the establishment is not aware of the Peak Oil issue or at least are only recently. In order to remedy that, over the last few years, Colin Campbell (and ASPO) has given many presentations to national governments and parliaments. However as far back as the 1977 the CIA had projections (The Impending Soviet Oil Crisis) on when the Soviet Union would peak and were aware of similar issues for the Middle East. Indeed the US signed a 60 year agreement with Saudi Arabia actually 60 years ago to secure the oil for them. Thus they or the key players, have always been aware of the central importance of this commodity.

For references and more details, see: www.fromthewilderness.com/free/ww3/100405_petrocollapse_speech.shtml

And also: Smoking Gun: The CIA's Interest in Peak Oil www.museletter.com/archive/cia-oil.html

Peak Oil for those who are not familiar with it, refers to the impending maximum daily production, globally in the amount of oil that will ever be produced as shown in the Figure 1. Up to now, production has been rising and soon if not this year, the peak will occur and inevitable decline will occur over the next 40 or so years. It is based on the principle first discovered by M. King Hubbert in the 1950s who was a geologist who noted that production of oil fields slowly rises up to a peak and then falls in a similar manner. The familiar bell-shaped curve. He then realized it collectively applies to a whole set of fields and quickly realized back then, using the data for the USA, that it would peak in 1970. Nobody believed him. He was spot on and it peaked in 1971 — just before the first oil shock incidentally. The same analysis applied to all fields globally, predicts a peak anywhere from this year (2005) to 2010, but there are strong indications it was either last year or is this year. Thereafter it will decline anywhere from 2% to about 8% a year. Nobody really knows.

The prediction of most geologists working in this area, fall within this narrow time frame. Forget what economists say, since it's fantasy. Other countries that have peaked already are the UK & Norway (both down 20%+), China, Mexico, Venezuela, Indonesia, Russia, Syria, USA (1971), Libya, Nigeria, Qatar and many others. Only the Middle East has spare capacity, except their reserve figures are not very transparent and could be more like Enron stock values. Saudi Arabia provides approximately 8 million barrels of the total 82 million used globally per day or 29.9 Gb annually (82m x 365). About 60% or so of Saudi oil comes from just one giant field, indeed the biggest field in the world called Ghawar, which has been producing for almost 60 years now. As shown in Figure 2, the 14 biggest fields in the world supply 20% and the 55 biggest supply a full 35% of the world supply. Many of these fields are in decline or are about to go into decline. For instance Canterall 2nd biggest, in Mexico, went into decline this year and a giant field has not been found in years. Besides the peak of oil field discovery was in 1964 and the number and sizes of fields found has fallen steadily since then.

So for the sake of not writing too much more on this because many others have already written about it, I have provided some URLs that contain more background information for those who wish to know more on the technical side since what we want to do here is to present this topic in relation to what it means for anarchism.

www.oilcrisis.org/campbell/

www.peakoil.ie/

www.energybulletin.net/

en.wikipedia.org

www.dieoff.org/

3. What does it all mean?

So what does all this mean? Surely there are replacements and what has it to do with anarchists anyhow. We are interested in workers, rights and freedom, hardly oil? Well Peak Oil does not mean there will be no oil left. It means the End of Cheap Oil and this is central to the whole idea. And in cheap, I do not necessarily mean money as such. It's not a question of charging lower prices for it or whatever in anarchist heaven. Basically what has happened, most of the promising areas of the world have been explored, all the big fields were found long ago and pressed into production. The peak in discovery of oil fields occurred in the mid 1960s and the number and sizes of fields found has fallen steadily since then. All the easy or at least most of the easy oil is gone. We are well on the way to using the stuff that is dirtier, heavier, found deeper and lying around in smaller quantities. Whatever form of society one has, it still means as we move towards the bottom of the barrel as it were, more resources in terms of manpower, knowledge, equipment and energy itself must be expended to get the stuff. This is thus reflected in the value and whether it is cheap or not. For example the tar sands of Canada are vast and are often mentioned as a valuable resource and replacement. But they are not because to extract approximately 40 barrels of oil in a place like Saudi Arabia which includes pumping, cleaning, shipping and refining requires only of the order of one barrel of oil in terms of energy required while for the Canadian sands this figure is a lot worse and more like burning one barrel to get two (or 1:2). For the tar sands, there is also in excess of 10 barrels of water required as part of the processing which becomes polluted and the creation of a bloody great environmental mess from all the open cast mining.

Eventually so much more energy has to be expended, it's just not worth it. And as I said regardless of your form of society, it is physics not politics that says when you reach the point of having to burn a barrel of oil (equivalent) to get a barrel of oil, then it's of no value or use to you. For the Tar Sands, not all of it is even 'high' grade and at the moment they are using valuable high quality natural gas from Canada, to heat the tar sands to steam out the tar and then crack it chemically into oil. From an energy point of view, it's an incredibly wasteful thing to do with a high grade energy source like natural gas. Without the gas, extracting the tar and turning it into oil, would be way more difficult. It's just the absurdities of money and the markets that happen to completely undervalue the true benefit of natural gas to us. Likewise with oil. As the famous scientist Buckminster Fuller said: 'Oil should be valued at a million dollars a barrel for the benefits it gives us'. There's nothing that's both as energy dense and as versatile as oil.

To clarify the above it ought to be noted that the amount of oil currently extracted from the tar sands is only a tiny fraction of the current global daily production, but the point was to show they are not really the huge replacement reserve that they are made out to be regularly in the media.

So to continue; all the main oil producing regions have been found. There are no more North Sea oil equivalents, which is already in decline. The most optimistic projections for the ANWAR on the North Slope in Alaska only put reserves at half of the Prudhoe Bay field (in decline) -about

two weeks of the global supply. Even the Caspian Sea basin area where only 7 or 8 years ago, excitement was running high and it was said to be another Middle East with reserves of 200 billion barrels (Gb), turned out -thankfully- to have only around 17 Gb or about 7 months global supply. And much of that has a high sulphur content.

In the meantime of course, demand for oil has risen dramatically and the physical structure of our society is organised around the assumption that there will always be plenty of it. It's hard to see how the demand can be met if the total available is decreasing. Somebody is going to have to use a lot less and even do without it. Thus it is clear that the problems aren't quite when the oil is gone, but at the turning point or peak where it starts to get scarce.

As things currently stand with our industrial agricultural system that is both inhuman and destructive to the environment, the production and distribution of food requires a lot of oil. It is reckoned that most items of food on sale in the shops have travelled up to 1000+ miles on average. We could and should switch back to sustainable organic agriculture, but that will obviously require much more labour and a partial return to the land. See: *The Power of Community: How Cuba Survived Peak Oil*.

4. The Natural Gas cliff in North America

Natural Gas is in a similar situation, except being a gas it's a bit different. Production does not follow a bell curve, but rises to a plateau, remains at that level for some period of time that is obviously related to the field size and then almost without warning as the gas pressure drops when the field is exhausted, production falls off a cliff. While the global peak in natural gas will be a bit later than for oil, for the North American continent it already past peak. Even the corporate press has acknowledged that. The cliff is very near. Nearly all homes in the USA are heated with natural gas and a considerable amount of electricity especially peak power, is generated with gas. Shipping gas, which involves liquefying it (known as LNG), is costly, dangerous, hard to move in large quantities and requires 15% of the energy in the gas to do it. And I think there is only one gas terminal in the US that can handle LNG although there are plans to build more. But they need to build the ships too. This stuff could not be built overnight, so by the time enough infrastructure was built to fully satisfy US needs, it's likely we would be past global gas peak, thereby making any such costly investment less profitable since the infrastructure would become under used again fairly quickly. At best some of it will only be built meaning there are going to be pretty big shortfalls in supply. Thus massive dislocations are about to hit the US economy pretty soon. Indeed the recent hurricane Katrina has shut down a fair amount of domestic oil and gas production, but so far the US has actually tapped into the European strategic (oil) reserves to cover the gaps, nevertheless it could still end up being the trigger. It will mean in the USA at least, soaring prices for heating and probably for the cost of electricity too. The production of nitrogen fertilizers which are a crucial component for the high production of industrial agricultural, is heavily dependent on gas and so is sensitive to the price. Whether this production moves offshore to countries where there are no impending gas shortages remains to be seen, but if it does, it is bound to result in higher prices unless Uncle Sam can bully them into lower pricing. Overall there will be knock on effects to the US economy and the world economy too, since so many countries rely on exports to the US. The sheer quantities of energy provided by oil and gas cannot be readily replaced by other forms of energy, at least not immediately and more on that later.

For those in doubt of these figures, checkout: www.energybulletin.net/1590.html And see this graph of gas production in North America showing the rapid decline in the size of fields. www.mnforsustain.org/images/energy_paper_fig14_depletion.jpg Minnesota Energy Future: Part II-B: Energy + Resources at www.mnforsustain.org/erickson_dell_minnesotas_energy_future_part_IIB.htm

The important consequence of this for Anarchists at least in North America, is that it will be hard for the corporate media to hide this jolt although they will do their best. It is something that will hit most people. It is precisely in these sort of situations when people awake out of corporate / state induced slumber that they will be receptive to an analysis of what is happening and may begin to question the status quo. However given the reaction to 9/11 and the way the Patriot Act was brought in, I having my doubts. For example when I read things like the following extract from "A General Strike Won't Do It", I get worried although it's hard to know how much to trust

the poll that the piece is based on:

“...It’s encouraging that a July 18th Harris Poll found that 64% of surveyed Americans strongly disapprove of Bush’s handling of the War in Iraq. It’s not so encouraging that a Gallup Poll of November 19, 2004 determined that 45% of Americans also believe that God created human beings pretty much in their present form about 10,000 years ago. If lions and tigers and bears can simply pop into existence, with no eons of natural history required to produce them, then surely oil and cheap Chinese goods can be conjured out of thin air, too? The same poll found: A third of Americans are biblical literalists who believe that the Bible is the actual word of God and is to be taken literally, word for word. If sacred texts can just fall out of the sky, with no social conditions or individual people required to compose them, then surely all our other institutions — marriage, NASCAR racing, gross inequality of wealth — are just as perfect and transhistorical as the Bible. People who are so afraid of independent thought that they will happily vote for a fascist are not likely to suddenly notice that they can overthrow their bosses if they all pull together...

Nevertheless we must be ready for this moment. There is a historical precedent for this situation, such as Germany of the 1930s, where there was a great economic upheaval; obviously not for the same reasons, and significant fractions of the masses there turned to fascism. It’s important that we understand why, as the capitalists will or rather are trying this trick again.

5. Oil a wasted Gift

Oil is a one off gift from Nature to build a sustainable infrastructure. This has not happened. The replacements for oil are not looking good. To run the global car fleet on bio-fuels would require most of the farmland in existence and besides the amount of energy used to produce bio-fuels versus the return is low, ranging from 3:1 to 1:1 since the actual figure is disputed. At the moment this fact is hidden, because the subsidized cheap fuel for tractors, transport and processing are not properly energetically taken into account. The proposed 'hydrogen economy' is pure fantasy. Not because burning hydrogen doesn't work but because there are no free sources of hydrogen to tap and to split water to make hydrogen requires the same or more energy as is released when you 'burn' it again to form water again so your problem is really where are you going to get that energy from. On nuclear, there are about 450 or so power stations worldwide; this would need to rise rapidly to at least 1600+ or higher. Figures depend exactly on assumptions of efficiency and so forth. With this number of reactors the present lifetime of the uranium's reserves would last only of the order of only 15 or so years. See more detailed figures the section "Ore Resources" in: Minnesota Energy Future: Part II-B: Energy + Resources, at: www.mnforsustain.org/erickson_dell_minnesotas_energy_future_part_IIB.htm

Some will no doubt point out that the effective reserves of Uranium can be increased a 1000 fold by fast-breeder technology which is where normal Uranium is irradiated to produce Plutonium which is fissionable. However the USA, UK and France tried this for about 30 years and have abandoned it because it is so fiendishly difficult. Only the Japanese are still at it without too much success. And even now nobody is seriously proposing it.

With alternative forms of energy while good, the amount of power is very diffuse. Besides from this side of the Peak, nobody seems to realize just how much cheap oil essentially subsidises the construction and cost of alternative energy plants and nuclear ones too. One of the key problems with alternative energies is that there are no real viable technologies for storing large amounts of energy. For solar and wind energy to come close to providing the same amount of energy as oil does, would require a truly massive scale up in production and deployment of such technologies and still they would come nowhere near to match the convenience of oil. Current world electrical capacity is about ~3.5 TW (3,500 GW) while global installed wind capacity which has grown dramatically is only 44 GW. So it has a long way to grow to reach 10% or 20%. It's feasible but it will take at least another 10 years and we will be well past peak and already in difficulty. Likewise the theoreticals are quite good for photovoltaics; current annual production is equivalent to about 1.7 GW which is a long way behind wind, but it has the potential to grow and has been. Yet we would need to see the current rapid growth continued for many years into the future too. So as we can see, it's no so clear cut or straight forward. Anyhow, I am sure everyone has noticed that the capitalists seem to have absolutely no interest in these technologies. Presumably if they had been developed and deployed (using the cheap energy) years ago, it would have threatened demand of fossil fuels and thus profits. Regardless of all that, what is easier to do is to use less energy and use it more efficiently, such as promoting far more public transportation and there is a good

case for making it free or almost free, thereby reducing dramatically the energy requirements of transport. For example Cuba which has essentially gone through it's own Peak Oil because of the cut off of cheap Soviet oil back in the 1990s has created special public transport buses that can hold 100+ people and are very cheap to travel on.

Certainly there will be some energy, but the days of endless motoring, of driving to the shop to just get some milk and bread, basically our entire car based culture, is as Howard Kunstler says entering the twilight years. And about time too. The problem is our built spread out suburban environment forces lots of driving upon us. Suburbia is now a millstone around our necks and the huge post-war (WW-II) investment in it will be seen as a big mistake. See for example Howard Kunstler's cynical but realistic take on things in his blog and now infamous essay: 'The Long Emergency' which can be found at www.kunstler.com. Kunster sees not a calamity but a long slow decline over many decades which is probably the most realistic scenario around rather than the extremes of optimism and pessimism.

It will be realized soon in the near future that the energy wasted on the production of every single additional car will mean there was or is less energy to build a solar panel or wind turbine or some such device that would enable us to construct a sustainable society. We are recklessly throwing away the very valuable energy sources that we will soon wish we still had. There will be clarity of what stupidity has taken place, but largely too late. What people don't realize is that say 20 or 30 years in the future, when a component in that wind turbine breaks down, and the part needs very special metals of a particular purity and some other alloys, will the infrasture for the mining and refining still exist? What about the ease of transporting the part and then getting it to the site? What about replacing the wind vane and the energy intensive to produce carbon composites in it? It could well be a case that a missing critical part means the rest of the machine is essentially scrap. This is an everyday ocurrence of semi-complicated machinery in the Third World, where for the want of parts; pumps, tractors and other machines lie idle and eventually rust. So you can see we may have some power, but just not enough to keep the whole system together and hence we should have started building all this stuff on a global scale back in the 1970s and 80s, but instead built millions of useless cars which by then will be long rusted in the toxic scrap-heaps.

What tends not to get discussed anywhere is that the combination of Peak Oil, the Greenhouse Effect and the general trashing of the global environment all together. Chances are in the panic down the back-side of the Peak Oil slope, there might be a rush to all sorts of different fuels, like lower grade oil, tars, coal, wood and so on and the amount of carbon dioxide released per unit of energy will actually be even higher. Already there is a rush to bio-fuels. It will be a brave person who tries to stop the mad rush. Desperation will see environmental standards and safeguards consigned to the dustbin. Indeed the present 'administration' in the USA has already done this and there is similar talk in the UK. It will be likewise everywhere else. The reactions are therefore likely to exacerbate existing environmental problems and if society and politicians continue in their denial in the face of the facts, then the actions and solutions they take are likely to be reckless.

And speaking of reckless behaviour, the desperation of the White House's War of Terror reflects what it knows about the dire situation on the oil front. It's actions seem illogical to us and everyone else, but from it's perspective it knows how grave the energy situation is now and the consequences for the American Dream, and is preparing the ground for it's own survival afterwards in terms of the global elite of capitalists holding onto power. There will be much de-

nial initially and great upheaval. Capitalism has been partially accepted by the masses because there has been endless growth so far and the bounties of the Earth got through hyper-extraction have been so great, that a portion of the masses -i.e. in the 'Developed Countries' have got a few half decent scraps up to now. Capitalism as everyone knows requires endless growth. The manifestation of the economy in the real physical world means growth requires more energy. Since there is going to be a lot less of it, growth will stall and we will have contraction of our present appalling wasteful setup. The oil gift has been wasted! Actually you could argue the gift of the Earth's environment has been wasted too in the thrashing sense.

See: Cornell ecologist's study finds that producing ethanol and bio-diesel from corn and other crops is not worth the energy www.guardian.co.uk/print/0,3858,5349045-103390,00.html

See: 'Labour to ease pollution rules if gas runs short' at observer.guardian.co.uk

And see: 'Thermodynamics of the Corn-Ethanol Biofuel Cycle' by Tad W. Patzek at petroleum.berkeley.edu

6. Energy and Capitalism

Oil or rather first coal and then oil and electricity has allowed human society to go from basically an existence limited by animal muscle power to almost unlimited power. This in the context of capitalism or rather society with hierarchical dominating power structures has allowed a cancer to occur on Earth and threaten the very existence of the abundant diversity on Earth. Most leading biologists in the ecology field are in widespread agreement, that the Earth's sixth extinction is well under way. Extinction rates are currently running at a 1,000 times the background rate. The availability of all this energy means that it is the lever that has allowed humans to extract huge quantities of resources such as minerals, opening lands, destruction of vast amount of forests, almost near exhaustion of all fisheries worldwide and production of fertilizers which lead to widespread pollution in rivers and estuaries because of super abundance of nutrients leading to algae blooms. Indeed it is widely accepted in the scientific community that over 40% of all bio-mass (and that includes the oceans) is now being appropriated by humans. The capitalists have been not just appropriating human labour! So in terms of the oceans, the zooplankton eat the algae, in turn eaten by the fish, of which we take most. Then on land, grass is being converted to meat, timber to products. Like a cancer, which grows at the expense of all the other specialised cells, it sucks resources and nutrients to sustain itself. Society is at the advanced stage of this. The sooner cheap oil runs out the better as maybe there will be a chance the leverage it provides to exploit resources will be diminished. With the psychopaths in power in most places, I reckon it isn't going to be pretty. Others, and I would agree, reckon we are actually in an overshoot situation, where we are currently beyond the capacity of the Earth to support current burden (especially the 20% using 80% of the resources) since so much damage has been done to our capital stock of biodiversity and other things. This is not good news for anyone, let alone anarchists. See for example: Industrialization: Prelude to Collapse. Excerpt from Overshoot: The Ecological Basis of Revolutionary Change by William Catton, 1982 www.mnfor sustain.org/catton_excerpt_overshoot_1982.htm

So for all of us reading this we have lived through the upside of the Peak. The physical consequences of the downside will give rise to a new set of forces acting on politics and society. This is the sort of thing science fiction writers write about which is largely trying to imagine politics and society under the effects of new and often novel forces and or technologies. Many have made the analogy of the well known biological effect, when nutrients are supplied to a bacteria culture on a petri dish, the population grows exponentially and then crashes when it suddenly runs out. The same thing actually is the cause of plankton blooms from rivers polluted with too much nutrients such as agricultural runoff and fertiliser. The comparison is also made with humans that so far on the grand scheme of things, we have behaved no differently. Unfortunately the actual evidence supports this. Anarchism is the only political philosophy that seems remotely capable of rising or attempting to rise above running society based on our most primitive biological instincts. Authoritarian socialism unfortunately retains the trappings of power within it's structure and so does not really break from the past. Capitalism and all the other tyrannies were just derivations

of the basic instincts of greed, fear and desire to maximise the number of kin, through the acquisition of resources. [In the book: *The Red Queen and the evolution of Sex* by Matt Ridley, it is noted that up to relatively recently -a few hundred years ago- nearly all rulers used their wealth and resources to maintain large harems of women -i.e. for maximisation of kin. Allegedly more recently, Chairman Mao had a harem of sorts.] Anarchism aims to raise humanity above that basic level, indeed advance 'intelligent life' so as to develop and bring to fruition the very unique human qualities, intelligence and abilities of our being. Thus it has to succeed if there is to be any chance of us breaking out of the deterministic boom and then bust of population growth as described above.

7. Cheap Oil and the End of the Show — Reactions

The endless growth of suburbia is based on cheap oil. Supermarkets are based on cheap oil. Where once we all walked to the local shop, instead we drive, -millions of us. Industrial agriculture with its high fossil fuel inputs in the form of energetically expensive to produce nitrogen fertilisers and insecticides are a product of cheap oil. Those apples in the supermarket in February from New Zealand are a result of cheap oil. The current stage of capitalism is based on cheap oil. When the price starts to go up as everyone realizes oil production really has peaked and production is now headed downward; everything dependent on oil will go up in price. Oil is now around \$60 a barrel, but Matt Simmons thinks \$200 or even \$300 a barrel is a more fair price for it. The whole market based system, with just-in-time manufacturing, just-in-time supply especially for the large retail enterprises such as Tesco, WalMart and all the rest, who rely on fairly thin profit margins, are on very shaky ground. The End of Cheap Oil will probably wipe these out along with a lot of other ways of doing things. Currencies may sink, the housing bubble will probably burst, financial derivatives will explode along with the economy and jobs. People won't be happy. What people don't realize is that the growth of money is ultimately dependent on the assumption there will be growth and that depends on energy.

There is a very real chance of breakdown and the deaths of millions, although many will scoff at such notions from their current relatively blissful positions. But in a study, possibly the only one of its kind, titled: 'Food and Energy in Japan: How will Japan Feed Itself in the 21st Century?' at www9.ocn.ne.jp, (table of contents at: www9.ocn.ne.jp) the author through a very detailed and quite scientific analysis taking into account past levels of population, energy usage, soil fertility, food intake and calorific value, crop yields, work force and so on and using realistic projections shows that in the case of Japan alone even under optimistic scenarios, tens of millions will die. He also documents (in *The Limits of Energy-Based Agricultural Systems* and the "North Korean Food Crisis", in www9.ocn.ne.jp) how events unfolded during the 1990s in North Korea when there was an oil shortage -due to loss of subsidized oil supplies from the USSR- and how the shortage of energy led to a 50% reduction in fertilisers and consequent plummeting of agricultural output and this lead directly to the famine there at the time. It was noted that land that has been intensively cultivated via industrial methods, rapidly loses its fertility when those inputs are reduced and it can take many years for the natural fertility to return. Therefore even if we turned organic overnight, it just doesn't work out that way, although Cuba survived having suffered a similar fate, as after the collapse of the USSR, it also lost its supplies of oil. However Castro et al managed to turn the economy around, by allowing farming of your own plots. There were a few years in the early mid 90s where people in Cuba were fairly hungry but they more or less pulled through. But then it was already a pretty rural society anyhow. What happens for urbanised ones?

As I said already, the capitalists are aware of all of this. The unbelievable luck of 9/11 provided the pretext to advance the obvious preparations that were already there, to put in place the police

state and civil control structures (i.e. Patriot Act, pre-emptive wars) to help manage the situation when the bad news dawns on the motoring public. It was also a very thinly veiled pretext to grab Middle East oil resources or at least sit on them since control of access is just as important. Much of this though was more or less laid out in the now famous document authored by the NeoCons called Project for a New American Century (PNAC) written in the late 1990s which also stated what America needed was a new wakeup call akin to Pearl Harbour. In light of this, the recent military take over and lock down of New Orleans can be seen as a good opportunity to run a live test of what will (possibly) be soon carried out in cities all over the US. (Read Operation Garden Plot which is an account of something similar that was planned in the Reagan days in the event that the USA invaded Nicaragua and was a plan to arrest and round up thousands of dissidents, radicals and journalists and put in camps similar to the way hundreds of thousands of American Japanese were interned during WWII). Actually it seems those camps have not gone away you know and are been upgraded as reported here: Homeland Security Contracts for Vast New Detention Camps. An interesting development and actually quite widely reported in the corporate press, was the deployment of Mexican troops after Hurricane Katrina to help give out aid. It was a bit odd to say the least. Perhaps someone was flying a kite to see if there were any objections. But for years the Right Wing conspiracy nuts have always been on about UN troops invading the country some day and everyone ignored them. While much of their theories suffer badly from any logical consistency, I think the point they make is that troops from out of town or country will more willingly suppress people. Thus Americans in Iraqi, and Mexicans in America. Likewise the Chinese had to use troops from outside Beijing to carry out the massacre in Tiananmen Square in 1989. The reason this is brought up is in light of this quote from Henry Kissinger:

“Today Americans would be outraged if U.N. troops entered Los Angeles to restore order; tomorrow they will be grateful. This is especially true if they were told there was an outside threat from beyond, whether real or promulgated, that threatened our very existence. It is then that all peoples of the world will plead with world leaders to deliver them from this evil. The one thing every man fears is the unknown. When presented with this scenario, individual rights will be willingly relinquished for the guarantee of their well being granted to them by their world government.”
— Henry Kissinger speaking at Evian, France, May 21, 1992 Bilderburgers meeting.
Unbeknownst to Kissinger, his speech was taped by a Swiss delegate to the meeting.

While much of the focus these days is on the US, much less recognised and appreciated is that in most European countries equally repressive and sinister laws have been passed. In Germany for example the separation of police and military intelligence has been removed and the EU has effectively begun to put in place equivalent of it's own CIA and FBI. Much of this has been unnoticed by the public at large although very well documented by www.StateWatch.org/ Indeed much of this activity has a fair amount in common with the Strategy of Tension that was created in the 1970s in Italy where the state engaged in state terrorism (Bologna bombing 85 dead, kidnap and murder of Prime Minister Moro) to pin on the Far Left, to keep the Far Right in power. And it worked.

The relative ease in the way these laws were changed represents the fruits of the relatively long investment period in the careful nurturing of ignorance by the elites, as in the creation

of our largely clueless society (US and Europe to a slightly lesser extent) and the promotion of the Cult of the Celebrity.¹ Japan and Australia have followed a similar trajectory too. The award winning ex-teacher John Gatto (US) brilliantly documented the real purpose of compulsory state schooling in works such as *The Underground History of American Education* and how in the early 1900s many of the big industrialists like Carnegie and Rockefeller put their money behind it so as to control the agenda. Gatto went back to the original works and papers which showed clearly state schooling was designed to dumb down the masses and create obedient, subservient and a passive populace so that they would be less inclined to rebel and less able to question. It intentionally was designed to make people anti-intellectual and it certainly is very noticeable that trait exists widely. This seems to result in those at the bottom who are disenfranchised plus the many who are not quite there but simply disillusioned, that they do not have the capacity or ability to see or understand their plight and so do anything about it. This for those in power, results in a form of nihilism that doesn't go anywhere and is relatively easy to manipulate.

For more about this, see: "Against School: How Compulsory Education cripples our Kids and Why" at www.spinninglobe.net/againstschool.htm. Another interesting essay on the schooling topic is: *Deschooling Society* by Ivan Illich, 1970 which might be familiar to some readers at reactor-core.org.

This agenda of the state so-called education system clearly operates in Europe too. Indeed in Ireland (pop ~4m), a large number (50+) of public libraries were built from 1906 onwards and nearly all of them have the name Carnegie over the doorway which is an interesting observation. The Catholic Church, a rather right wing organisation, pretty much operated the Irish educational system at that time and for years afterwards. Their interests probably would have nicely dovetailed with Carnegie et al. Clearly he must have had some links to Ireland, perhaps through Eamon de Valera who later became the first Taoiseach (Prime Minister) of Ireland. Carnegie and others may have given support to de Valera who was fighting to get the British out of Ireland in return for helping put the lid on education that laid down the basis for control of development of people as suggested by Gatto. In Ireland at this time, there was a strong labour movement (aka. James Connolly who inspired many and lived in New York for awhile) and revolution had just happened in Russia (1917). The capitalists and church would have been quite alarmed and been keen to swing public opinion away from radical ideas like real democracy.

So to get back to Peak Oil, when the news breaks, because people have largely been kept ignorant about all things political since birth, their core faith will be shaken and the normal reaction will be denial of the reality. Therefore they will be trying to hang onto the endless growth myth as promised for most of their life by capitalism and regrettably are likely to turn to their 'leaders'.

Going back historically to the Nazi example, in the 1930s, many middle and working class Nazi followers, if they had followed the logic of the situation, would have gone Left wing and revolutionary. They didn't. Marxism never had an explanation for that. However the writings of William Reich in the 1934 book 'The Mass Psychology of Fascism' (available online) shows how fear, mysticism and sexual repression essentially gives rise to people afraid to question themselves, their plight and generates a craving for authority. The Neo-Cons and the rather large Christian Right in the USA are in the same situation more or less. It is noteworthy how the Right

¹See for example *The Culture of Narcissism* (1979) by Christopher Lasch who documented the growth in this phenomena in US society but which now afflicts much of Europe too. He describes how the cult of celebrity has come

always gravitate towards religion, family values, sexual morals and tend towards historical myths (i.e. the true German, the true American etc) and are always anti-science. Reich isn't an easy read and is not well known probably because his later work is quite whacky and would tend to discredit his earlier work. But here's two extracts if a bit long winded:

"...Contrary to this concept, my medical experience with individuals from all kinds of social strata, races, nationalities and religions showed me that "fascism" is only the politically organized expression of the average human character structure, a character structure which has nothing to do with this or that race, nation or party but which is general and international. In this characterological sense, "fascism" is the basic emotional attitude of man in authoritarian society, with its machine civilization and its mechanistic-mystical view of life. It is the mechanistic-mystical character of man in our times which creates fascist parties, and not vice versa. Even today, as a result of fallacious political thinking, fascism is still being considered a specific national characteristic of the Germans or the Japanese..."

"... If reaction is successful with a certain ideological propaganda, this success cannot be due simply to "obfuscation"; rather, in each and every instance there must be a mass-psychological problem. There must be in the masses an as yet unrecognized process which enables them to think and act against their own vital interests. This is a decisive problem. For without this behavior of the masses, political reaction would be powerless. The strength of fascism lies only and alone in the readiness of the masses to accept its ideologies, in the "mass-psychological soil." A full understanding of this is, therefore, imperative. Increasing economic pressure on the masses of the working people is always accompanied by an increasing pressure of compulsive morality. This can have only one function: that of preventing a rebellion of the working masses against the economic pressure by accentuating their sexual guilt feelings and their moral dependence on the existing order. The question is, how does this take place?

...Since permeation with mysticism is the most essential mass-psychological groundwork for the acceptance of fascist ideology, an understanding of fascist ideology is not possible without a study of the psychological effect of mysticism in general.

Does this remind anyone of the Christian Right, militarists, allegiance to the flag crowd, faith in authority, the compulsory schooling system? We must somehow take onboard all these ideas because it has not been paid attention to, before and yet it is a crucial part of the social dynamic at any given moment and has direct consequences for dealing with Peak Oil and Climate Change too.

With regard to the fallout of post Peak Oil, it is clear the rest of the capitalist powers are helplessly hitched to the Anglo American agenda. From an anarchist perspective and that of any reasonable sane societal aware person, it is obvious we need to run society more energetically efficiently, sustainably and equitably but as we see from the German example and Reich's interesting and unusual insight into humans, it doesn't follow that this is what people will actually do. The sane route though is the one that Anarchists wish to follow and anyone else who cares to pay attention to their own rationality. The challenge then is to salvage the situation and turn

to dominate our lives. www.amazon.com/gp/product/0393307387/103-0343557-6039845?v=glance&n=283155

society around in time to avoid what the mainstream press would call anarchy, but we would call chaos. We must not be thwarted and that is why it is crucial we are aware of what people like Reich, Gatto and others have to say because we must take into account the irrationalities of human behaviour and the human state of mind. Class analysis is not enough.

8. Roasting the Frog — Making Changes

Like the story about the frog that doesn't jump out of the pot, if boiled slowly, that is what the last 60 or 70 years have been. But Peak Oil is about to give a major jolt and everyone is going to notice. It's a rare wakeup call and we should be ready and waiting when people receive it. We must not let this opportunity go to waste. However we must not kid ourselves with rhetoric that people will know what to do. The very powerful State institutions of compulsory schooling which churns out passive, submissive, obedient people as already described and the powerful corporate media that has filled everyone's lives since birth have given rise to a society where many have expert knowledge of celebrities, films and sport -safe stuff; but know very little of the real physical world, it's ecosystems, the reality of the current political establishment, it's relationship to their own social environment and lives, foreign policies, the mechanisms of corporate corruption and exploitation and so on -i.e. the dangerous stuff. And whilst people seem perfectly rational most of the time, when it comes to the political realm they seem to uniformly forgo all their critical facilities, lacking any ability to critique or challenge their own political beliefs or the very deep assumption that somehow we need leaders. There is a widespread foolish faith in the parliamentary facade and the structures of the state. Frequently people say: '... but we must have someone in power and it's just the present lot are not any good...' Basically they are largely unaware of other possible ways of organising society (cleverly crushed and kept out of the media) and they seem to think there is only the present one or authoritarian communism, unaware of non-authoritarian communism. This is one of the fruits of compulsory schooling masquerading as education. One of it's mechanisms is that it teaches the idea that experts know things and we do not question. Notice the way everything these days has become a service run by 'professionals'. After we finally leave school the authority of teachers and of the school gets mentally transferred to ministries, institutes and 'papers of record'. I would admit I was there myself too. A case of we don't know what's best, the teacher, the manager, the civil servant, the engineer, the journalist, the businessman, they do.

People do not change their ways about anything by accepting logical arguments and then saying: 'That makes sense! — I will now think different'. It rarely happens and we should not rely on it. It takes years for people to change their views, opinions and behaviour to issues like racism, gender inequality, wars, environment, human rights, animal rights and so on. As already said earlier, if this was not true, then nobody would have followed the Nazis. But they did. A class analysis is important and vital to understand many political issues, but class analysis alone won't lead people to change. We must examine the human psychology of people's responses and as to why people change or don't change. Denial not only on a personnel level, like as in an alcoholic's denial, but denial on a wider scale at the scale of society exists and we must tackle that and recognise it exists, if we are going to succeed in making any changes. And denial exists because it was clearly of evolutionary advantage for a long time. It's just that now it is hampering us quite a bit.

For an opposing view to the usual of experts know it all, check out the book: The Wisdom of Crowds by James Surowiecki. Excerpts and reviews can be found at:

www.randomhouse.com/features/wisdomofcrowds/excerpt.html

www.randomhouse.com/features/wisdomofcrowds/

www.kottke.org/04/07/wisdom-of-crowds

blogs.salon.com

Capitalism long ago took human psychology onboard in the form of the marketing and advertising industry. It lies to people, by using the basic human instincts of sex and fear, -i.e. it uses emotion rather than logic. And it works. However I am not proposing we do that here. What I am proposing is that we don't concentrate in our efforts to bring about a better world by only dealing with logic which is what we and other Left groups tend to do. We must deal with and understand human emotion -sometimes referred to as irrationality which it isn't but is probably an evolutionary older method of thinking that integrates much better with our immediate senses; hence use of imagery by advertising. Try go into a bar somewhere today and present your arguments logically to anyone and tell them how we need to build a sustainable environmental and an equitable society without dominant power structures and see how far you get. So in a certain sense our job is much harder because we are trying to build up something whereas it is easier for capitalism as it just has to appeal to our primeval instincts and goes around plundering the environment and killing those who oppose them.

More generally, you could also say that technology advance has grown greatly and for the system as a whole to advance any further it must advance socially to catch up as it were.

9. Disaster or Sanity — The Road Ahead.

If we allow the capitalists to continue to control the situation, as in the past, the wholly destructive path will continue. They will try to continue with industrial society as it is, repression will greatly increase, (it already is), human kind will begin a fairly long descent as without widely available cheap energy, economies will collapse, industrial agriculture will stall, and world population which rose more or less in synchronisation with cheap energy (first coal then oil) will track it on the downward path. Resource wars will break out. Iraq is the first venture in the current episode. It's true though, in a sense all wars have been resource wars to some extent. The big question is; will it go nuclear. Who knows? But the fact that the Republican junta in power in the US is trying to place much of the military nuclear infrastructure for decision making, targeting and in the hands of private corporations is a bit worrying to say the least.

To quote from: The US Nuclear Option and the "War on Terrorism" at globalresearch.ca

The new nuclear policy explicitly involves the large defence contractors in decision-making. It is tantamount to the "privatization" of nuclear war.

Corporations not only reap multibillion-dollar profits from the production of nuclear bombs, they also have a direct voice in setting the agenda regarding the use and deployment of nuclear weapons.

And Noam Chomsky who's not exactly an alarmist, has pointed out this is one of the major threats facing humanity today as he doesn't feel the risk has been lessened since the Cold War.

If you want to rank issues in terms of significance, there are some issues that are literally issues of survival of the species, and they're imminent. Nuclear war is an issue of species survival, and the threats have been severe for a long time.

Referenced from: Nuclear Terror at Home at www.commondreams.org/views05/0226-26.htm

To digress a bit, a really excellent analysis of capitalist plans has been put together in the article: Apocalypse Now and the Brave New World at cyberjournal.org And before reading the next bit, recall that Donald Rumsfeld back in 2001 when talking about the new missions for the intelligence service, encouraged them to 'think outside the box'. Maybe we should think outside the box too. This analysis if it is to be believed, but should maybe be best used as a guide to the type of thinking that goes on, shows they are not going to be caught off guard. In summary what it says is that given population growth has tracked oil production, they intend to manage it on the way down. That way, they can remain in control of the situation. It is claimed several reports indicate a plan on reducing the population by 80% by 2020. The likely scenario is pushing forward the economic jolt of Peak Oil, killing millions in the process, with a possible nuclear attack of China (takes care of 1 billion approx) and (not in the article) but perhaps bio-warfare campaign throughout much of Africa, although with all the small arms sales at the moment to Africa, they are already causing

widespread death. When all other major powers are thus removed, the US arm of international capitalism, de facto achieves global dominance. It goes on to suggest that once this power has been achieved then they might actually bring about a sustainable society themselves, with the key difference that they still remain in power and all dissent removed, although in my own view a sustainable society is probably not possible in any form of authoritarian society. While this all seems fanciful and paranoid, from the logic of capitalism it is not surprising.

In 1942, the notion that the Germans had held meetings to meticulously plan the construction and operation of death camps for the planned elimination of millions would have been scoffed at, but we know that this was carried out very much like any construction project today, where they had architects and all sorts of people involved in the design, sizing and planning of the camps, buildings, the crematoriums, the gas itself and of course the number of trains needed per day. Why would anyone suppose those behind the face of global capitalism are much different today? What has changed that says they are different? Nothing. About the only difference now is they have access to a far greater technology and sources of power (energy) and delivery. And that's not good.

We should just reflect over the past 4 or 5 years particularly how incredibly easy all sorts of totally repressive legislation has been introduced and simple activism is now on the brink of being outlawed and deemed a terrorist activity. See for example recent legislation to be introduced into the UK where: Britain: police given unprecedented arrest and surveillance powers

Again in the decade leading up to the horror of World War II, looking back, the evidence was clear enough as to where it was going, with huge increases in repression and roundup of people. It's more or less identical today.

But then maybe all this is going a bit too far and capitalism just could not be bothered and in a sense daily reality elsewhere indicates this may be true because in the article: Planet of Slums (www.newleftreview.net/NLR26001.shtml) the author documents how today, hundreds of millions of people live in slums and they are basically neglected and treated as surplus to the human population. He shows how this figure in the next decade or two will rise to billions as the shanties spread even further. The strange thing is we would expect these places to be hotbeds of Left wing and revolutionary activity, but his research shows this is far from the case and they are heavily influenced and dominated by mainly two particular religious beliefs; populist Islam over much of Asia and oddly enough Pentecostal Christianity in Africa and Latin America. Strangely in some areas it even took route in former anarchist strongholds as in the following quote which seems to suggest anarchism is incapable of appealing to the 'soul':

Symptomatically, the first Brazilian congregation, in an anarchist working-class district of S? Paulo, was founded by an Italian artisan immigrant who had exchanged Malatesta for the Spirit in Chicago. In South Africa and Rhodesia, Pentecostalism established its early footholds in the mining compounds and shanty towns; where, according to Jean Comaroff, 'it seemed to accord with indigenous notions of pragmatic spirit forces and to redress the depersonalization and powerlessness of the urban labour experience.' Conceding a larger role to women than other Christian churches and immensely supportive of abstinence and frugality, Pentecostalism — as R. Andrew Chesnut discovered in the baixadas of Bel? — has always had a particular attraction to 'the most immiserated stratum of the impoverished classes': abandoned wives, widows and single mothers. Since 1970, and largely because of its

appeal to slum women and its reputation for being colour-blind, it has been growing into what is arguably the largest self-organized movement of urban poor people on the planet.

So there you are, maybe Howard Kunstler has the most realistic scenario worked out (The Long Emergency, see above) that basically says things change more slowly and in the case of Peak Oil, it will gradually get worse and society will go on this path of a long steady decline over decades to centuries.

So it looks like a sane world is not going to come about of its own accord too easily. The only solution in my opinion and it is what has attracted me to Anarchism, is a solution whereby everyone acts maturely, knowingly, actively and participates as equals in a direct form of democracy. There can be no masters and no craving or fawning of leaders nor celebrities. In other words humanity has to grow up. Realistically the odds of this are probably zilch. But then who said it was going to be easy?

Clearly the whole of society needs to be radically changed. Consumerism has to end. Mass propaganda by the media must disappear, yet somehow we must prevent the recreation of local kingdoms of times past. That's a tricky one though. Our agriculture system must change to being totally organic. This would take time as soils subjected to years of industrial agricultural techniques take years to recover, during which time, productivity plummets. Our urban environments and transport system must change. We cannot abandon them as that's impractical, so we must morph them into places that people want to live in. A good start would be to make public transport free in every town and city to help connect areas. Also every reasonable sized housing estate should have a community hall or other buildings for holding meetings and organising the neighbourhood, teaching, workshops, socialising, and a kind of library type entity for sharing and exchanging things. A bit like the www.freecycle.org network concept. And of course whatever else people come up with. It's also necessary to solve the anti-social problems that plague many cities and towns. Primarily it means empowering the vast majority who are decent enough people and allowing them to form groups in solidarity to wipe out this affliction. (Apparently in Kronstadt they ruthlessly stamped out crime.) Currently because solidarity is such a rare thing now-days and all problems get referred to the police, this allows the tiny percentage to run riot. Of course this suits capitalism just fine. Giving meaning, control and purpose back to people's lives is most likely to result in the greatest benefit. While they remain without it, they feel dependent on politicians and other forms of hierarchical power structures.

To help eliminate wasteful consumerism, things should be made to last and advertisement needs to become something else. Copyright ought to go, along with patents. This would release all proprietary information allowing detailed designs of much equipment to be readily available allowing things to be more easily fixed rather than replacing them. This would be part of the 3Rs in the Reduce, Reuse and Recycle and would simultaneously take off some of the current constant destructive pressure on the environment. A few years ago a voluntary effort was initiated in the spirit of the free software movement, to scan in everything that was ever published. The goal was very achievable and it was reckoned that within 2 or 3 years a huge inroad to it could be made. Unfortunately it was thwarted by the copyright laws. But it shows what is possible. Science has thrived through the free exchange and sharing of information and it is also true of the arts. It has opened up huge possibilities to humanity but as it stands capitalism has hijacked it for its own self destructive needs. A society where all information, text, audio and video was available

to practically everyone via broadband whether that be to every home or at least community hall for access by all and where people did not have to work 40, 50 or 60 hours a week, but say 15 or 20, would open up truly culturally revolutionary changes throughout and would enable many new synergies and possibilities. Naturally much of this would derive from the ability for anyone to communicate with anyone else. All this though is premised on the basic assumption that everyone's basic needs would be met. The development of language was a huge step for humans; the extension of our communication ability globally is likely to have just as significant results, assuming we can manage to keep our technological society.

Currently society suffers greatly from an emotional deficit and this is reflected in the isolation and individualist lives we lead and is certainly a major factor in the widespread incidence of anxiety, fear, depression and the various addictions from drugs to alcohol to shopping. Of course the structure of the car dependent urban environment that requires everyone to drive -generally in isolation is part of the problem too. Addressing these are as important as anything else. But post Peak Oil to survive we will have to come together anyhow to cooperate.

But the vision of society is not one of everyone just sitting at their PCs and as well as the steps outlined above and presumably others, a massive effort must be made to address the needs of people in education, housing, health, particularly preventive health and in turning ghettos and smashed communities into living ones again. In fact the entire health system seems to be designed these days for selling drugs rather than addressing the core reasons or prevention. Not to be forgotten too is the need in many areas for local infrastructure. Actually we should start again with education. A good example of what a role model for a new system is the Sudbury Valley School described in the essay: School for a Post-Industrial Society at www.spinninglobe.net/carnegiesvs.htm. This was an unique and very different place. So further straying from the main point and apologies for the length but it is important to reproduce especially for the vision thing; here's some extracts that discuss the setting up and then the day to day operation of the Sudbury school:

...We then looked at the requirements for individual realization. These too had undergone a rather interesting change of perspective through the work of psychologists and developmental theorists. The commonly accepted model of the human had been that of a tabula rasa, a clean slate, born as infants with basically nothing in their heads and therefore growing up to be what other people have written on that slate..... In a sense, that model was the utter negation of the individual as an independent being, and the subjugation of the individual will to the influences of those around it who impose their wills and their intellects on it from infancy onwards.

But Aristotle, 2,000 years ago, and developmental psychologists in recent times, developed other models that seemed to us, when we were creating Sudbury Valley School, to be much more realistic and much more in line with what we saw to be the nature of the human species. These people considered children from birth as being naturally curious, as being active participants in the learning process — not born with blank minds but, on the contrary, born with information processing systems in their brains which require of them, demand of them, by nature, to reach out, to explore, to seek to understand the world and make sense of it, using their sensory interactions and their agile brains to build pictures of reality — world views — in their minds that enable them to function in the world. In our view there was no such

thing as a passive child. Every child is active. Every child we had ever seen, certainly in early infancy, was devoured with curiosity, was energetic, was able to overcome almost every barrier, was courageous, persistent, and constantly seeking to meet every challenge that came their way. And these are traits that we saw continuing year after year in children as long as it wasn't forced out of them by some crunching outside intervention.

So it seemed clear to us that the ideal environment for children to attain the full realization of their inherent intellectual, emotional, and spiritual potentials had to be one which, subject only to constraints imposed by safety, is totally open for exploration, free of restraints, free of external impositions; a place where each individual child would be granted the freedom to reach out everywhere and anywhere they wished so that they could follow through on all of their curious probing.

This realization came upon us like a thunderclap because we saw such a beautiful fit between the needs of society today and the needs of the individual. Both society and the individual in modern post-industrial America require that schools be an environment in which children are FREE, and in which children can LEARN HOW TO USE FREEDOM, how to be self-governing, how to live together as free people in peace and harmony and mutual respect. Not an environment in which one group dominated, or exercised power over another. Not an environment in which children were put into any sort of externally imposed track, or forced to think about prescribed subjects. But an environment in which children and adults alike work together to guarantee free accessibility to the world, to the greatest extent possible, for each and every child. And that, in effect, is what Sudbury Valley school is about.

If you come to Sudbury Valley ... You notice children, outdoors and indoors, freely going on and off campus, freely walking about, moving from room to room, changing from group to group, talking, interacting, reading, playing. So much playing! More than anything else, the children at Sudbury Valley School, of all ages, play. The better they are at playing, the better they are at fashioning new models with which to understand the world. Play is the greatest teacher of all. Every innovative adult who has ever written about the creative process has talked about the extent to which he or she played with new ideas, moving freely in and out of new, original conceptions of the world without being hampered by preconceived notions of reality. The children at Sudbury Valley know how to play. They know how to take their play seriously. They know how to play with intensity and with focus.

Sudbury Valley is a community governed by itself. Every child in Sudbury Valley has a vote in every matter that pertains to the school. The school is governed by a School Meeting in which four-year-olds have the same vote as adults. Every decision in the school is made by that School Meeting. The budget, the hiring and firing of staff, the letting of contracts. In the Sudbury Valley community, no adult wields any particular power over any child, nor does any child wield power over any other child. All decisions are made in the School Meeting or delegated by the School Meeting to people elected on a temporary basis to fill a particular need. Our community is a model of democratic governance, much like the New England communities that we

serve.

The children at Sudbury Valley, from age four and up, by being free, learn how to function as free people in a free society. They learn how to find their own pursuits. They learn how to occupy themselves. They learn how to create their own environments. They learn how to respect each other. They learn how to cooperate. They learn how to use the School Meeting to legislate community rules, and to forge compromises when there are mutually exclusive demands made on property, or on places, or on activities. They learn how to meet challenges. They learn how to overcome failure since there is nobody there to shield them from failure. They learn how to try something and relish success, and they learn how to try something and fail at it — and try again. All of this takes place in an environment in which there is absolutely NO outside intervention of curriculum, of guidance, of grading, of testing, of evaluation, of segregation by age, or of the imposition of arbitrary outside authority.

So there you have it. It sounds like it was a mini experiment in Anarchism and it certainly was full of empowered and socially mature people. Our so-called education system today produces regressed adults where all interest, curiosity, solidarity and responsibility has been utterly crushed. Although a few do somehow survive. What we are not realizing is how devastating this pillar of capitalism -compulsory schooling is to our minds and human potential and is one Anarchism needs to challenge much more. It may well be one of our biggest obstacles.

In a way none of this is particularly new and it's all very fine to speculate, but getting there and convincing others that it's workable, achievable and desirable is a completely different matter. But before we dwell on that, we must also consider our impact on the environment. This is an incredibly urgent task. In fact our new work should be to try and reverse the damage already done and we turn to this task in the next section. Much of this damage cannot be undone. What is lost is gone and in the natural world we have lost a lot.

10. Cleaning up the Mess.

The legacy of industrial society that has accumulated so far, one way or another is going to be a huge and already is a huge burden on us now and in the near, medium and long term future. Addressing this legacy is inseparable to trying to achieve an Anarchist society during this major transition that is about to occur. This is not something that we can ignore. It is a problem now and Anarchism must have something to say about it. It's no use saying it's all capitalism's fault. The mess will still exist afterwards. At least by saying something about it, we can inspire others to our cause. It is a way for us to break out of just discussing workers and the class system. If we want Anarchism to be relevant to people then we have to say something about practically everything.

Vast tracts of the world's forests are gone. All the major global fisheries are in a state of collapse. Over 150 years ago Cod could be caught that were up to 12 ft long! Imagine Cod & Chips made from that! Over 20 years ago catching Tuna 15ft in size was a regular thing. That's no longer the case. Instead we increasingly have moved down the food chain, so much so that fishing for crabs is now the big industry. This is all within our lifetimes! The damage is incredible if only we look. Off numerous coastlines, there is massive runoff of nutrients causing dead zones in the seas adjacent. The great Autumn migrations of birds where millions took to the air at once were a wonder to be seen some 50 years ago. It's no longer the case. Most of their habitats have been destroyed. On land, there are tens if not hundreds of thousands of toxic waste dumps all over the world. These are ticking time bombs that will poison the very soil we depend on and damage our health and possibly cause widespread genetic damage. Some are already doing this and have poisoned all water basins around them. While in areas subjected to years of irrigation, the soil has been wrecked through salt contamination as it is drawn to the surface by the water. Urban sprawl has consumed some of the most productive farmland in city areas because typically cities have also been founded on rivers in fertile plains. In the case of Dublin, some of the best soil in Ireland would have been in that river basin where the city exists. Likewise for London, or Paris and almost any other city you can think of. In the near future we may have to depave the vast acreage of car parks and excessively wide roads to get back at these precious soil again.

Some of the best gems of the Earth's bio-diverse areas are seriously destroyed with only tiny fractions hanging on and we've no idea of the true losses. For example 97% of the Atlantic Rainforest in Brazil which were part of a bio-diversity hotspot is gone. Then there is the Amazon rainforest which has been also seriously degraded and there is evidence that the cycle of rain and evaporate that stretches from the coast of Brazil into the heart of the Amazon is breaking down, meaning the whole thing could dry out. The Earth's store of incredibly biodiversity which anyone with an inkling of curiosity ought to marvel at, has been enormously damaged. Any further assaults must be stopped. We must give room back to whatever intact areas remain so that they can hang and maybe even expand. Even our closet animal relatives, the Great Apes are on the brink of extinction even as interest in our own evolution has never been so high. We must recognise that the rest of life on Earth has rights to exist too and act on it. The global population

needs to be addressed in some democratic way even though it is recognised at the moment the richest 20% use 80% of the resources.

Overhanging all of this is the issue of Global Warming largely caused by our wasting and rapid burning of fossil fuels of coal, oil and gas over the last odd 150 years or so. The pace of climate change has increased alarmingly fast over the past decade or two and even if fossil fuel usage was cut to zero tomorrow, there is an incredible momentum in the Earth climate system which is basically unstoppable and there is the real prospect that the system has been set on a trajectory with enough forcing to pass it through an irreversible tripping point. Apparently James Lovelock, one of the original authors of the Gaia concept thinks we have passed that point in Environment in crisis: 'We are past the point of no return' (16th Jan 2006) The Gaia concept is the idea that the multitude of positive and negative feedback mechanisms in the global atmosphere-ocean together with the workings of the biosphere through absorption and emissions and other mechanisms and the various geochemical and bio-chemical cycles acts such as to effectively result in the Earth system being a living entity that attempts to regulate its environment over the long run. It's similar to the idea of say a typical living cell, let's say an algae cell which is really just a very complex collection of biochemical structures and their interactions each of which is separately dead or innate but collectively we recognise as a living cell. Lovelock does not mean, it then means the system or Earth is conscious in any way no more than a single cell is. Regrettably the Gaia hypothesis has been discredited by New Agers who have used the concept to claim the Earth has all sorts of behaviours including a sort of conscious which is complete nonsense. The Gaia concept ties in a little with the idea of systems dynamics and world dynamics discussed later and is probably the global environmental version of it.

In relation to global warming one of the many threats poised by it is that by changing weather patterns including the temperature and rainfall, it can result in ecosystems being moved all over the place. So where it was suitable to grow say wheat or rice may no longer be. And instead some other area with unsuitable soils might have the ideal weather. The central plains of the US for example might dry out. Or higher temperatures in Europe might allow certain pests to persist all year and it could become too hot for many of the current crops. Snow and rainfall over the Himalayas may decline drastically meaning a much smaller flow in the great Ganges river resulting in much lower yields that affect hundreds of millions of people. The list goes on. Effectively global warming takes all the different regional climates, throws them all up in the air with no guarantee they fall back down where you want them or need them.

Now at face value then, Peak Oil looks good for saving our asses with regard to the climate, but the phenomena of global dimming mentioned in the article above but described here: www.bbc.co.uk/sn/tvradio/programmes/horizon/dimming_trans.shtml makes the case that the global aerosol of industrial pollutants is currently making the Earth cooler than it should be and is thus masking global warming, which means it's a lot worse than we thought. If industry stopped for even a few days this aerosol would clear and accelerate the global warming, but if we continue burning fossil fuels we are making it an awful lot worse. So we are damned if we do and damned if we don't. And the well documented current rapid melting of the Arctic Ocean ice cover is a huge positive feedback mechanism because of the drastic change in absorption of sunlight by a dark ocean instead of the high reflectivity or albedo of white ice. Along with the melting of vast areas of the Tundra in Russia (now underway) which may release a lot of methane, this has the potential to put Global Warming into overdrive.

But getting back to the mess we are in, there is also nuclear waste issue to contend with. This is another legacy that we have been left with. We are going to have to look after it and clean it up. A lot of technical resources and expertise will be required by this. All these things are going to divert resources away from other things that need to be done. We can't just leave it. Most high level nuclear waste which thankfully is only about 1% of all nuclear waste sits in cooling ponds. If these failed, they would boil over and we would be in Chernobyl type territory again.

There is also the millions of people disabled by wars, poverty, dislocation, degraded lands, human rights abuse, and then the orphans and even child soldiers. How can any of these people ever return to normal life? Where's the support for them? The on-going problem with the hundreds of millions of landmines; the contamination of the soil and water tables by Depleted Uranium in places like Afghanistan, Iraq, Bosnia and Kosovo. And the fallout from Chernobyl, still contaminates very large tracts of land in Belarus and parts of the Ukraine. en.wikipedia.org On top of that is the Aids calamity in Africa. And the list goes endlessly on.

I for one though, in an Anarchist world would happily work 40 hours a week trying to repair this stuff than working for some capitalist outfit. At least there would be a sense of purpose and achievement by repairing the ecosystem rather than lining someone's pocket. I'm sure many others would want to do likewise. And unless we repair the damage it is hard to see how we can have a society based on the principles of freedom and justice. Yet again though the vast majority of the population is clueless to what is the real state of the world's environment and in a large measure because of the bubble society detached from the environment that they live in but propped up by cheap oil. But life shortly after Peak Oil may be the place where all those exponentials finally meet.

11. Grappling with the Family and Population Growth.

Addressing the issue of population, we must recognise that in an equitable society which we never have had, that one person having ten offspring while others have say two, is a form of unequal distribution that ultimately will result in inequality. We must face head on the arithmetic of Malthus. Anarchists talk about building a sustainable equitable future. In such a future, one would expect that one's children will all survive. For tens of thousands of years while the human population grew very slowly, it seems that people had more than two children since the death rate was higher. Big families seem to be the norm and so may be part of the background in the evolution of humans. Yet this long tradition will have to end as clearly even within capitalism because as Malthus shows, we can't let the population increase geometrically. The Earth is finite, something the early Marxists appeared to deny in their talk of producing enough for everyone. There will always be finite amount and shortages of some things and we must encompass this and work with it from the start and not be unrealistic about it. This shouldn't be seen as an argument for a harking back to the days when people lived sustainably. It's probable there never was any such societies and it was limitations of energy available that kept destructive tendencies in check. And the vision is not to dis-invent science and technology but to harness it wisely. Sometimes the argument is used that 20% of the population is using 80% of the resources and indeed that's true, but it does not mean we can dismiss the above arguments although they are often used to argue that a lot more people could be supported. The point is often made that if we could raise living standards everywhere then the growth would stabilize just like the industrial West. We are part of biology and biological entities like to reproduce. The smaller growth rates has probably more to do with the constraints on our desires to reproduce within the capitalist West and the nature of work there than anything else. The figures don't actually prove the issue has been solved at all and it would be a grave mistake to think they do. Either way there will always be a trade off between quantity, quality and long term sustainability and we should grasp that nettle rather than try to dodge it. And Peak Oil and climate change too is forcing those issues on us.

In the nineteenth century Marx and Engels wrote about the family and how the hierarchical structure of the family reproduces its dominant structure in wider society and sets the scene for its acceptance. Reich touches on this also. And yet, this important area has not been discussed much in recent years as far as I am aware. One way or another it will be dealt with in the relatively near future. It be better we did it with humanity than barbarity. This is where the demands, needs and survivability of the whole of society collides with the individual and it happens not just externally but internally too in the brain because it is the conflict of the older parts of the brain driven by base instincts to reproduce with the more recent evolutionary parts with the capacity for reasoning and abstraction, the very thought processes that enable us to have a complex culture and society. The basic instincts within us that shape the older parts of the brain are more primitive and immediate in terms of sensory input from the environment and these

spring up from the powerful genetic influences within us and are common to all living things from bacteria to plants to animals. From this mix all our human emotions, psychology, behaviours and dependencies arise. Capitalism has always emphasised the individual and more selfish side at the expense of the social. Capitalism can be thought of as anti-social and barbaric because it strives to keep people ignorant, isolated, non-thinking, selfish and exaggerates and then exploits basic fears, sexual energy and insecurity. It can be seen then that we have more than just a Class War on our hands but we also have a Biological War within us.

It took about 3+ billion years for multi-cellular life to evolve from single cellular. Clearly there was a lot of issues to sort out and new microbiological and genetic processes and mechanisms had to evolve to enable cells to cooperate to work together. Yet since roughly 500 million years ago when this happened and life burst out in new forms and directions into primary categories of life; fungi, plants and animals, what has happened compared to the mere soup before, has been incredible. Likewise the smooth transition from the biological forces milling around promoting our genes in a rather selfish and not so cooperative way to one where we try and create real democracy which is really just a higher form of cooperation can usher in completely new forms and unforeseen advancements in society every bit as different was the change from the primordial soup to the rainforest or coral reef. The catch though is self control of our numbers. Where Peak Oil and Climate Change relate to this is that they are the agents of change forcing the issue now. We have completely binged on fossil fuels and setup a ludicrous temporary lifestyle instead of using the treasure of fossil fuels and other resources wisely. Basically we have blown it in every angle you care to look at it from.

12. Did We Miss the Boat in 1936?

Possibly. In 1936, at the time of the Spanish Revolution, where it seemed for a moment the Anarchist ideal was within reach, the world's environment and store of resources were more or less still intact. There were also still quite a number of diverse peoples and cultures reasonably intact compared to today. The world at that time was only at the start of the climb up the cheap energy curve, (Fig 1) towards the peak where we now find ourselves. Things would have been a lot easier and the environmental problems a lot less. As it stands now we have most likely overshot the sustainable carrying capacity and it is obvious that such a degraded world makes our goal much harder and less achievable because if you take this argument to a more extreme point the chances of a bright future being carved out of a nuclear and toxic wasteland are essentially nil. Some people might argue that we humans have great capacity when we work together, but that argument simply does not take on board the important and very real damage that would occur to our genes and every other living thing. If all your children are going to be deformed at birth because of radiation, then it's unlikely that even if they had children, they would revert to being okay. This on a smaller scale globally, is the situation now in Iraq due to the more than 4000 tonnes of depleted and radioactive Uranium used during Gulf War II. The amount of radiation released by this quantity is roughly equivalent to 250,000 Nagasaki bombs. With approximately 16 kg per nuke bomb then the calculation is $4,000,000 \text{ Kg} / 16 \text{ Kg} = 250,000$. (1 tonne is 1000 Kg). Birth defects and cancers recently have risen alarmingly in Iraq and presumably it was part of the capitalist's plan all along to destroy long term Iraqi resistance by destroying the genome of all the people there. Whether it really was a plan or not, that is in fact what is in store now. And actually reports recently (Feb 2006) indicate this depleted uranium dust was blown back over Europe just after the outbreak of the war in 2003 and was detected by equipment at various nuclear sites in the UK. Blowback of sorts.

Returning to the what if scenario of 1936 though, we would have none of this to contend with. It is difficult to speculate on the course of human history both culturally and technically otherwise. Regarding science and technology it seems a fairly ingrained assumption these days that without World War II it would have been much slower. This is quite bogus really and much of what we got out of that period and the Cold War that followed was military technology. It has often been said that the technology of a society reflects what is allowed by the political system to develop. Capitalism as it stands has the absurd technology of nuclear weapons, missiles, nerve gas, fuel-air explosives, landmines, air forces, and a computer infrastructure that is heavily geared towards a totalitarian system of monitoring and control. On the agriculture side, there is a huge push into GM crops, less diversity and the control of the usage of seeds. A regression of the last 7,000 years of human agriculture. Had the Anarchist revolution prevailed, we might have had a globally interconnected mass transit system, decent housing, sanitation, water, food and real education for all. Racism and bigotry might have been a thing of the past. Our intact environment might have ensured that places of beauty were in easy reach to much of the population and the wonders and solitude of nature and wilderness available to all. Communications would have continued to

develop and there is no reason that something equivalent to the Internet would not have evolved. Much of science had developed outside the strict commercialism of capitalism before that period and has in fact been quite anarchistic in nature because scientists have always shared data and knowledge and gladly published their works without a second thought to patents or copyright. Only as it has been touched with money has it been corrupted. So had history been different, we might not have wasted vast resources in researching more ways to kill but rather have devised whole infrastructures that all of society can share and benefit from. In that sense I mean the way a telephone is only useful to you if nearly everyone else has one because if you were the only one, you would have nobody to phone. It's very possible that an Anarchist society given these better starting conditions, would have drawn out new forms of social interaction or phenomena that still remain hidden to us due to the influence of capitalism on us. Who knows, the world we would inherit now, being less healthy, may cut off numerous opportunities.

One should seriously consider the possibility that in the evolution of intelligent life amongst the wider universe, as it surely must happen from time to time, although far less frequently than life itself, because much of it probably gets no further than the equivalent of primeval soup, that it just so happens the configuration of planetary resources and other things means there is really only one chance given and the window of opportunity to use it intelligently in the true sense, may only occur at the start of the climb to the Peak Resources. Otherwise and it applies here, if the knowledge and technology became readily available to unlock the tremendous energy available through nuclear fusion (as opposed to fission) was gained by capitalism, it would literally open up a vast vista of possibilities and allow the horror and murderous nature of this cancerous form of society to infect the entire galaxy. If this is a possibility here then it's a possibility everywhere. Thus maybe there is a kinda of inbuilt safety valve. This is not an argument about intelligent design in case anyone thinks it is, but merely a curious observation. Some people quite rightly, will recognise this as a variant of more or less a similar argument proposed by the late British astronomer, Fred Hoyle.

All we can really say then is; in an ideal world it would have been better to transition to an Anarchist society voluntarily rather than be forced there by nature. Still I rather get there too late than never.

13. Trying to Get There and The Obstacles

As anyone knows who has engaged even in a token amount of activism to try and bring about change, the obstacles are many and the task huge. So how do we bring about change and do it any differently because now we supposedly know about Peak Oil? That's a good question. The most sensible thing at the moment is to start getting people to educate themselves about Peak Oil and what the consequences of it mean to our destructive way of life. Being fore-warned is being fore-armed and if people take that message onboard, then it would seem reasonable that they would choose the only logical and sensible choice which is a sustainable future instead. This we have to show is one and the same as what Anarchism proposes. In our individualist world at present no one is going to forsake any gain if others take advantage. A switch to a more social structure allows the possibility of some kind of system that is seen to be fair to all and requires all to restrain equally, to more likely arise. This initial step will not be easy. If people don't see others accepting these ideas, then they won't. If people do not see others changing their ways, they won't. Simple peer pressure arising from the current status quo and the fear of looking silly socially are probably enough to prevent them. For change to take place, people have to feel connected to the issue. It has to be something they feel part of, that touches their lives directly and that they have some control or effect in. This is probably similar to the fact that for many anti-war campaigns over the years, it is only when many thousands of families have been directly affected by it through death and injury of their close relatives, that it becomes an unstoppable movement. The alarm mode alone does not work.

To that end, we must not just launch awareness and education programs in the traditional sense, whether that be leaflets, talks, workshops and so forth, we must be creative and try new methods to cause the necessary sea change. Feedback to see what is and what isn't working is vital. We should devise our own surveys using valid scientific statistical techniques. Capitalists use market surveys. We should do likewise. Surveys are a scientific tool and should not be confused with being a capitalist tool. The difference is they use the tool to exploit. We should use it to help circumvent the enormous blockade in distributing our ideas that the corporate and state media puts up against us and use it to continually refine our methods and adapt them to the particular situation.

It follows, we should be examining denial and apathy head on as already argued earlier. It is well known and recognised that participation in Direct Action is fairly central to the whole idea of Anarchism and this is the most effective way of empowering people. In this post 9/11 world, it seems the capitalists realized that more thoroughly than we have and have been extremely busy going about making all forms of direct action illegal. Still though, direct action and organising for it, whether that be affinity groups or other non-hierarchical power structures can form an important element in showing people that other forms of organisation can exist. Actually we probably should have been addressing these issues years ago.

Being relatively new to anarchist ideas in the last few years, I have perhaps wrongly, but got the distinct impression that anarchists seem to think if we got rid of capitalism, all would be well

and we could share out everything more equally and maybe living standards would be lower, but other than that, there is no major problem. This is a dangerously flawed belief and has similarities to a kind of biblical deliverance myth. People will just know. It's like the myth of the Apostles after Jesus heads up to heaven and some spirit comes down and then suddenly they become multi-lingual enabling them to do their missionary work all over the world. It's a bad way to plan things by relying on miracles. Take any city and a typical urbanised street of say 20, 50 or 100 hundred houses where you might live; how many of your neighbours do you reckon will go through the transformation on the morning of the revolution? Well none of course because the revolution is unlikely to come about in that sudden scenario. As we know for it to happen a huge number of people would need to be actively engaged in the political process and to have already taken control of their own lives and communities. And this is something that we are always stressing in Anarchism. What's more for any sort of favourable outcome people need to become aware of social and environmental problems and actively face up to and not deny them. There are many who won't admit there is a problem and that in fact things are pretty much okay. It's also a possibility that people are suffering from what is called cognitive dissonance -a condition where new information conflicts with their world view, and so they are unable to take it in and will even resist doing so. (See http://en.wikipedia.org/wiki/Cognitive_dissonance).

The question might be asked by the average person: so why would we want a better world? Many would see us as dreamers who want to wreck the status quo. And wasn't there a revolution in Russia last century and that didn't work? The vast majority of people are unaware of what Anarchism is about and the fundamental differences between non-authoritarian as opposed to authoritarian ways. They don't realize society should be viewed along these lines rather than along the traditional lines of Right and Left. See for example: *Waiting For the End of the World: Popular Responses to Environmental Issues in Australia* by Terry Leahy for a real world survey of people attitudes in Australia at www.octapod.org/gifteconomy/content/waitinglong.html for a sampling of this sort of attitude.

I suspect though that quite a few people found it odd the way former communist party officials in Eastern Europe and Russia switched easily to being capitalist bosses. Viewed from the authoritarian / non-authoritarian viewpoint it is easy to understand because there was no real change for them since they are both authoritarian positions. People can know a lot of stuff quite unconsciously, sort of as background information and they just need a few extra pieces to link it all together. On the other hand there are plenty of empty heads too. And the generation younger than about 30 to 35 are unlikely to know the above lesson, since the fall of the Berlin Wall and the Soviet Union are already more than 10 years ago. And that brings us to another point that one continually hears which is: People are copping on and becoming aware of corruption and the true nature of the system etc. That simply fails to take account that every 10 years a whole bunch of people with life long experience drop dead at one end and their living knowledge in the body of society is lost and at the same time an even bigger bunch of new young people are hitting their 20s and coming fresh on the scene in terms of their views and beliefs and don't know any of recent life lessons, so frequently cited. At the same time we are all continually forgetting things including the issues of the day. Who remembers last month's scandals, last years, 5 years, 10 years ago? And this applies not just to politics but awareness of environmental issues too.

In anarchism there is much store put by the idea that we don't do templates and it would be presumptions of us to make plans when in the future these would be made and decided democratically by others anyhow, rather than by vanguard specialists now. That's a fair point but the

trouble with this, without ideas and scenarios being thrown about it's hard to persuade others and to stimulate their imagination. What we need to be doing though is outlining the possibilities to solving problems and identifying any methods that could be useful and get people working and thinking about them. Concepts, methods and ideas can take considerable time to work their way through to wide acceptance. Things have to mature and grow. Look at free software or something like Indymedia, both of these took time to develop and grow and are still growing. And it is only after awhile do people begin to see and appreciate the benefits. Thus things can't be left until the morning of the revolution, they have to start well in advance. Maybe there won't be a revolution but instead it will be revolution through evolution. Seriously though I don't believe that myself either because capitalism won't allow it and it is very likely that if there was a social evolution in the direction of anarchism, the blockade of capitalism would have to be overcome to proceed any further. As it stands now the capitalists are constantly trying to find ways of controlling the Internet and privatise it, thereby bringing this latest tool under control. Just like they did with radio through the use of licenses.

New approaches to analysing problems and solving them are needed. The current approach to solving problems tends to be very reductionist largely because of the success of science and engineering in the last 200 or 300 hundred years which tend to look at relatively simple systems with pretty clear causes and effects, (often referred to as a Newtonian view named after Isaac Newtonian who formulated the mechanical laws of the world.) As a result, our thinking and approach to solving what are much more complex systems has been influenced by this although not totally since much of our daily interaction with the world is also straight forward, like you trip, you fall, you hurt yourself. Pretty simple. Trying to analyse things like cities, societies and ecosystems is fairly new and direct cause and effect relationships no longer hold. Instead the consequences and effects of doing things in complex social systems can show up later and in different places. We then can get misled by things that happen at the same time and maybe in the same place but in fact one is not caused by the other. This field is known as System Dynamics and applied to cities is Urban Dynamics and to the world in general as World Dynamics and was invented by Jay Forrester -see en.wikipedia.org -who happened to also invent Random Access Memory (RAM) for computers in the 1950s -and his book on World Dynamics was very influential with the Club of Rome and publishing of the Limits To Growth. For a better description of what is meant here, see his Urban Dynamics essay found in the above URL. What Forrester opened up was new ways of thinking, analysing and approaching problems, especially social ones. This is not an alternative to Anarchism, it simply just an idea or method that Anarchism should take onboard. The fact that it comes from engineering originally should be irrelevant. Forrester has been very much involved in bringing these ideas into new ways of educating. Take for example this quote from a report on a summer teachers' conference on System Dynamics in Vermont:

"Models provide a common language with which to engage learners with diverse learning styles and interests. Simulations are especially engaging, and draw out many who might not otherwise participate in more traditional discussions and activities. ? Models are extraordinarily powerful for helping to convert abstractions into concrete realities. A learner's ability to ?see? a system?what goes into a stock, where feedbacks exist?and then to run a model and ascertain how the system operates under varied conditions, renders abstractions into real meaningful, concrete terms. This discovery is true for students at all levels."

When one becomes an activist the process is similar to that described above, because it is only by getting involved in real campaigns and issues that you begin to get a feel for how things work or don't work and how hard it can be and you get a realization of the many aspects there are to things and concerns to be taken onboard. The real meaning of what freedom actually is, really only becomes fully apparent then. One tends to easily spot the newcomer because they generally come with a more simplistic and naive viewpoint which is to be expected since how else is one going to get experience otherwise. Activism of course has its own limitations too and one can get tied up in the day to day concerns and lose sight of the overall direction. Nevertheless we shouldn't be getting confused here with activism which is more the doing, even though the learning aspect of it has been emphasised here, and system dynamics as a way of analysing something.

In the book: *The Wisdom of Crowds* -mentioned earlier, Sureksi basically demonstrates how crowds are always smarter than individuals but one crucial condition must hold which is that the crowd is diverse in terms of their knowledge and what they know. In his view the crowd involved in say a housing or stock market bubble are not diverse enough usually because they have all read the same or similar information. And the word crowd should not be confused with mob. This idea of the crowd making better decisions must warm the heart of every anarchist, but the reason it is brought in here is in relation to the idea that democratic decisions are always or must be correct. Not quite. We might democratically continue to thrash the environment. But a wrong decision in this sense is like the idea of the stock market bubble, clearly the knowledge embodied in a crowd may not be diverse enough perhaps because a life in capitalism has ensured people hold similar views -i.e. the ones planted there by the corporate and state media or more seriously because they all read the same newspaper, follow the same sports team, are all city dwellers with few country folk or whatever. In a properly functioning democracy unlike the present facade, we would hope that people have more diverse knowledge and continuously and freely learn and thereby satisfy the requirements of the 'crowd'. Clearly then things can get very subtle sometimes, although this should not be seen as an argument for retaining a vanguard of specialists. It's also a way of saying that we don't just make decisions in relation to each other, essentially political ones but also ones against nature itself and to make good decisions there, we must really understand the environment in its many facets.

In relation to Peak Oil one might imagine that the crowd now would say it's a myth and that we will just find some new technology and everything would be alright. I would argue that the crowd here in terms of what they have been told means that in this subject area they are not diverse but as more people read about it and weigh up the arguments and consider the actual facts, that the wider body of society hopefully will come to accept it. Oil companies certainly don't want the public to know, because they could lose out on potential huge profits for the next few years. And capitalists don't want the public to know as outlined earlier as they could lose their grip on power, because capitalism will only last as long as people believe in it and most of them believe it delivers or will sometime in the near future.

And on a final note in the Western world at least, religion has moved off centre stage and a new religion of technology and never ending progress has taken its place for the moment. Everyone is addicted to it. It's one of the first reactions you get from people who are new to Peak Oil. The response is usually something along the lines: 'They are probably working on some unknown technology that will solve all our energy problems'. Or 'Who knows what inventions lie around the corner?'. In fact it's just another way of dodging the hard questions. That's not to say there

are solutions, but to blindly rely on things that haven't been invented yet is not a good way to plan ahead. Anyway technology does not create energy. Instead we find sources of energy and we used up quite a few. Basically all we are left with are various forms of solar energy and maybe fusion power in the distant future if we can maintain the crucial support base for a technological civilization to survive on, although it must be pointed out that fusion power is not the clean power source it is often promoted to be. If we burn what remains of the rest of coal and the other half of gas and oil, it's almost a certainty we are moving into the uncharted territory of positive feedback in climate change and quite simply that's not a good place to be. And only recently scientific reports show that the pulse of CO-2 absorbed by the oceans in the past few decades has resulted in a slight rise in the acidity of the water almost enough to start dissolving coral and sea-shells, both of which would cause massive disruptions and extinctions in the entire ocean ecosystem.

Peak Oil then is strongly interlinked with all our problems as burning fossil fuels is directly tied in to Climate Change, relates to our energy addicted life styles, mass consumerism, population growth, environmental degradation, widespread species extinction and of course is at the heart of global geo-politics too.

So as we can see here, there are many things to consider when we try to bring about change and we need to be open to new ideas to the methods and techniques that we use. There is no single solution and there's lots at stake.

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