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I am so sad that the world's major governments and economists are so stupid! But thankfully, I am not silly enough to think they will change.

A plea for rational thought

Some may think this is a rant, but it isn't. It is just a plea for rational thought. I have spent the bulk of my career in business doing turnaround projects. That has usually meant needing to ignore management (and prevailing fashions) and find out what the true drivers of poor performance really are. That is not to disparage them because I am sure many were much smarter than me. But in most cases managers treated the symptoms of their poor financial performance as the real problem and had set out, unsuccessfully, to try to solve the symptoms...and thereby continued down the gurgler....their efforts being of no avail. I usually found that actually facing up to and dealing with the real causation was unpalatable to the incumbent management or governance group – so they dealt with what they could see as easiest – the symptoms.

The cause central to humanity's problem is our hubris. Sure, we live in a finite world that imposes constraints on us, but we now reckon we can solve these limitations with financial engineering, smoke and mirrors. Aren't we wrong? Economists have models that totally ignore the bounty we got when we first started using and exploiting all the opportunities from fossil fuels and many other minerals. They simply need now to be even smarter because they are so ignorant. This energy endowment may be a large bounty but it was a one-time opportunity that will be disappearing by the time our grandchildren grow up. Our successful inventions of new technological tools to use, simply added to our misplaced hubris and further distorted reality. All our new "devices" whether solar panels or batteries have just added to fossil fuel utilisation. Sure we get improvements from increased efficiency in car engines, but how do we convert our built environment from an absolute reliance on fossil fuels? This may already be too late IMHO.

This endowment allowed us to go from small scale farming in 1750 with one family, one ox and one plough (where 96% of the population were engaged in food production – to 4% today), to large factory farms where it now takes on average 10 calories of fuel to make one calorie of food. This kind of trend extrapolated into the gizmos we use in homes and factories, allowed us a huge production and productivity surplus based on the ready availability of coal, oil and gas – and also uranium. So we invented advertising to stimulate demand and created a consumer society...now mostly outsourcing all our production to low wage/slave economies to keep our excesses affordable. More and more, we gather our non-productive human drones in huge urban ghettos of our own making.

Lack of gold to back our fiat currencies

Once we ran short of gold to back our fiat currencies, we detached gold from money in 1971. In 1999 Bill Clinton got the idea that financial institutions should be allowed more scope and repealed the Glass Steagall Act...unwittingly allowing bankers free rein to gamble with other people's money.... and now, at least in a de facto sense, to rule the world through the US Fed, IMF, World Bank and BIS.

Smart academics like Professor Alby Bartlett in the link below, just get either ignored or vilified by the self absorbed masters of the industrial/military/financial establishment who are solely intent on pursuing their own personal advantage...

<https://www.youtube.com/watch?v=F-QA2rkpBSY>

Of course for oil, the rate of increase in annual production dropped rapidly after about the year 2000, but if one graphs growth in GDP on the same graph, they both dropped together, so while the truisms in this video remain, the production stats are wrong and we are now struggling along with many times as much global debt as there was when Alby Bartlett delivered this video, similar to his first lecture on the subject in 1969 when the world's population was 3.7 Bn.

We can always dig deeper, we can always devote a greater proportion of our money to overcome the impact of our easy oil, gas and coal. But our lifestyles will suffer – at first slowly and then rapidly as we find out some people and countries have been preparing for what is to come.

Net energy is still dropping

Over the period from 1950 to the present, our average **net energy** available from oil, coal and gas production has dropped and is still dropping. It is even the same with uranium. But what is now happening is that we are building backlogs in the OECD of bridges and buildings that may one day fall down (said to be 20,000 bridges in the USA with a major deferred maintenance backlog, alone) and roads that cost too much to repair. For ethanol it costs more energy to produce fuel than we get back. For tar sands we get four barrels of oil for every barrel input, and for shale oil (from source rock rather than reservoir rock) we get 15 barrels for every barrel of cost. The average in net return from oil liquids has dropped from about 90 barrels extracted for every barrel of cost in 1950, to about 20 barrels for every barrel of cost today. The proportion of our funds that have to be devoted to winning that reduced net energy is climbing dramatically from one decade to the next. The effect of drilling and fracking for shales is not a contradiction of Alby's talk, it is simply a range extender for oil...and we desperately need to hope for more of these before Burghan and Ghawar become uneconomic. They (in Kuwait and Saudi Arabia) are the world's largest remaining oil fields with high net energy output...yet they are deep into water flood to keep the party going. They are the canaries in our net energy "coal mine".

From 1999 onwards derivatives reduced financial risk for individual parties yet dramatically increased risk for the global financial system. That risk hit one thousand trillion. The remnants of that 2008 risk has now been passed on to the general public. But it hasn't really lessened.

Expanding money printing and debt

Following the GFC in 2008, bankers/economists started in with their new un-tested models on the presumption they could solve this real problem (of every mineral resource – not just energy) becoming considerably harder and more costly to extract by printing money, reducing its cost to stimulate demand.... and quietly changing the monetary measure of GDP by expanding money printing and debt.

The role of the G20 was mainly to ensure that the financial problems generated by banks' financial engineering became the responsibility of all citizens so governments were free to continue to print and borrow.

It alarms me that those same bankers and economists have not realised that they are now still setting out to solve the symptom – ballooning debt – instead of seeking to solve the cause....rapidly falling EROEI of oil, gas, uranium, and in many locations coal. In fifteen years it will be all over, with the end of the industrial age of oil looming; now that close.

Some folks may be silly enough to rejoice today in the relatively low world commodity prices, without realising what this means and what the effects will be. But to those who have run the numbers, studied prior societal collapse and also past near resource extinction events, this is par for the course. May I recommend Joseph Tainter's fine book, "The Collapse of Complex Societies". I really doubt that one economist or banker in 1,000 has bothered to read this work, or to watch Prof Bartlett's video set – as per the link above. The most valuable work is the 2004 book by Meadows, Randers and Meadows called "Limits to Growth: 30 years on"....

Options for future energy

I earnestly recommend you read and watch these if you haven't already done so.

Now, to those who doubt what I am saying, I invite you – no, I implore you – to tell me how we can produce more stuff without using more energy? Because that is what ignorant bankers, economists and politicians are imploring us to do. "Just go into debt," they say, "but hey we are planning to increase the cost of that to you at some point...you stupid schmuck!"

Or do you actually believe that we can solve the world's problems by printing more money, or making those who have money in the banks pay the banks for the privilege in one never-ending Ponzi scheme?

(Editor's note: a third option is to believe that technology will resolve the energy shortage that grows as supplies of fossil fuels, in particular oil, diminish and become prohibitively expensive: a 'just-in-time' energy solution..... For instance, there is more solar energy arriving from the sun than the world is ever likely to need. Ditto the potential availability of nuclear energy. But both have major problems. Solar needs far more cost-effective batteries than are available today, but should be available at some state from new and evolving technologies. Nuclear requires a combination of political will and better technologies. A large proportion of oil is used for transport at present - mass-use of electric vehicles relies on far more cost-effective batteries than are currently available. But will the requisite technologies arrive in time to avert a massive world economic collapse? If we are extremely lucky, battery technology and improved nuclear power plus a host of other energy technologies will start filling the gap soon enough to avoid, in part, a massive collapse. 'In part' because colossal greed within the world's financial systems may cause a world financial collapse before the energy problem is resolved. Only time will tell.)

The clever folks at NZ Institute believe in that sort of growth because it serves the short term needs of its members (major corporate). The folks that run our city and our country are also devoted to growth for similar reasons.

Aren't we lucky? We are getting exactly what we deserve. It is just that our children's children will suffer for our myopia and stupidity!