richardheinberg.com

*MuseLetter #245 / October 2012 by Richard Heinberg*

*I've spent most of the past month touring Australia and New Zealand, giving over a dozen lectures in about as many cities. This month's MuseLetter includes two op-eds from that tour. First is a submission to the Sydney Morning Herald, which that publication declined to print. Second is a transcribed and edited extract from one of my lectures, printed as an op-ed in the Canberra Times. I have also done a number of radio and TV interviews on the tour, my favorite being the radio interview with Margaret Throsby on ABC Classic FM, which turned out to be the most enjoyable one I've ever done—mainly because I got to talk about music as well as the usual subjects, and was invited to share a few of my favorite pieces. For some of the others see here. Enjoy!*

## Australia, Meet the Post-Growth Economy

Australia is betting its future on resource extraction for a growing China, hoping its own economy will expand to support up to twice as many people by mid-century. The folly of this strategy is exposed as China's manufacturing falters. That lowers the price Beijing will pay for Australia's export commodities, dashing profit expectations for Aussie industries that have spent billions building export terminals and related infrastructure.

When Resources Minister Martin Ferguson told ABC that "the resources boom is over," he was uttering an unwelcome truth. The government's plan is to boost mining rates to make up in volume for what is lost in per-unit price. But a glut in supply will lower commodity prices even more. Unless the nation changes course, Australia is set to suffer the fate of all resource "boom towns."

Here's the situation in schematic. As economies in America and Europe stagnate due to high oil prices and too much debt, China's exports to those countries dry up. Which means China needs less iron ore and coal from Australia.

No one is immune; the world is a system. And the system is undergoing a historic "correction." Deutsche Bank strategist Jim Reid gave a bracing summary when he suggested the western financial world might be "totally unsustainable."

If policy makers continue assuming that the ongoing global reset is merely another turning of the business cycle, then we lose whatever opportunity still remains to prevent financial crisis from becoming social crisis.

Unfortunately the idea that growth has limits is still a minority view. After all, in the "real" worlds of politics and economics, growth is essential to creating more jobs and increasing returns on investments. Questioning growth is like arguing against petrol at a Formula One race.

Keynesians believe government stimulus spending will boost employment and consumer spending, thus flipping the economy back to its "normal" expansionary setting. But bailouts and stimulus packages of the past few years have produced only anemic results, and central banks and governments can't afford much more of the same.

Free-marketeers nurture faith that if government spending shrinks, that will liberate private enterprise to grow profits and jobs. Yet countries that implement austerity programs show less economic growth than those whose governments borrow and spend—until the spending spree ends in bond market mayhem.

Neither side wants to acknowledge that its prescription no longer works because that would imply the other side is correct. But maybe both are wrong and growth is simply finished. There are, after all, limits to both resources and debt.

Admittedly this is scary business. What's scarier still is the prospect that the economic costs of climate change could deliver the coup de grace to world economic growth sooner rather than later, as droughts and floods intensify worldwide.

There will be life after GDP growth, and if we adapt wisely it doesn't imply misery. Indeed, if we focus on improving quality of life and protecting the environment rather than aiming to increase quantity of consumption, we could all be happier even as our economy downsizes to fit nature's limits. But a gentle landing is unlikely absent intelligent policy and hard work.

The alarm bells are ringing. Like Americans, Europeans, and perhaps the Chinese, Australians will soon wake up to find themselves in a post-growth economy. The key questions are: What will we all do then? And, how are we preparing?

## Economy paying dearly for the high cost of energy

*Originally published as an Op-ed in the Canberra Times*

Energy is everything. Without energy literally nothing happens. It's easy to overlook the role of energy in the economy because we often just look at it as how much we spend on energy as a fraction of total GDP. But that really is misleading. Because if you take away energy, the GDP doesn't just contract by that percentage, the GDP disappears.

If suddenly there was no petrol at the pump; if suddenly the lights went out and did not come back on, the economy would go away. Energy is central to all economic activity. Up until the last couple of hundred years, the energy that we used was from renewable sources

- it was almost entirely from the sun. But something changed with the Industrial Revolution. We developed the tools, the gears, the metallurgy, the simple heat engine, so that we could access and use the fuels that had been created by nature over tens of millions of years.

Think of it this way. You have run out of petrol and have to push your car a couple of metres off to the side of the road. It's a lot of work, especially if it's a heavy car. Think about having to push the car for kilometre after kilometre - that would really be a lot of work. If you do the math, a single litre of fuel is doing the work that's the equivalent to, maybe, six weeks of hard labour. You can't get labour anywhere as cheap as the petrol we buy.

Australia is paying $1.50 a litre for petrol now. Can you get even a month's worth of hard labour anywhere on the planet for $1.50? Obviously no. That is really what has given us so much economic benefit over the last couple of hundred years. We have mechanised every process of production and transport that we possibly could.

Most important of the fossil fuels is oil because it represents virtually all transport energy. But oil is finite in quantity. We discovered that in my country, the United States, over the course of the 20th century. We started out as the world's petroleum powerhouse.

Around 1930 the rate of discovery of new oil fields started to taper off in the United States, and 40 years later in 1970, the rate of extraction of oil also started to taper off and has generally been doing so ever since. (Right now, the US is having a spate of good luck in extracting unconventional oil, but that's another story.) The same basic process is going on in country after country. Countries that used to be oil exporters are now importing countries - Indonesia and Britain.

Now, everybody can't be an oil importer. We have to have some countries that produce more than they use domestically. Some exporting countries like Saudi Arabia are seeing a rapid increase in domestic demand for oil. This could cause problems along the way; ignoring even the fact that worldwide discovery of oil peaked in the early 1960s. Actual production of regular conventional crude oil has hit a plateau, as of about 2005. This is not for want of effort.

Oil prices have been increasing rapidly and dramatically. Back in 1998 a barrel of oil sold for about $12. Today it sells for 10 times that, and even if you factor in inflation, that's a pretty rapid rate of increase in world oil prices. So, the incentive is there for oil producers to bring as much to market as they can and there's every evidence that they have been doing so. All oil producers are producing flat out, with the possible exception of the Saudis. Even in that case I would argue they're producing as much as they can, and yet, we're flat-lined.

What's going on? The oil industry has changed. In the 1930s, it was just a matter of sticking a hole in the ground. These days, it takes more technology because we have to go to ultra-deep water oil, or to tar sands, or to tight oil that has to be fracked and drilled horizontally. It costs more to explore for and produce oil. A single exploratory deep-water well can cost half a billion dollars to drill and still come up empty. So the oil industry needs high prices to produce

that new incremental barrel. There's still oil that could be produced at a profit if the price of oil was $20 a barrel, but there's not enough of that around to meet global demand. So it's that new incremental barrel that sets the price for oil, and that new incremental barrel is expensive.

There were a couple of years when Australia was an oil exporter, but only a couple. You're importing more oil, every year. Well, get in line. China is importing much more oil every year and it's soaking up just about all exports that it can. And, it's willing to pay. My country is actually seeing its oil imports drop, not just because of slightly increased production from unconventional sources, but also because American drivers can't afford $4 per gallon.

If you look at the recent economic history of the United States, every time there is an oil price spike there is a recession that follows. Now we have had recessions in the post-war period that were not linked to high oil prices, but we haven't had a single oil price hike that wasn't correlated with a recession. We have found from experience that high oil prices have an economic cost.

This is the situation we're in right now. The price that's needed - about $100 - to develop new oil sources is the price that brings on recession. This doesn't mean that the price of oil can never go down again. Indeed, I think it will go down substantially by several tens of dollars but what will cause that to happen is weakness in the global economy and declining demand for oil. When it happens, oil producers will stop going after that incremental barrel and oil production will go down. The scenario that is extremely unlikely is to have low oil prices and demand being satisfied and economic growth continuing to happen. That's not going to happen. Oil, by itself, right now, is capable of undermining world economic growth.