

## Climate deniers undermine economic growth

*Humans didn't evolve to deal with great challenges like global warming, it's true. But neither did we evolve to overcome deprivation, create beauty, or achieve happiness. In overcoming oppression and deprivation—predators, hunger, disease—we have given birth to a new world. It is a world at once beautiful and terrible. And this world too, we shall overcome.*

(*The Emerging Climate Consensus* by Ted Nordhaus and Michael Shellenberger)

**D**EALING WITH CLIMATE change is the biggest question civilization has ever had to face. Global warming over the period since the industrial revolution is a fact. It is also a fact beyond dispute that this rise in global temperature has coincided with the increase in CO<sub>2</sub> emissions pumped into the atmosphere as a result of human activity. But correlation is not absolute proof of causation. The climate scientists represented on the Intergovernmental Panel on Climate Change (IPCC) have concluded they are 90 per cent certain that climate warming is due to the human generated CO<sub>2</sub> emissions. This is a high degree of confidence in the causal relationship.

The uncertainty lies in the climate models. Unlike most science based on experiments which can be replicated to test the conclusions, scientists on this issue are in a similar situation to economists, whose models of the behaviour of the macro-economy are less reliable. For example, the relationship between changes in income and consumption is tested by looking to the past relationship between changes in income and consumption. These relationships can be unstable because consumer behaviour can, and does, change over time. There is no guarantee in economics that the relationships between economic variables will be the same in the future as they were in the past. Climate models are built on physical and chemical laws which do not change over time.

A paper prepared by Keith Burrows for 'Science Teachers for Climate Awareness', and supported by the Climate Emergency Network, points out that 'over the last 40 years there has been a clear upward trend in global temperatures of around 0.2C per decade just as

the models predict, but only if they include human added CO<sub>2</sub> in the atmosphere. There is no other coherent explanation for the rise in temperatures over recent decades'.

Putting climate models to one side, there is also a rich store of knowledge in the study of the earth's past and its climate, the discipline of paleoclimatology, which provides a historical basis for model-building and for testing the efficacy of models by backcasting. Paleoclimatology can teach us for example, by observations of temperature and sea-level changes over the last million years as the planet swung between ice ages and inter-glacial periods, that each one degree increase in temperature will push the sea level up by 10 or 20 metres in the long run.

Until there is an alternative theory which can better explain the rise in temperatures which gets the support of the majority of climate scientists, prudent decision makers who are not scientists should make a risk assessment of the probability of catastrophic climate change under a business-as-usual scenario and what that would mean for life on earth. What the climate models are saying is that there is a 90 per cent chance that continuing with a business-as-usual emissions' trajectory will destroy civilisation and most of the planet's biota.

Using these models, the UK Met Office calculates that business-as-usual will lead to a global temperature increase of 4 degrees by 2060. At that level only half a billion people will survive out of 9 billion, according to Kevin Anderson who is director of the Tyndall centre for Climate Change and an advisor to the UK government.

The international Climate Institute has calculated that if all the best promises to reduce CO<sub>2</sub> brought to the climate change conference at Copenhagen had been incorporated in a binding agreement—which was the initial purpose of the conference—global temperatures would rise to 3.9 degrees by 2100. In effect this would mean a postponement of the business-as-usual temperature rise by 40 years. Either way global warming would have increased by more than 2 degrees Celsius much earlier in the century. Two degrees is now seen as being past the likely tipping point for catastrophic climate change. The



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world probably has no more than a decade to change the current mindset of the bulk of decision makers that some modifications of business-as-usual based on emissions trading combined with purchase of carbon offsets from developing countries will avoid the worst of global warming.

To change the political mindset is the task which has been set by groups such as Beyond Zero Emissions (BZE) in Australia and similar groups overseas. They have set an objective of 300 to 350 parts per million (ppm) for atmospheric CO<sub>2</sub> equivalent concentrations, which is below the current concentration of 385 ppm. This target is based on the science which says there is strong evidence that the world is already close to or beyond certain critical tipping points that might be difficult or even impossible to reverse. BZE considers

it is now reasonable to say the earth is already too hot and it is not possible to cool the earth back to a safe temperature—which would be close to the pre-industrial level of 280 ppm—unless humanity can move towards zero emissions as quickly as possible.

Based on a recent study by the Director of the Potsdam Institute, Professor Hans Joachim Schellnhuber, we can conclude that in order to have a two-in-three chance of keeping global warming below 2 degrees Celcius over pre-industrial levels, and taking into account the responsibility of rich countries in creating the problem, it would be necessary for the US (and Australia) to reduce their per capita emissions to zero in 10 years. Reducing global emissions needs global co-operation based on consensus which requires fairness allowing per capita emissions to converge >

over time. According to Schellnhuber, this means that advanced industrial countries such as the UK, France, Japan and Germany with per capita emissions half the level of US and Australia, would be required to reach zero emissions by 2030-2035. On the same basis China would need to reach zero emissions before 2040 and India before 2050.\*

This looks like an impossible task. It isn't. Australia, in common with most developed countries, spends about 2 per cent of GDP on defence which is designed to deter the military threat of invasion. (Sophisticated weapons systems and soldiers trained to use them are useless in the face of terrorism and arguably amplify the terrorism threat when they are used in foreign military adventures.) The risk of invasion in the case of Australia is low to the point of meaningless. The only country which has the capacity to undertake such an adventure is the US. Further, if Australia was successfully occupied the consequences would be trivial compared to the impact of catastrophic climate change. Even so, if a credible strategic analysis showed there was a two-in-three probability of a serious military threat to Australia within a decade there would be no significant political opposition to a massive increase in defence spending to deter the threat.

Expenditure on defence is pure consumption. Most of the expenditure required to avoid climate change will create value in the form of more liveable cities and lifestyles, lessen the probability of societal and international breakdown as individuals and nations can avoid the use of force to acquire resources—particularly oil and water—and arguably, even at this late stage, cost less in net terms than expenditure on defence.

Sir Nicholas Stern said in his path-breaking report for the British government in 2006 that the failure to take timely action could lead to disruption of economic activity and social life equal to the two great wars and the 1930s depression: 'tackling climate change is the pro-growth strategy for the longer term, and it can be done in a way that does not cap the aspirations for growth of rich or poor countries'.

**S**OME ENVIRONMENTALISTS who argue that the world has a choice between economic growth and global warming are their own worst enemies in that they play directly into the hands of the climate deniers. The deniers attempt to discredit the science because they see it as a threat to their political agenda because it completely undermines the economic foundations of neoliberalism. (Deniers are in a different class to genuine climate sceptics who play an important role in testing the robustness of the climate change models.)

For example, in an interview on Four Corners last November, Senator Nick Minchin who lit the neoliberal torch which destroyed the Liberal Party leadership of Malcolm Turnbull (who was seen as a moderate prepared to co-operate with the government on global warming), said: 'For the extreme left it (the science) provides the opportunity to do what they've always wanted to do, to sort of de-industrialise the western

world. You know, the collapse of communism was a disaster for the left...and really they embraced environmentalism as their new religion'.

Given the neoliberal belief of what constitutes communism, they have a point. While most of the conspirators in the audacious destruction of Malcolm Turnbull's leadership were opportunistic, Minchin honestly saw the compromise ETS as the slippery slope towards world government. The evidence was the UN climate conference at Copenhagen in December. The objective of the conference was a treaty binding signatories to emission reduction targets.

Recognition of anthropogenic global warming and its consequences as forecast by science undermines the primacy of the market. Like a war economy, industry becomes subject to government direction. History tells us that Neville Chamberlain was a poor leader but once war was declared, like every other major country involved in the war, he didn't leave it to the market to allocate food, allocate resources of labour between the needs of the civilian population, war industries and the military. He set up a war cabinet which introduced food rationing, manpower planning and conscription and issued industry directives. The dominions and the US after it entered the war imposed a similar command economy on a willing populace; Detroit changed from building cars to building tanks within weeks of war being declared. The war effort was directed by resource planning, not constrained by the availability of finance. At the peak of the war effort, defence consumed 30 per cent of US GDP without imposing great hardship on the civilian population. Once there was a consensus about the threat posed by Hitler and Japan in the case of the US, democracies were able to impose greater financial burdens on their people than the totalitarian Hitler on the Germans, even when it was apparent that Germany was losing the war.

It is unrestrained capitalism which is the real problem in dealing with climate change rather than economic growth per se. Most people think of economic growth as more smoke stacks, more highways and more pollution. Economic growth can also mean accelerated structural change to reduce the raw material and energy intensity of economic growth.

Activities which are profitable, but harm the environment have to be reversed so that resources are directed to producing infrastructure that won't contribute to global warming. These changes include reversing the production of electricity by burning coal when it is technically possible to produce base load energy from renewable sources such as the wind, sun and the tides or the production of water by the consumption of immense amounts of electricity when there is the cheaper alternative of recycling and conservation.

The challenge of making this switch is political rather than economic or financial. Neoliberalism is unlikely to provide the answer which is to close off these profitable, but polluting, activities while stimulating more environmentally sustainable forms of growth.

Dealing with the threat of global warming, like the democracies which successfully responded to the threat of fascism, not only requires an economic transformation, it also requires an acceleration in economic growth as occurred during WWII. In fact it is impossible to imagine a successful transformation to a below zero emissions state without an acceleration in economic growth. The cost of economic transformation may not be onerous providing it is properly planned. For instance the stationary energy plan designed to make coal-fired power stations completely redundant by 2020 has been estimated by volunteer engineers working for the Below Zero Emissions project to cost \$364 billion or less than \$40 billion a year.

The estimate is based on replacing the existing coal-fired generators with mainly wind and solar power generation plus improved transmission based on the most cost-effective, commercially available and scaleable technologies. Most of the coal-fired power stations in operation are close to being fully depreciated so that a high proportion of the cost of renewable investment would simply replace investment in coal fired stations under a business-as-usual scenario if future peak load blackouts are to be avoided.

**T**HE NEOLIBERAL case against this approach is that governments should not 'pick winners and losers'. This ignores history. US governments have had a remarkable record of picking technological winners. Massive expenditures on military R&D and product development laid the foundation until recently of the US competitive strength in the manufacture of civilian jets and more recently the creation of the information technology revolution.

An influential collection of articles written by American economists, Ted Nordhaus and Michael Shellenberger, —published under the title *The Emerging Climate Consensus* and available on the web—argue that the market-based approach to climate change based on Emission Trading Schemes offers an unpromising mix of bad politics, poor policy outcomes and at best very modest and incremental progress on climate change.

According to Nordhaus and Shellenberger what is required is a green Keynesianism, that it is time that green leaders 'reconsider their obeisance to neo-classical economic orthodoxy in the form of their

devotion to carbon pricing. In recent years, environmental leaders in Washington have increasingly embraced the view that private firms and investors are the primary drivers of technological innovation. Indeed, but for the caveat that new green market fundamentalists place their faith in regulated markets, green pricing advocates would make Milton Friedman proud. While many conservatives imagine that technology innovation is driven by private firms identifying market opportunities, green leaders imagine that it is driven by private firms responding to regulatory or fiscal mandates'.

The authors argue that a strategy to deal with climate change which involves a slowdown in economic growth and energy consumption is politically

impossible to achieve.

The challenge we face as a species is to roughly double global energy production by mid century while simultaneously cutting greenhouse gases in half. The highest objective of anyone concerned about global warming must be to bring down the price of clean energy below the price of dirty energy as quickly as possible. And for that to happen, we'll need a new paradigm

centred on technological innovation and economic opportunity, not on nature preservation and ecological limits.

— Kenneth Davidson



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\*In Australia's case the task of reaching a zero emissions target will be compounded by high population growth. As Bob Birrell and Ernest Healy point out in *People and Place* (Vol.17 No4 2009) even if Australia were to achieve a 5 per cent reduction in greenhouse emissions by 2020 (the government's unconditional offer made to Copenhagen), if population reaches 25.2 million based on Treasury forecasts due to high levels of immigration, this will require per capita emissions to fall 28 per cent—an impossible target based on the CO<sub>2</sub> reduction policies of the major parties. Birrell and Healy point out that 63 per cent of the projected population increase comes from net overseas migration from countries, including the main industrial countries, with per capita emissions much lower than Australian per capital emissions.