

CLIMATE CHANGE AND THE GREAT CRASH OF 2008

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Australia and the international community are living through a time of consequences.

If the mainstream science is broadly right, we have little time to stabilise and then to reduce global emissions of greenhouse gases, if there is to be a reasonable chance of avoiding dangerous anthropogenic climate change. Most of you know that better than I do. This year, a meeting under United Nations auspices is to set the rules for emissions reductions and trade for the period after the Kyoto arrangements come to their conclusion in 2012. This is the first year of a new Obama administration in the United States, coming to office with a commitment to participation in strong global action to combat anthropogenic climate change. It is the year in which Australia makes critical decisions on mitigation policy.

It is also the year after the Great Crash of 2008. A collapse of global financial intermediation of unprecedented dimension is sending powerful recessionary pulses through the world economy.

I said in the concluding chapter of the Garnaut Climate Change Review that when human society receives a large shock to its established patterns of life, the outcome is unpredictable but generally problematic (Garnaut 2008, p 591).

Things fall apart.

I said that unmitigated climate change, or mitigation too weak to avoid dangerous climate change, could give human society such a shock.

We know that the possibilities from climate change include shocks far more severe than those in the past which have exceeded society's capacity to cope, and moved societies to the point of fracture.

For these reasons, the decisions that are to be made at Copenhagen in December this year would be fateful—whether decisions to move forward with a comprehensive global agreement to mitigate climate change, or to postpone action, or to do nothing, or to take one more step on a journey of a thousand li.

It happens that each of the three examples I gave in Chapter 24 of shocks that had knocked human society from its settled course were from financial instability. This reflected my longstanding professional interest in development and international finance, rather than the ominous news emanating from New York and London as I worked on my Review.

This financial shock of 2008 is one of the big ones of history. As a financial shock, it may yet be the biggest—although corrective policy action may moderate its consequences for the real economy.

I presented the Final Report of the Climate Change Review to the Prime Minister on the morning of September 30, 2008. This was the morning after the night of the largest ever one day points fall on the New York Stock Exchange. The equities markets had been on edge as private credit shrivelled after the collapse of Lehman Brothers. The Bush administration crafted a response. Market participants panicked when, in the United States business day of September 29, our morning of September 30, the Congress rejected the President's recovery package.

Since then, the panic has given way to uneven but heavy and sustained pessimism.

The Great Crash of 2008 and its recessionary aftermath have provided the whole context for Australian and international discussion of my Review. They have provided the whole context of discussion of the Government's December White Paper, and now of the exposure draft of the Government's Emissions Trading Scheme legislation.

Climate change was always going to be a diabolical policy problem (Garnaut 2008, p xviii). I described it as being harder than any other issue of high importance that has come before our polity in living memory.

I wondered in the Final Report whether climate change policy was too hard for rational policy making. It was too complex. The special interests were too numerous, powerful and intense. The time frames within which effects become

evident were too long, and the time frames within which action must be effected too short.

However difficult the climate change policy problem was in the first nine months of 2008 when I wrote those words, it is harder now.

It was a theme of my Review that there was no fundamental conflict between prosperity and the mitigation of climate change. It was an error to assert the priority of either economic or environmental values. Good economic policy and good environmental policy both required the removal of links between economic activity and greenhouse gas emissions.

There could be no victory for climate change mitigation that was not based on careful assessment of economic consequences. There would, on a balance of probabilities, be no long-term victory for economic prosperity that was not built on steady and large reductions in global greenhouse gas emissions, and eventually concentrations.

In the end, we would get both good economic and good environmental outcomes, or we would get neither.

This was true in high prosperity. It is true now, as the global economy experiences its greatest proportionate decline in output since the 1930s, and the largest proportionate decline ever in international trade over a similarly short period. It will be true in the challenging years that lie ahead.

LINKS BETWEEN THE GREAT CRASH AND CLIMATE CHANGE POLICY

Here I will discuss five links between the crisis and climate change policy.

First, the decline in growth of economic activity reduces the rate of growth of emissions. This gives us more time before dangerous points are reached.

Second, much capital and labour is underemployed in recession, and so they are available for new kinds of economic activity. This lowers the opportunity cost of investment in structural change.

Third, many enterprises are more fragile financially, and in a weak position to carry increased costs that they cannot pass on to users of their products.

These are probably the most important real economic interactions between climate change mitigation and the Great Crash.

There are two powerful political economy effects of the Great Crash and its aftermath, rendering more difficult the implementation of policy directed at strong reductions in greenhouse gas emissions at low cost.

First, there is greater anxiety about changes in the structure of employment of labour and capital. The inevitable losers from change are more vocal and effective in expression of that anxiety. The winners to a considerable extent do not yet know who they are, and so to that extent do not participate in the policy debate.

Second, recession weakens support for policies based on market exchange, the more so when its origins lie in the failure of markets. It therefore changes, for a while, the policies that are likely to be favoured in the wider polity, away from those that rely heavily on market exchange, towards those that rely on the exercise of discretion by Governments.

Let us look more closely at these five points of interaction between the financial and economic crisis and the contemporary Australian discussion of climate change policy.

- Global Recession Slows Emissions Growth

How large is the breathing space in growth in emissions? Unfortunately, small, especially compared with the scale and urgency of the mitigation task.

The Garnaut Climate Change Review drew attention to the powerful forces that were causing emissions growth in the early twenty first century to be much more rapid than anticipated by the IPCC Reports. Economic growth was stronger; it was concentrated more in economies at stages of development in which growth was highly energy-intensive; and it was concentrated in economies, first of all China, India and Indonesia, in which coal was relatively

abundant and cheap. Under 'business as usual', emissions growth through the twenty first century was likely to be higher than in the so-called A1FI scenario—that with the highest rate of emissions growth. A1FI had previously been considered to be extreme, and the IPCC, and analysts such as Stern (2007) who drew on it, relied on scenarios with much lower rates of emissions growth.

How much is the emissions growth outlook changed by the Great Crash and its recessionary aftermath?

For the time being, emissions growth has slowed considerably. After a period in which average growth in the world economy, weighted by purchasing power, was near 5% per annum, output is set to fall in 2009. Growth in the major developing countries, while remaining positive, has slowed significantly. Investment, which is associated with exceptionally high use of energy and emissions-intensive materials, has been affected more than other components of economic activity.

In China, the world's largest and most rapidly growing major source of greenhouse gas emissions, the downturn came suddenly in the third quarter of 2008. China is now a market economy with its own business cycle. Exceptionally high investment in commercial real estate and urban housing were due for a correction by 2008. The correction coincided with a stunning decline in exports, as domestic demand collapsed in the United States, Europe, Japan and Korea. There was a fall for a while in production of such highly emissions-intensive products as electricity, metals and cement.

It will be some time before we have reliable data for global emissions in the period since the financial crisis began to bite deeply into real economic activity. Emissions may have fallen a bit for the world as a whole in and since the third quarter of 2008.

The trajectory of emissions growth in the years immediately ahead depends first of all on the timing and strength of recovery from recession. China is likely to see a sharp increase in economic activity in response to large fiscal and

immense monetary expansion. The effects are likely to be evident in the second half of 2009.

Elsewhere, recovery will be mostly slow, uneven, and in some cases delayed for a considerable time by continued weakness in financial intermediation.

With colleagues, I have said elsewhere that there may be no overall emissions growth for two or three years through the current recessionary episode (Garnaut *et al* 2009, Garnaut 2009). The most likely course is for a return to growth that shifts back the curve of emissions levels over time by two or three years. This would mean that global emissions levels expected for 2030 would not be reached until 2032 or 2033 (Garnaut *et al* 2008, Garnaut 2008).

The conditions for sustained strong global economic growth, led by China and the large developing countries, are likely still to be present after the crisis.

However, there are several risks to the return to strong global growth concentrated on the developing countries. The recession may leave a durable legacy of weakness in global financial intermediation, with continuing dampening effects on the scale and efficiency of trade and investment. It may leave a legacy of greater preference for inward-looking, protectionist approaches to economic development. More generally, it may leave a legacy of interventions in the economy that reduce productivity and incomes and the potential for their growth. It may leave a legacy of political instability in some countries and regions, which is inimical to growth. It may leave an ideological legacy of distrust of market exchange, which renders more difficult and less likely the adoption of productivity-raising reforms in many countries.

Any of these developments could weaken the beneficent processes of the Platinum Age, which have reduced the number of people living in poverty more rapidly than ever before in human history.

Any of these developments would lower rates of growth in energy use.

While any substantial diminution of future growth prospects may reduce 'business as usual emissions from what they would otherwise have been, it

would not be good news for reductions in emissions. It would make effective mitigation policies less likely. The overall impact would be to increase, not reduce, the risks of dangerous climate change.

Even now, in deep global recession, with total emissions possibly lower than a year ago, the level of emissions is high enough for concentrations in the atmosphere to continue to rise at a considerable rate.

This is part of the context in which we should understand the 'breathing space' provided by the financial and economic crisis. The other part is the reality that concentrations of carbon dioxide equivalent in the atmosphere are already close to 450ppm.

- Recession is a Good Time for Investment in Structural Change

Global recession and the period of recovery that follows is a good time economically for investment in necessary structural change.

In global recession, there is too little effective demand to employ available resources in the world as a whole and in most of its parts. Good economic policy requires fiscal policy action to increase demand. Any increase in expenditure helps to reduce the immediate deficiency in demand. Expenditure that is focussed on building an economy that will do well in future delivers an additional dividend: it augments future as well as current incomes.

It is for this reason that the fiscal responses to the current recession in many countries have included measures to reduce the emissions intensity of economic activity. China's stimulus packages include major commitments to renewable energy, public transport, and broadly to economisation on energy use. The Obama recovery package allocates large sums to support for investment in low-emissions energy technologies and more efficient electricity transmission. European Governments have given high priority to encouragement of production and use of renewable energy. Australia's second recovery package gave high priority to economisation in energy use through insulation of housing. There is considerable discussion of increasing the

climate change mitigation component of future stimulus packages in all of these countries, and others

The case for investment in mitigation in recession is not that it will increase total employment more than alternative patterns of expenditure. Effective mitigation policy encourages the movement of resources from high-emissions and towards low-emissions activities. Gradual structural change of the kind and dimension required for effective mitigation is unlikely to affect total employment one way or another. There is no reason to expect that, on balance, employment will be higher or lower as a result of this movement.

Gradual structural change expands employment in some areas and reduces it in others. Whether or not resources are fully employed depends on familiar macro-economic considerations, some of which are strongly affected by policy.

The case for investment in mitigation in recession is that expenditure that improves the future operation of the economy gives value beyond the immediate stimulus to demand. Any public investment has lower opportunity cost than at other times. Investment in structural change towards a low-emissions economy, if designed and implemented well, is likely to have relatively high long-term value.

- Be Careful of Financial Fragility

The financial fragility of many enterprises is a reason to avoid sharp increases in costs until the economy has begun to expand after recession. Even if the whole of the increase in permit revenues received by the business sector were recouped from the passing on of costs increases or in other ways, there would be uneven distribution across firms.

Looking forward from March 2009, it would seem likely that the economy will be expanding again by the middle of 2010, when the Government's proposed emissions trading scheme is scheduled to be introduced.

- The Political Economy of Rising and High Unemployment

Whatever the overall effect of climate change mitigation policies on employment, there is much greater sensitivity about the loss of some jobs from policy changes at times of rising and high unemployment, and less confidence that change really will lead to commensurate growth in employment elsewhere in the economy. This generates doubts about policies that introduce pressures for contraction of some sources of employment, and expansion of others. It also generates fertile ground in which vested interests affected adversely by structural change can plant opposition to policy change.

Whatever the overall employment effects, there will be losers as well as winners from structural change. The losers are likely to be more vocal in expression of their concerns at any time, and more stridently so in recession. The beneficiaries of structural change are often silent—some for the good reason that they do not know who they are until after the new policies are in place.

So whether or not recession, and, more so, the recovery period that follows, is a good time for investment in structural change, as the basic economics suggests, it is a time when the political economy of reform is difficult.

There are historical cases of Governments taking heed of the economic realities, and pressing ahead with reform despite the difficult political context created by recession. The outstanding Australian example is the Hawke Government's announcement of the largest step in reduction of Australian protection in March 1991, with the new measures to take effect in what was expected to be, and was, a period of post-recession expansion.

It is more common for Governments to give weight to the political difficulty than to the opportunity of reform in recession and its aftermath. Attempted reform in recession usually runs risks of compromise in response to business pressures which, unless designed with care, can reduce the value of the reform on return to prosperity.

- The Political Economy of the Market Economy During and After Recession

Most deep recessions leave some legacy of distrust of market exchange, and of increased sympathy for interventionist government policies. This recession is shaping up to be by far the deepest and longest since the 1930s. With its origins in failures at the heart of the global market economy in the New York and London banks, it would be surprising if it did not leave an unusually deep ideological legacy.

Some of the newly preferred interventions by government will be justified by lessons of experience. These will include the need for more effective regulation of transactions by deposit-taking banks.

Others will not. There will be greater resistance to reliance on markets in circumstances in which they contribute unambiguously to rising incomes. For reasons discussed in the Review, market-oriented approaches to mitigation are likely to secure larger reductions in emissions at lower costs than a myriad of interventions favouring some economic activities over others. But the environment for making the case for market-oriented approaches will be more difficult in recession and its aftermath.

It must be said that the reality as well as the perception of the value of market exchange may be diminished by deep recession, to the extent that it reduces the capacity, competitiveness or efficiency of the financial sector. If owners or intermediaries in the exchange of capital have less capacity and willingness to take risks in holding new financial instruments, the forward market for permits will reveal a steeper contango and be less efficient than would otherwise be the case. This is a reason for ensuring that the financial sector has returned to health before relying on it to set the price for emissions permits.

GLOBAL RECESSION AND COPENHAGEN

The global recession provides a difficult political context for preparations for Copenhagen in December.

Other developments and conditions are supportive of a strong outcome at Copenhagen. These include the change of Government in the United States,

the Australian Government's recent return to the international community, the understanding in Hong Kong, Korea and Taiwan that these economies will need to accept mitigation commitments in line with their contemporary economic status, and increasing evidence from the scientific community of the urgency of climate change mitigation. There is considerable momentum in domestic mitigation activity in many countries, including China and South Africa amongst major developing countries. Domestic opinion in most countries remains strongly supportive of mitigation, although its priority has fallen relative to the maintenance of employment and incomes.

An effective global agreement would have five parts.

First, it would embody an understanding on the desired level of ambition in global mitigation, expressed as a desired trajectory for reduction of emissions over time.

Second, it would allocate the emissions budget embodied in this trajectory across countries as emissions entitlements. This would be based on clear principles. The Review judged that convergence towards equal per capita entitlements at some time in the future, with transition arrangements for rapidly growing developing countries, was most likely to serve as the basis of global agreement.

Third, it would secure a level playing field for investment and trade in emissions-intensive goods, either through trade in emissions entitlements across countries, or through agreed rules on assistance to trade-exposed industries.

Fourth, it would embody a commitment by high-income countries to allocate a minimum sum, related to national income, to public financial support for research, development and commercialisation of new low-emissions technologies.

Fifth, it would contain commitments from developed countries to provide funding to support the climate change adaptation efforts of developing countries.

The Review (Chapters 8 to 10) suggested a possible basis for agreement in each of these areas.

The international community is closer to a basis for agreement in some of these areas than others.

On the first, there is widespread rhetorical support for strong mitigation, built around securing emissions concentrations of 450ppm or below. It may not be difficult to secure an agreement on an ambitious mitigation objective. The problem is that without agreement on allocations across countries that add up to the desired total it is only rhetorical.

The second area in which agreement is required is crucial. This is a technically complex matter with large ramifications for the distribution of income in and between countries. It will take time to build an understanding across all countries. It is unlikely that there will be effective agreement unless heads of major governments have put in place a process for sorting through the possibilities, with reporting times well in advance of the Copenhagen meeting. This process has not yet begun. The position of the United States is crucial, and the late start in that country and the pressures of recession may make it difficult for it to play a leading role in time for agreement in December. Chinese participation is likely only after a strong lead from the United States, and other developing countries later still. Time is running out.

The third area in which agreement is required has only recently been given anything like the attention it requires. As soon as countries begin to take strong action to reduce emissions, the possibility of emissions prices in the home country exceeding that in some or other competitor becomes a source of agitation for assistance. Each country which has or is contemplating strong mitigation is developing its own approach to assistance. The inconsistencies in approach create infinite opportunities to argue for pressure for increased

assistance in every country. The unedifying Australian discussion of allocation of free permits has its analogues everywhere—in the United States in discussion of measures to penalise imports of countries whose industries are not exposed to comparable emissions pricing.

This is a matter on which international rules are crucial. The absence of international rules would become an argument against strong mitigation in every country. It is likely to lead to systematic exclusion of many of the most emissions-intensive industries from constraints being applied elsewhere in the economy. It is likely to lead to corrode the multilateral trading system.

The problem would not arise if there were comprehensive allocation of emissions rights and trade in those rights. This would establish comparable emissions pricing in all participating countries and a level playing field for competition in the emissions-intensive industries.

Pending agreement on allocating emissions right as a basis for global trading of permits, the solution is a principled approach to assistance to trade-exposed, emissions-intensive industries in all countries. The principled approach is defined in Section 14.5 of the Review (see also Garnaut 2009). Each country would assess the effects on global prices of other countries not having comparable emissions pricing, and compensate domestic producers for divergence of 'shadow' from actual pricing.

I discussed this matter in some detail with the Director-General of the World Trade Organisation (WTO), Pascal Lamy, in early March. The problems of trade and environmental distortion from differential emissions pricing across countries is now widely recognised as being of such large dimensions that a global solution is required.

The global solution prior to comprehensive emissions pricing and trade is to establish an international entity to assess the carbon price that would correspond to universal carbon pricing at various rates, and to allow support to enterprises in each country to the extent that there was divergence between

the current international price, and the price that would rule if that price applied in all countries.

The fourth requirement in an effective global mitigation agreement is for a minimum commitment by high-income countries to public fiscal support for research, development and commercialisation of new, low-emissions technologies. This is one aspect of agreement that has become easier with recession and fiscal expansion across developed countries. The unilateral commitments on technology of the Obama administration are broadly in line with, if still below, what is required from the United States within a global agreement. This is one dimension of mitigation policy that is both consistent with recovery policies, and widely perceived to be so. Now is a good time to lock in global agreement on one of the pillars for an ambitious global mitigation effort.

The requirement of adaptation assistance for developing countries, especially those with low incomes and most vulnerable to climate change, has a particular history that makes it a condition for the participation of some developing countries in a comprehensive global mitigation effort. Adaptation assistance would often be administered through a development assistance budget and agency. Adaptation assistance could be a means through which many countries met stated commitments to higher levels of development assistance.

GLOBAL RECESSION AND THE AUSTRALIAN POLICY DISCUSSION

Where does this all leave the Australian policy discussion, as two Senate Committees review the exposure draft of legislation to implement the emissions trading system?

The whole reason for Australian action is to encourage the emergence of an effective global mitigation effort. The first test that Australian policy must pass is that it does that well.

The Garnaut Climate Change Review made the case that it was in Australia's national interest to secure the strongest possible global mitigation agreement. This followed from Australia being the developed country likely to be most severely damaged by unmitigated or weakly mitigated climate change, and from analysis demonstrating that the benefits to Australia of strong global action, with Australia playing its full proportionate part, outweighed the costs. This case was accepted by the Government in the White Paper.

It is important that we indicate that Australia is prepared to play its full proportionate part in an ambitious global agreement on mitigation. The Government's White Paper in December proposes targets that indicate willingness to do our proportionate part in an international agreement of considerable but not of high ambition. Reduction of emissions to 15% below 2000 levels would correspond to our share in a global agreement to hold emissions at somewhere below 550ppm but above 500ppm.

It must be said that an effective agreement along these lines would be a considerable step forward. It would certainly be better than what now seems likely in an effective international agreement secured in September 2009.

The maximum reduction of 15% would not, however, allow us to play our proportionate part in an agreement to secure emissions concentrations at or below 450ppm which, if it were feasible, would correspond more closely to the Australian national interest. It would be wise for us to keep open the possibility of our participating in an agreement of high ambition, and in so doing, to encourage the emergence of such an outcome. An ambitious outcome might just become possible, as the dynamics of United States relations with China unfold in the initial stages of the Obama Presidency.

An effective international agreement on the allocation of emissions entitlements with high levels of ambition may not be feasible by December 2009. World leaders may decide to lock down agreement on some issues in December, but that delay in agreement on entitlements allocations across countries is better than compromised ambition.

Now is a good time to lock in place international agreement on a low-emissions technology commitment. Australia is in the process of greatly increasing its support for research on carbon capture and storage from fossil fuel combustion. The expansion of this commitment to greatly increased funding for research, development and commercialisation of low-emissions technologies in which Australia has national interest and comparative advantage has a logical place in recovery strategies. The areas in which Australia has national interest and comparative advantage in research would include biosequestration of several kinds, which is potentially transformative in both the cost and the potential extent of emissions reduction within Australia. Expansion of Australian effort now on the new technologies would allow Australia to play a part in movement towards the necessary global commitments.

Why go further at this difficult time, than to announce our willingness to play our full part in an ambitious global agreement should one be reached, and to increase the commitment to the emergence of superior low-emissions technology? For the other necessary elements in an effective mitigation policy, and especially for the pricing of carbon, why not wait until the financial and economic storms have passed, and we know the outcome of the Copenhagen and subsequent meetings?

In particular, why do we need to put a price on carbon now, when we seem to be on track now to meet our 2012, Kyoto targets?

These are all good questions.

There are several good reasons for locking in place now the structure of an Emissions Trading Scheme (ETS). A properly designed scheme is likely to deliver emissions reductions of specified extent with greater certainty and at lower cost than the alternatives. This is especially so when the opportunities for international trade in permits are considered. The ETS is a major institutional development. Time is required to iron out inevitable imperfections, before it is called upon to carry a heavy load of emissions reductions.

Good work is being done to put an ETS in place next year. There are advantages in making full use of that work. Making a start in 2010 makes it more likely that Australia will have an effective instrument for reducing emissions at relatively low cost when it is required, from 2013.

The Review recommended early introduction of the scheme, but allowing market participants to buy permits at a fixed price during the remainder of the Kyoto period, to the end of 2012. That would allow the regulatory agencies and market participants to become familiar with compliance and monitoring processes. Market participants would be assured of a low permit price for and beyond what we all hope will be the full duration of the crisis. Financial markets would not have to carry a heavy load until they had recovered from the stresses of 2008 and its aftermath.

The greatest difficulties of implementation of the ETS relate to 'compensation' for trade-exposed industries. The White Paper says that the principled approach to assistance put forward by the Review is correct in principle. It has been said, however, that the principled approach would be too difficult for the Australian authorities to administer. It is clear by now, if it was not clear before, that the *ad hoc* approach favoured by the White Paper is not plain sailing.

A low fixed price for permits to the end of 2012 would reduce the costs of distortions from *ad hoc* arrangements for compensating trade-exposed industries during the Kyoto period. The fixed price period would provide time for the introduction of a principled approach from 2013, whether on a national or an international basis. It would provide time for development of an approach within the WTO, if there were the will amongst major Governments to do so.

To delay introduction of the scheme altogether until it was needed to secure large reductions in emissions would carry high risks. The presence of the scheme would signal that, when the time arrived, the pricing of emissions through an ETS was to be the principal instrument of Australian mitigation policy.

Its absence would leave a vacuum. The high community interest in climate mitigation would make it certain that the vacuum would be filled. It is likely to be filled by manifold policy interventions, together with less potential for emissions reduction, and at much greater cost, than an ETS. This should be of concern not only for people who recognise that economic and environmental efficiency are complementary, but also for those who are interested solely in either economic efficiency or climate change mitigation.

The other type of reason for pressing ahead with introduction of an Australian ETS is that time is running out for a global agreement, with prospects for holding risks of dangerous climate change to acceptable levels.

Pressing ahead with the ETS would provide a signal to the international community that Australia was following through on the commitments made in Bali in December 2008. This would be helpful to global movement towards agreement in the approach to Copenhagen.

To go beyond amendments to improve the proposed ETS, and to defeat it comprehensively, would have global implications. It would be noticed in the United States debate about an ETS. It would raise doubts about Australia's capacity to join a strong international mitigation effort. This would be especially important amongst developing countries who heard the developed countries including Australia make strong commitments to lead on mitigation, first at Rio de Janeiro in 1992, then at Kyoto in 1997, and most recently December in Bali. It would set back progress towards a global agreement.

There are risks to the integrity of the ETS from the political economy of recession. Introducing the ETS with a low fixed price in an interim period, and avoiding the projection of recession-induced distortions in 'compensation' to trade-exposed industries beyond the Kyoto period, would avoid the greatest risks.

A TIME TO CONSERVE WHAT IS GOOD

I referred in the Climate Change Review and in the introduction to this address, to things falling apart when society receives a shock that is too large for human institutions to cope.

That is the ultimately conservative case both for strong climate change mitigation, and for strong action to restore high employment and rising incomes.

The financial and economic crisis and the now urgent challenge of climate change make this a time for careful analysis of policy choice on climate change and the economic crisis, and of their interaction with each other. It is a time for strong involvement in the policy process of a large centre of the polity, whose involvement is motivated by concern for the public interest.

Alas, it has recently been a time when the Australian discussion has been claimed disproportionately by the private interest, the ignorant, the myopic and the excessive.

Turning and turning in the widening gyre

The falcon cannot hear the falconer

Things fall apart; the centre cannot hold.

- WB Yeats 'The Second Coming'

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