A RESPONSE TO CLIMATE CHANGE

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Climate: critical tipping points

We are living in the initial stage of global warming. Let us consider what that means. At the end of 2008 Professor Ian Lowe, summing up recent findings of scientific bodies, pointed out: 'Until recently, methane levels in the air had been stable for a decade, but there has been a surge… The methane is coming from the Arctic. This is the sign that climate scientists have been warning about, a possible tipping point… Warming is releasing methane from tundra, increasing warming and causing further methane releases, possibly setting in train an unstoppable surge in temperature.' (*Age* 31 Dec. 08)

A year ago an international team of climate scientists identified a number of areas that are in danger of passing critical tipping points beyond which they will not recover. It may be already too late to save the Arctic sea ice. They suggest that in 50 years the Boreal forest and the Amazon rainforest could die if there is a 3 to 5 degree rise in temperature. (Lenton et al. 2008)

In December a paper from the Tyndale Centre for Climate Change at Manchester University argued that to give the earth an even chance of limiting warming to 2 degrees carbon emissions must peak by 2015 and decline to zero by around 2050. (Anderson & Bows 2008)

Denial

Let us now consider a few responses to this issue. The first response I want to consider is denial. To be sure outright climate scepticism is on the decline. But governments, while acknowledging climate change, are formulating policy as if the problem did not exist.

It is generally realised that the Australian Government's proposed carbon trading legislation is a completely inadequate response to the problem. Worse still, what are we to make of the following report in the *Guardian Weekly* (28 Nov. 08)? 'Europe took a step last week towards scrambling for the vast mineral riches of the Arctic that are being opened up by global warming.' In other words, the EU, Russia and the other countries in the Arctic region intend to benefit from the melting of Arctic ice, even though that will make the problem worse.

Meanwhile, there is no denial in the places that are starting to go under water: the Maldives, Tuvalu, Kiribati. While each week or so an outlying village on the Ganges delta folds up, as the people can no longer keep out the water at high tide.

So that everything may remain the same!

Now consider a rather different response from some of the powerful forces in the global establishment. I am thinking of those that accept the reality of global warming and accept that we must make changes. However the changes they want are those that ensure that, in the realm of political-economic power, everything remains the same.

Examples are clean coal, nuclear power and geo-engineering. In the current *Quarterly Essay*, Guy Pearse points out that, when you look at what is actually being invested, clean coal is not about cleaning up the atmosphere but rather cleaning the image of the coal industry. The term *geo-engineering* refers to proposals to subject the entire planet to a gigantic piece of engineering. The favoured scheme is to get sulphate aerosol particles into

the upper atmosphere in order to reflect back solar radiation into space. I will consider this further on.

On a much lighter note, we observe the various schemes by which you can pay for carbon offsets if you travel in an aeroplane. We witness here the rebirth of indulgences in secular form! I have been told that they are getting cheaper and, if you shop around, you can get an offset for less than five dollars.

Declare an emergency?

What then should be done? How do we respond to global warming in a meaningful way? Let us next consider a suggestion by some people in the environment movement that governments should declare a global emergency. A comparison is made with other emergencies in recent history, such as World War 2. These are characterised by a strong government role in planning, sufficient to achieve a rapid response that is beyond the capacity of society's normal functioning. (Spratt & Sutton 2008)

In current discussion the term 'emergency' is being used in two different ways. Sometimes it is simply a way of stressing the urgency of the issue. However, a problem arises when we shift to the proposal that the government 'declare a state of emergency'. It seems to me that while climate change requires urgent action there is something inappropriate in evoking the emergency paradigm. It has a military character to it, which hardly brings a sensitivity to nature or to people. Of course government planning is necessary and we need a strong public sector, but any declaration of emergency would probably result in them claiming new repressive powers, as in the case of terrorism. Such powers might well be used to suppress dissent, aimed for example at the government's environmental performance.

The prophetic stance

Writing on this topic in the February-March 2009issue of *Arena Magazine*, John Hinkson observes: 'The absence of social interpretation is a familiar tendency in environmental writing. The question of the social conditions of environmental destruction is hardly ever raised.' He points out that to make a difference we need 'to reach down into the cultural assumptions that we feel but barely know'. My paper is one attempt to address this absence.

In particular I want to reflect on the biblical tradition and consider a prophetic response to the issues of our time. According to Walter Brueggemann (2001): 'The task of prophetic ministry is to nurture, nourish and evoke a consciousness and perception alternative to the consciousness and perception of the dominant culture around us.'

It is a matter of 'addressing, in season and out of season, the dominant crisis that is enduring and resilient'. And he says that 'the alternative consciousness to be nurtured serves to energise persons and communities by its promise of another time and situation toward which the community of faith may move.'

So what the prophetic voice is calling for is a deep change in persons and in the culture—something that cannot be reached by evoking a sense of fear, guilt or emergency.

The prophetic stance is one that both challenges and empowers. First of all it must challenge the ruling system of values—the presuppositions that underlie our economic and technological system—and the institutions that uphold this system. It is a matter of getting at the roots of the global warming crisis.

The kingdom of God

For a model of the prophetic stance let us consider the beatitudes in the New Testament. Palestine at the time of Christ was the object of imperial oppression in which people were

impoverished. This was the context in which Jesus was teaching and acting. According to Luke (6:17-21):

> He came down with them and stood on a level place… with a great multitude of people… who came to hear him and be healed of their diseases… He lifted up his eyes on his disciples and said: 'Blessed are the poor, for yours is the kingdom of God.'

So here Jesus is telling the poor—those who have been marginalised and made destitute—that a quite different future is possible and that they themselves are the agents of that future. He is turning the ruling ideology on its head and proclaiming the seemingly impossible.

The term 'kingdom of God' was familiar to the people of the time, with their Old Testament formation, though it was understood in a number of quite different ways. What Jesus is proclaiming is a thorough transformation of persons and community, in which justice and compassion are central.

It was not a political revolution in any familiar sense. The Roman empire remained powerful for a few more centuries. But something new happened to those people. In spite of the harsh constraints they began to be agents of their own destiny.

They proclaimed their good news. They shared things in common. And through the details of daily life they witnessed to the incarnation: the fullness of the divine present in the world. They persisted, in season and out of season, even in the face of rejection and hostility.

Technology: characteristic phenomenon of our age

So what are we to make of *our* world and the ruling ideologies of today? To answer this we have to consider what is most characteristic of our age. I argue that it is our technology. To understand how this came about, we need to look back to the scientific revolution in Western Europe. The philosopher who did most to systematise the new outlook was René Descartes. In his *Discourse on method* he expressed the vision of his time: nature worked according to mechanical laws, and everything could be explained in terms of the arrangement and movement of its parts.

Our new mastery of the mathematical sciences gave us the power to modify and develop nature. It was therefore our destiny to use nature, to remodel it for its own development and for our human wellbeing and progress. We could, in Descartes' words 'thereby, make ourselves, as it were, masters and possessors of nature'.

Of course the implementation took time and it was not till the late 19th and the 20th centuries that we witnessed the growth of the complex and powerful technologies that we know today. One thinker who helped me understand the dynamics involved in these technologies was Jacques Ellul (1981).

For him modern technology is a system: a set of elements, all interrelated, reacting to one another and acting together as an integrated whole. The recognition that technology is a system is most important if we are to fully understand the modern world. In fact, the economic and state administrative systems are permeated and unified by technology. It is the characteristic phenomenon of our age.

A key feature of the technological system is self-propelled growth. At any moment the system gives rise to countless possibilities of innovation. With microelectronics, for example, each invention immediately suggests further developments. Current favourites include the internet, the mobile phone and the anticipated high-speed broadband.

The growth of innovation has, unfortunately, been accompanied by growth in overall energy demand. Many of the more recent technological developments could in principle be used to reduce the heavy environmental impacts of previous practice. Applied to public transport and the use of offices at home they could reduce car dependence; while electronic communications could in principle also reduce the use of paper.

However, in practise such potential benefits have generally not eventuated; the wastage of energy and forest products has continued unabated. Our present technology remains one of high energy use. And so it continues to give rise to global warming.

New frontiers

A new frontier is genetic engineering. The information theory guiding computer systems is now being applied to biological systems, and the cracking of the 'genetic code' is seen as equivalent to unravelling a computer program.

Descartes' dream of mastery over nature, through the understanding of its mathematical character, appears to reach fulfilment in this marriage of engineering and biology. However, his notion of the world as a complex machine is replaced with the new concept of life as information. Jeremy Rifkin (1998) comments on the implications of this:

> By resolving structure into functions and reducing function to information flows, the new cosmology all but eliminates the idea of species integrity. Living things are no longer perceived as birds and bees, foxes and hens, but as bundles of genetic information. All living beings are drained of their substance and turned into abstract messages. Life becomes a code to be deciphered.

Another new frontier is the proposed geo-engineering. As I have mentioned, one proposal is to get sulphate aerosol particles into the upper atmosphere in order to reflect back solar radiation into space. This would be the first attempt to subject the entire earth to human and technological control. This assumes that it is *appropriate* to exercise control over the entire natural world and that in the process we can improve it. But how can we be sure about what is best for the earth and how can we foresee all the consequences?

And what if the major powers had different ideas about the optimum temperature? Wouldn't that open up the earth and the atmosphere to military tensions—in other words climate could become a weapon of cold or hot war? And while the aerosols lasted, apparently, the sky would not be blue.

The ruling values of today: mechanistic view

What are the values that guide the development of the technological system? Many social forces interact when decisions about innovation are being made. Corporations are motivated by the goals of profit and growth. Governments tend to enhance their own power. The genuine popular appeal of ever changing technologies is also important. These various social factors—profit, state power and consumerism—tend to be mutually reinforcing in the support of technological growth.

While recognising the interrelationship between all the factors, Ellul argues that it is the broadly based affinity for technology itself that is the most central and pervasive value. Thus our culture is pervaded by 'an intellectual or a spiritual attitude consistent with the demands of technology'.

The technological system with its underlying mechanistic view—that was first spelt out by Descartes—has become a prime source of values. The growth of technology, with its increasing sophistication and insertion into new aspects of life, is regarded by many as a desirable goal in itself.

Many even take it for granted that a technological development that is supported by substantial research and investment *must* go ahead, that this represents progress, which must not be opposed. One has only to start a discussion on nuclear power or genetic engineering, for example, to be told that it must go ahead: 'there is no alternative'. The path of technical or mathematical order is thus allowed to shape society and the natural world.

Lilies of the field

The prophetic task is to reveal and challenge these hidden assumptions that are taken for granted—then to open up the alternatives, to dream of a different future. Looking again to the New Testament, we hear in the 'sermon on the mount' (Matthew 6:28-34):

> And why are you anxious about clothing? Consider the lilies of the field, how they grow; they neither toil nor spin; yet I tell you, even Solomon in all his glory was not arrayed like one of these... Therefore do not be anxious about tomorrow, for tomorrow will be anxious for itself. Let the day's own trouble be sufficient for the day.

Many have failed to see what the gospel is teaching us here. It seems too simple and commonplace to be noticed. Yet here is a radically different consciousness. We are being invited first of all to look, to see what we haven't noticed—the lilies of the field.

They are the clue, the key to the kingdom of God, to the different vision—that of a natural world in which we can feel at home, without anxiety and without any need for domination, but with a sense of what is sufficient.

We wake up and see the immediate world in a new way, in all its richness and potential. Attention is focused on the present moment and the local place. Only here can we encounter the truth and engage in this alternative reality, the kingdom.

Today much is at stake. In the ruling values of our society—the values of the global elite—the natural world is disvalued. It is seen as a set of resources to be developed. The lack of serious policies about global warming, by governments such as our own, reflects a lack of seriousness about the natural world.

With the suggested geo-engineering, even the entire earth would be open to our manipulation. But the gospel points us in a different direction; even the inconspicuous grass of the field is of value. Furthermore, it points beyond itself to the divine presence among us, in the creation and the incarnation.

The local scale

Modern western culture has by no means lost its memories of the past nor quite forgotten the gospel message. The organic alternative to the mechanistic view has been expounded by various writers and expressed by artists. In this alternative view it is not possible to understand the world just in terms of material particles and their motions or to reduce living organisms to mechanisms. (Birch & Cobb 1981)

Of the wide range of technologies available to us it is important to make choices, to decouple the elements of the technological system—to develop some technologies and reject others. The concept of appropriate technology, made popular by Schumacher, has provided practical guidelines. From now on our technologies will have to be in harmony with nature—grounded in an ecological matrix and deeply attuned to it.

To minimise global warming, it is necessary to reduce the consumption of fossil fuels to a small fraction of present use. So our energy will have to come from renewable sources. Now these cannot provide us with energy at anything like the present scale of use. This applies particularly to transport. A sustainable future will involve a more localised lifestyle and economy.

The cultural change reflecting the organic view implies a renewed engagement with our local landscape and its ecosystems. We have to develop a greater sense of the place we live in. Over the past twenty years, I have been engaged in revegetation projects and the monitoring of plant and animal species. With time I came to recognise the deeper significance of this work.

The useless tree

I discovered that the awareness of the natural world, in all its immediacy, takes us on a beautiful journey. And every patch of earth has its message for us. Consider one episode in my book, *Reading the land*—a September walk in forest on Mt Wellington, French Island:

This forest contains some old Messmate trees and a variety of shrubs, yet it has an open, spacious aspect. Nearly all of the plants were in flower. A number of Honeyeaters, of several species, were feeding on the abundant nectar. Many Golden Whistlers were singing and Brown Thornbills calling. I was surprised to find that patches of ground churned up by Echidnas seem to favour wildflowers rather than shrubs or grasses. For example, Button Everlasting and various Rice-flowers are conspicuous in such places.

It is good to be in such an ecosystem, where we can sense our relationship with all these creatures and the intricate web of connections. We are drawn in to explore deeply this community and its landscape.

An old live Messmate, two metres in diameter, with broken branches, escaped being logged. It had no use in the economy, yet it is still there, demanding our quiet acceptance just as it is.

When we engage with our local surroundings, we become truly familiar with our own home. Each place has its own special character, its own mystery—that we can explore, yet never know completely. Here we begin the deep cultural change that the world needs. Through our simple observations and activities we are saying that this change is urgent.

The prophetic task

The crisis of global warming is something we never previously imagined. There are many urgent tasks. Some of these are political—directed to getting sound policies and practice on carbon emissions, water and forest management.

Along with action in these fields there is a task that is even more urgent, because it is lacking. That is the task of searching the cultural causes of the present predicament and expressing a vision in a spiritual depth appropriate to the decisions ahead. I think that our main role is this prophetic one: to engage in critique of the established worldview and to show that a different and abundant life is possible.

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