



ONE CHRISTIAN PERSPECTIVE ON CLIMATE CHANGE

Cardinal George Pell

The Global Warming Policy Foundation

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One Christian Perspective on Climate Change

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Cardinal Pell was ordained a Catholic priest for the Diocese of Ballarat in St Peter's Basilica, Rome, in 1966. In 1987 Cardinal Pell was ordained Auxiliary Bishop of the Archdiocese of Melbourne, and in 1996 he was appointed Archbishop of Melbourne. He was appointed Archbishop of Sydney in 2001, and elevated to the Sacred College of Cardinals in 2003.

Welcome Address

Dr Benny Peiser

Director of the Global Warming Policy Foundation

Your Eminence, Cardinal George Pell,

Distinguished Guests,

Ladies and Gentlemen,

It is my great pleasure to welcome you tonight to the Global Warming Policy Foundation's second Annual Lecture.

It is my particular honour to welcome His Eminence, Cardinal George Pell, the Archbishop of Sydney, and his distinguished guests.

Allow me also to extend a word of welcome to the ambassadors and diplomats from more than a dozen nations.

Ladies and Gentlemen,

The climate debate is much more than just a battle over scientific theories and environmental statistics. At its core is the question of which approach our societies should take in view of a serious concern that could possibly turn out to be a real problem some time in future.

What rational societies and policy makers need to ask is: what are the most reasonable and the most cost-effective policies that neither ignore a potential problem that may possibly materialise in the distant future nor the actual economic costs of such policies here and now.

Fundamentally, these are social, ethical and economic

questions that cannot be answered by science alone but require careful consideration by economists and social commentators.

Because climate policies are having a detrimental impact on many families, not least the poorest in society, we should listen carefully to the social and ethical concerns raised by Cardinal Pell.

After all, it is the poor who are paying the price for expensive green energy policies. Heating and electricity bills are going up and fuel poverty is increasing in the name of saving the planet.

It is quite apparent that over the last 12 months there has been a huge public backlash against these unpopular policies, in particular in Britain but also in other countries.

Instead of using the cheapest form of energy which would help the poorest, who are increasingly struggling to pay their bills, the government is forcing us to subsidise highly-expensive green energy.

Ever since we launched the Global Warming Policy Foundation two years ago, we have argued that Britain's unilateral climate policy is indefensible, both socially and economically and that it should be suspended in the absence of an international agreement.

Today, our realistic concern and assessment has finally been acknowledged by the government. In fact, the Chancellor George Osborne has recently promised that Britain will no longer be bound by unilateral policies that cut CO2 emissions in Britain faster and deeper than other countries in Europe. We certainly welcome the government's new realism which, in many ways, reflects the public's growing scepticism.

This change in public mood is likely to have other consequences too. In this week's issue of Church Times, the weekly journal of the Church of England, Peter Forster, the

Bishop of Chester and one of our Trustees and who, I am happy to say, is with us tonight in the audience, wrote:

“The Churches have tended to follow climate alarmism with uncritical enthusiasm, but it is now time to take stock. The moral issues surrounding climate policy, as well as the underlying scientific and economic issues, are much more complex than is usually acknowledged. It is time for the Churches to recognise this, and to lead a debate which helps our society to a more sensible set of policies.”

I believe that nobody has done more to raise these awkward questions within the Catholic Church than Cardinal Pell. It is an irony of our bewildering times that it is a courageous churchman who dares to question one of our society’s most entrenched dogmas – but that is exactly what he will do tonight.

Ladies and Gentlemen,

Please join me in welcoming our distinguished speaker, His Eminence Cardinal George Pell.

One Christian Perspective on Climate Change

Cardinal George Pell

Archbishop of Sydney

Let me begin by thanking the Global Warming Policy Foundation for the invitation to deliver this lecture. It came as a surprise and I truly appreciate the honour. However I am more grateful for the existence of the Foundation and its sane and important contributions in this debate.

A word or two about the structure of the talk, because I examine the issue from a number of directions reflecting my own expertise. The central part discusses the scientific claims and demonstrates, I hope, that a scientific layman can cover and identify the basic issues.

After a brief theological introduction I explain why I chose to write on global warming, while the central section is followed by a brief discussion of the propaganda wars, a longer discourse on the existence of the Medieval Warm Period, and concludes with some public policy questions and reflections.

Introduction

In the Book of Genesis we read that God “regretted having made human-beings”¹, such was their wickedness and anarchy and decided to send an immense flood “to destroy them and the earth”.²

1 Gen. 6:5-8.

2 Gen. 6:13.

However God chose Noah “an upright man”³ to build an ark and enter it with his wife and family and two animals of every kind. The ark survived the flood and Noah was commanded “to breed, multiply and fill the earth”, reassured by God's promise that “never again shall all living things be destroyed by the waters of a flood”.⁴

Many generations later “when the whole world spoke the same language”⁵, the descendants of Noah on the Babylonian plains, “decided to build a city and a tower with its top reaching heaven”⁶ in order to make a name for themselves.

God however was displeased by their ambitions, so he intervened to destroy their linguistic unity, and they could not understand one another. This unsuccessful tower was called Babel.

The extreme-weather event of a gigantic deluge was already described in Mesopotamian mythology in 2000 BC, and the Babylonian epic Gilgamesh tells of his surviving such a flood and becoming a god.

We have the ark or the tower of Babel as alternative symbols of our attempts to survive or perhaps escape from our natural predicaments.

Leon R. Kass is a brilliant and controversial polymath, recently retired from the University of Chicago. He has written an intriguing book on Genesis, entitled *The Beginning of Wisdom*. I want to quote briefly from his understanding of the tower of Babel.

The tower presupposes the city, which Aristotle celebrates, but Genesis views with suspicion. The metaphor of the tower is

³ Gen. 6:9.

⁴ Gen. 9:7-11.

⁵ Gen. 11:1.

⁶ Gen. 11:4.

ambiguous, but could be seen as a presumptuous attempt to control or appropriate the divine.

Kass sees God's intervention as only highlighting the inevitable failure of an attempt to impose a single world-view, "the all-too-human, prideful attempt at self-creation"⁷ and sees the emerging differences and opposition, implied in the diversity of language and migration to different lands "as the key to the discovery of the distinction between error and truth, appearance and reality, convention and nature".⁸ As do I.

Not surprisingly Kass believes that in today's Western world "the project of Babel has been making a comeback Science and technology are again in the ascendancy, defying political boundaries en route to a projected human imperium over nature".⁹ Kass asks "Can our new Babel succeed?"¹⁰ We should ask whether our attempts at global climate control are within human capacity, (that is, the projected human imperium); or on the other hand, are likely to be as misdirected and ineffective as the construction of the famous tower in the temple of Marduk, Babylon's chief god.

Science and technology have already achieved considerable mastery over nature, and massive local achievements. But where is the borderline separating us from what is beyond human power? Where does scientific striving become uneconomic, immoral or ineffectual and so lapse into hubris? Have scientists been co-opted onto a bigger, better advertised and more expensive bandwagon than the millennium bug fiasco? At one extreme we have no evidence at all that we could prevent the return of another Ice Age, but might we be able to slow the rise of the oceans (as President-to-be Obama

7 Leon Kass, *The Beginning of Wisdom: Reading Genesis* (Free Press, New York: 2003), 236.

8 *Ibid.*, 238.

9 *Ibid.*, 242.

10 *Ibid.*, 249.

announced when he had won the Democratic nomination¹¹); or limit this rise in sea levels by making the “deep cuts in global emissions required according to science . . . to hold the increase in global temperatures below 2 degrees Celsius”, as the Copenhagen Accord famously and fatuously claimed was necessary in 2009¹²? Former Prime Minister Gordon Brown claimed at Copenhagen that such measures had to be pursued, because the “hurricanes, floods, typhoons and droughts that were once all regarded as acts of an invisible God are now revealed to be also the visible acts of man”¹³.

Climate change is not a religious question or problem. My main purpose in quoting so extensively from the Genesis accounts of the flood and the tower of Babel was to establish that human ambitions should be limited, because our powers are also limited. And we recognize these limits through reason and experience. We will pay for our excesses.

We can only attempt to identify the causes of climate change through science and these causes need to be clearly established after full debates, validated comprehensively, before expensive remedies are imposed on industries and communities. This is the way both science and democracy are intended to function, and is one path to truth.

Why might a Catholic bishop comment?

We might ask whether my scepticism is yet another example of religious ignorance and intransigence opposing the forward

11 “ . . . I am absolutely certain that generations from now, we will be able to look back and tell our children that . . . this was the moment when the rise of the oceans began to slow and our planet began to heal . . .”. Speech by Barack Obama on winning the Democratic Party nomination for President, St Paul, Minnesota, 3 June 2008 <<www.realclearpolitics.com>>.

12 United Nations Framework Convention on Climate Change, Report of the Conference of the Parties on its fifteenth session, held in Copenhagen from 7 to 19 December 2009, FCCC/CP/2009/ 11Add.1, 30 March 2010 <<<http://unfccc.int>>>.

13 “Copenhagen climate summit: Future generations will blame us, Brown warns”, Daily Telegraph (London), 17 December 2009 <<www.telegraph.co.uk>>.

progress of science as is alleged in the confrontations between Galileo and the Papacy in the early seventeenth century, when the Church party on the evidence of scripture insisted that the sun moved around the earth; or the almost equally celebrated debate between Bishop (Soapy Sam) Wilberforce and T. H. Huxley in 1860 at Oxford on the topic of Darwinian evolution, when the claim that man is made in God's image was seen as contradicting evolution.

Galileo's house arrest is indefensible and Pope John Paul II has acknowledged the suffering he endured from his Church,¹⁴ although Galileo's provocative claims on theology sharpened the tensions. John Paul II acknowledged that "the error of the theologians of the time, when they maintained the centrality of the earth, was to think that our understanding of the world's structure was, in some way, imposed by the literal sense of Sacred Scripture".¹⁵ But quoting St Augustine, the Pope observed, that "if it happens that the authority of Sacred Scripture is set in opposition to clear and certain reasoning, this must mean that the person who interprets Scripture does not understand it correctly. It is not the meaning of Scripture that is opposed to the truth, but the meaning which he has wanted to give to it"¹⁶. One of the lessons to be drawn is that "the different branches of knowledge call for different methods" so that they may "bring out different aspects of reality"¹⁷.

The Oxford debate has also expanded into legend. Darwin himself conceded that Wilberforce's 18,000-word review of *The Origin of Species* (1859) was "uncommonly clever", and

14 John Paul II, Address to the Plenary Session of the Pontifical Academy of Sciences, 10 November 1979; in *Papal Addresses to the Pontifical Academy of Sciences 1917-2002 and to the Pontifical Council for Social Sciences 1994-2002* (Pontifical Academy of Sciences, Vatican City: 2003), 241.

15 John Paul II, Address to the Plenary Session of the Pontifical Academy of Sciences, 31 October 1992; in *Papal Addresses to the Pontifical Academy*, 342

16 *Ibid.*, 340-41.

17 *Ibid.*, 342.

made “a very telling case against me”¹⁸; so much so that Darwin made changes in a later edition of the book to take account of Wilberforce's comments. At the end of this debate “many thought the bishop had the better of it, and even many committed Darwinians thought it at most a draw”.¹⁹

There is no contemporary evidence to show that Wilberforce actually asked his notorious question to Huxley about his simian ancestry on his grand-mother's or grand-father's side. But the question, real or fictitious, has been a propaganda boon for the anti-religious forces for decades.

At a recent meeting of the priests' council in Sydney one parish priest asked me why I was commenting publicly on the role of carbon dioxide in the climate, because in the past the Church had made a fool of herself on a number of occasions.

I replied that I was well aware of at least some of these instances and that one reason why I was speaking out was to avoid having too many Christian leaders repeating these mistakes and to provide some balance to ecclesiastical offerings.

I first became interested in the question in the 1990s when studying the anti-human claims of the “deep Greens”, so I had long suspected that those predicting dangerous and increasing anthropogenic global warming were overstating their case. During the years 2008-09 it was dangerous for an Australian politician to voice dissent unless he was from a country electorate. Opponents were silenced. As I was not up for re-election and I suspected the Emperor had few if any clothes, I made a few more small public statements, never from the pulpit, never at a large public meeting.

¹⁸ Darwin made these comments in letters to J. D. Hooker and Charles Lyall respectively. Cited in Rodney Stark, *For the Glory of God: How Monotheism led to Reformations, Science, Witch-hunts, and the End of Slavery* (Princeton University Press, Princeton: 2003), 188-89.

¹⁹ *Ibid.*, 188.

Mine is not an appeal to the authority of any religious truth in the face of contrary scientific evidence. Neither is it even remotely tinged by a post-modernist hostility to rationality. I reject emphatically the claim that most science can be dismissed or at least downgraded as socially constructed by the great and the powerful, although the enduring power of a paradigm, of established patterns of reasoning can help the self-interested to distort science for a time. My appeal is to reason and evidence and in my view the evidence is insufficient to achieve practical certainty on many of these scientific issues. Much less is there validation to justify huge public expenditure on these phantoms.

What the science says:

Methodology

Recently Robert Manne, a prominent Australian social commentator, following fashionable opinion, wrote that “the science is truly settled” on the fundamental theory of climate change: global warming is happening; it is primarily caused by the emission of greenhouse gases, especially carbon dioxide and it is certain to have profound effects in the future.²⁰

These fundamentals are distinct, he acknowledges, from scores of other different questions. The author is secure in these fundamentals, dismayed and embarrassed by those who cannot make these distinctions especially as “the future of the Earth and of humanity are at stake.” Opponents are accused of “ideological prejudice and intellectual muddle”.²¹

His appeal is to the “consensual view among qualified scientists.” This is a category error, scientifically and philosophically. In fact it is also a cop-out, a way of avoiding

²⁰ Robert Manne, “The truth is out there”, Sydney Morning Herald, 3-4 September 2011.

²¹ Ibid.

the basic issues.

Recently, worldwide, almost as though at the direction of some central authority, supporters of anthropogenic global warming have suddenly begun to maintain that instead of a consensus of scientific opinion there is a “consensus of evidence”.

Journalists questioning a speaker at the National Press Club in Canberra earlier this year came out with this phrase, and on the other side of the world, an environmental campaigner used it at a conference in rural Oxfordshire this autumn.

What is important and what needs to be examined by lay people as well as scientists is the evidence and argumentation which are adduced to back any consensus. The basic issue is not whether the science is settled but whether the evidence and explanations are adequate in that paradigm. We should remember that much money is sometimes lost by following consensus. Moreover, a strong consensus for eugenics existed in the twentieth century until World War Two.

I suspect many educated people are like the insurance brokers working in this area, whom I heard of recently, who confessed they had never even begun to examine the evidence for themselves. I fear too that many politicians have never investigated the primary evidence.

Much is opaque to non-specialists, but persistent enquiry and study can produce useful clarifications, similar to the nine errors identified by the British High Court in Al Gore's propaganda film *An Inconvenient Truth*.²²

²² *Dimmock v Secretary of State for Education and Skills* [2007] EWHC 2288 (Admin). The court held that there was insufficient evidence to support Gore's claims that human-induced climate change had caused the disappearance of snow on Mt Kilimanjaro, the drying up of Lake Chad, Hurricane Katrina, and the bleaching of coral reefs. His claim that global warming will shut down the Ocean Conveyor in the future was found “very unlikely”. His claim that it will cause all the ice of Greenland to melt and sea levels to rise by seven metres in the near future was found to be “distinctly alarmist” and “not in line with the scientific consensus” (because it would take millennia for Greenland's ice to melt and release that much water). Graphs Gore uses in the film to show an exact fit between rising CO₂ and rising temperatures were found “not [to] establish what Mr Gore asserts”. Finally, the court held that there was no

The complacent appeal to scientific consensus is simply one more appeal to authority, quite inappropriate in science or philosophy.

Thomas Aquinas pointed this out long ago explaining that “the argument from authority based on human reason” is the weakest form of argument²³, always liable to logical refutation.

While explanations and the outputs of climate models can be compared usefully to past weather patterns, climate models for the future can only be validated retrospectively. Recent weather patterns in Britain, Queensland and New South Wales provide no grounds for excessive confidence in the predictive ability of climate models. Quite the contrary.

Underlying these models, we have a fundamental scientific problem, which has been usefully set out by Lord Monckton, quoting Edward Lorenz, the founder of chaos theory. In 1963 Lorenz wrote that in the instability of a non-periodic flow (and the evolution of the climate is ostensibly aperiodic) “prediction of the sufficiently distant future is impossible by any method, unless the present conditions are known exactly”.²⁴

Lorenz continued that “in view of the inevitable inaccuracy and incompleteness of weather observations, precise, very-long range weather forecasting would seem to be non-existent”²⁵, because our knowledge both of the initial state of the climate system and of how the climate responds to

evidence to support Gore's claims that human-induced global warming had forced the evacuation of Pacific nations to New Zealand, or caused polar bears to drown.

23 St. Thomas Aquinas, *Summa Theologica*, I, 1, 8 ad 2. Thomas is answering a question about “Whether sacred doctrine is a matter of argument”. While affirming that “the argument from authority based on human reason is the weakest”, in matters of sacred doctrine “the argument from authority based on divine revelation is the strongest”. Thomas's point is that while it is rational to accept the authority of an argument based on human reason, this only applies in the absence of any rational case to the contrary.

24 Edward N. Lorenz, “Deterministic nonperiodic flow”, *Journal of the Atmospheric Sciences* (1963) 20, 130-141; cited in Christopher Monckton of Brenchley, “Climate Sensitivity Reconsidered”, *Physics and Society*, 37:3 (July 2008), 7.

25 *Ibid.*

changes in external forces is incomplete.²⁶

It is not generally realized that in 2001 at least, one of the IPCC Third Assessment Report's Working Groups agreed: "In climate research and modelling, we are dealing with a coupled, non-linear, chaotic system, and therefore that the long-term prediction of future climate states is not possible".²⁷

Note that it is not just weather but also "future climate states" that are not reliably predictable in the long term. As Mark Twain said, "Climate is what you expect: weather is what you get." Neither is predictable.

A friend also pointed out to me the views of Vladimir Arnold, one of the twentieth century's greatest mathematicians, on weather forecasting.

Arnold helped to explain why the systems around us work, how fluids flow. Like Lorenz, he found that small changes had an immense impact on outcomes. For him long-range weather forecasting was effectively impossible, because small events could have dramatic, unforeseen consequences.²⁸

Professor Bob Carter, Dr. David Evans, Professor Stewart Franks, and Dr. William Kininmonth have succinctly stated the case for the sceptics, a case which so far has been completely ignored by the Australian media and political class. The conclusions of the 2007 Fourth Assessment Report of the UN's Intergovernmental Panel on Climate Change (IPCC), they wrote, are "essentially reliant on computer modelling and lack empirical support"; its speculations on "the baleful influence of atmospheric carbon dioxide rest almost exclusively on

26 Christopher Monckton of Brenchley, "Is CO2 mitigation cost effective?" Lecture to the Prague School of Economics (typescript), May 2011, 17.

27 Intergovernmental Panel on Climate Change, *Climate Change 2001: The Scientific Basis. Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change*. Eds. J. T. Houghton, Y. Ding, D. J. Griggs, M. Noguer, P. J. van der Linden, X. Dai, K. Maskell & C. A. Johnson (Cambridge University Press, Cambridge, & New York: 2001), Chapter 14, Section 2.2.2.

28 Obituary of Vladimir Arnold, *Daily Telegraph* (London), 12 July 2010.

unvalidated computer modelling that rests on unsubstantiated assumptions about the amplification effects of water vapour, clouds and other unverifiable factors." The predictions based on these models "have been wrong for the last 23 years"²⁹. During the decade since 2001 carbon dioxide has increased by five per cent, but the atmosphere has failed to warm.³⁰

The influence of various solar mechanisms (such as sunspot activity) and changing ocean circulation, which are poorly understood, are "omitted from the climate models"³¹, as is the influence of major volcanoes such as the occasional mighty eruption of Krakatoa or Mount Saint Helens or the continuing eruptions deep in the ocean, brought to public attention by Professor Ian Plimer.³²

While causal physical principles such as the greenhouse effect are known, much else has not been established definitively. Such uncertainties include the already-mentioned water vapour multipliers, sunspot activities and cloud formation, as well as deforestation, soil carbon and aerosols. We should also add variations of the earth's orbital parameters, asteroid and comet impacts, and variations in cosmic rays.³³

Claims of atmospheric warming often appear to conflict and depend critically upon the period of time under consideration. All the following information is correct.

- The earth has cooled over the last 10,000 years since the Holocene climate optimum.

29 Bob Carter, David Evans, Stewart Franks & William Kininmonth, "The Critical Decade: Scientific audit of a report from the Climate Commission The Critical Decade: Climate science, risks and responses (May, 2011)" Part I – Introduction, Discussion and Conclusions, Quadrant Online <<www.quadrant.org.au>> 30 May 2011.

30 Carter et al, Part II – Science Audit.

31 Ibid.

32 Ian Plimer, *Heaven and Earth: Global Warming the Missing Science* (Connor Court, Ballan: 2009) 207-29.

33 William Happer, "The Truth about Greenhouse Gases", *First Things*, June-July 2011 (n214), 35.

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- The earth has cooled since 1,000 years ago, not yet achieving the temperatures of the Medieval Warm Period.
 - The earth has warmed since 400 years ago after the Little Ice Age three centuries ago.
 - The earth warmed between 1979 and 1998 and has cooled slightly since 2001³⁴.

Continuing work is being done to establish the reliability of temperature readings, to establish that they are not being distorted by, for example, proximity to large cities³⁵.

Global temperature reached a twentieth century high in 1998, corresponding to the strong El Nino episode of that year. Subsequently, the continued warming anticipated by the IPCC did not eventuate, and, after first reaching a plateau, by 2010 temperature had cooled slightly. The failure to warm was accompanied by dominant La Nina conditions, and by a period of solar sunspot quietude.

The following facts are additional reasons for scepticism.

- As the theory of climate is immature, computer models predict future climate according to the many uncertain assumptions programmed into them.³⁶
- Multiple lines of evidence show that in many places most of the 11,700 years since the end of the last Ice Age were warmer than the present by up to 2 degrees Celsius.³⁷
- The Central England Temperature Record is the oldest in the world, dating back to 1659. This shows that between 1695 and 1730 the temperature in England rose by 2.2 degrees

34 Carter et al, "The Critical Decade", Part II - Science Audit.

35 Plimer, *Heaven and Earth*, 384-87; & R. R. McKittrick & P. J. Michaels, "Quantifying the influence of atmospheric surface processes and inhomogeneities on gridded global climate data", *Journal of Geophysical Research*, December 2007.

36 Robert M. Carter, *Climate: The Counter Consensus* (Stacey International, London: 2010), Chapter 5.

37 Cf. Monckton, "Is CO2 mitigation cost effective?", 31.

Celsius after the seventy year period “of record-breaking solar inactivity known as the Maunder Minimum”. That rapid warming, unparalleled since, occurred long before the Industrial Revolution.³⁸

- From 1976-2001 “the global warming rate was 0.16 degrees Celsius per decade”, as it was from 1860-80 and again from 1910-40.³⁹
- The ice-core records of the cycles of glacial and interglacial periods of the last one million years or so show a correlation between CO₂ levels and temperature, but the changes in temperature preceded the changes in CO₂ and cannot, therefore, have been caused by them. Carbon dioxide was probably out-gassed from the warming oceans and vice versa when they cooled.⁴⁰
- The atmospheric concentration of carbon dioxide is generally the same everywhere, but temperature changes are not the same everywhere.⁴¹

A recent article in the Wall Street Journal highlighted another possible factor.⁴² Since at least the 1970s scientists have been speculating on the relationship between cosmic rays, solar activity and clouds and a 1991 paper showed a close historical correlation among those three factors since 1979.

Despite the political sensitivity and years of discouragement, in 2009 Jasper Kirkby began experiments at CERN, the Franco-Swiss home of the European Organization for Nuclear Research, in an artificial cloud chamber to discover whether subatomic particles from outer space, cosmic rays, are enhancing cloud formation. The results are not yet conclusive

38 Ibid., 30.

39 Ibid., 33.

40 Happer, “The Truth about Greenhouse Gases”, 35.

41 Timothy Curtin, “The Garnaut Review’s Omission of Material Facts” (typescript) 2011, 11.

42 “Anne Jolis, “The Other Climate Theory”, Wall Street Journal, 7 September 2011.

but the rays appear to be enhancing the formation rates of pre-cloud seeds by a factor of 10, though it is only the first step in cloud formation.

The Battle for Public Opinion

As a bishop who regularly preaches to congregations of every age and at widely different levels of prosperity and education, I have some grasp of the challenges in presenting a point of view to the general public. This helps me to understand the propaganda achievements of the climate extremists, at least until their attempted elimination of the Medieval Warming and then Climategate. I was not surprised to learn that the IPCC used some of the world's best advertising agencies to generate maximum effect among the public.⁴³

Since the climate had been changing — as Professor Plimer puts it, ever since that first Thursday 4,567 million years ago when the Earth began and the atmosphere began to form — I am not a “denier” of climate change and I am not sure whether any such person still exists.

Therefore the term “climate change denier”, however expedient as an insult or propaganda weapon, with its deliberate overtones of comparison with Holocaust denial, is not a useful description of any significant participant in the discussion.

In the 1990s we were warned of the “greenhouse effect”, but in the first decade of the new millennium “global warming” stopped. The next retreat was to the concept of “anthropogenic global warming” or AGW; then we were called to cope with the challenge of “climate change”. Then it became apparent that the climate is changing no more now than it has in the past. Seamlessly, the claim shifted to “anthropogenic climate disruption”.

⁴³ Carter, *Climate: The Counter Consensus*, 144-45.

These redefinitions have captured the discourse. Who would want to be denounced and caricatured as a “denier”?

Another more spectacular example of this successful spin is the debate on “carbon footprints”, on the advisability or not of a “carbon tax”. We all know that it is the role of carbon dioxide in climate change which is in question, not the role of carbon, but we continue to talk about carbon. The public discussion is almost entirely conducted in terms of “carbon footprints” and a “carbon tax”, provoking colourful but misconceived images of carcinogenic burnt toast and narrow, Dickensian chimneys being cleaned by unhealthy young chimney sweeps. It is brilliant advertising. But it is untrue.

My suspicions have been deepened over the years by the climate movement’s totalitarian approach to opposing views, their demonising of successful opponents and their opposition to the publication of opposing views even in scientific journals. As a general rule I have found that those secure in their explanations do not need to be abusive. Churchill claimed that in wartime “truth is so precious she should always be attended by a bodyguard of lies”⁴⁴ : but this approach should be anathematised in science.

I have discovered that very few people know how small the percentage of carbon dioxide is in the atmosphere.

Carbon dioxide levels in the atmosphere during the twentieth century are estimated to have risen from 280ppmv to about 390ppmv today, an increase of forty per cent. Yet today’s total CO₂ concentration represents less than one-twenty-fifth of one per cent.

While opinions vary, one geochemist has calculated that only

44 “‘In war-time,’ I said, ‘truth is so precious she should always be attended by a bodyguard of lies.’” Churchill made this remark in a discussion of Operation Overlord with Stalin (who was delighted by the comment) at the Teheran Conference, November 30, 1943. See Winston S. Churchill, *The Second World War: Volume V, Closing the Ring* (1952), 338.

about five per cent of present atmospheric carbon dioxide is derived from burning fossil-fuels; that is, just 19 parts of CO₂ per million parts of atmosphere.⁴⁵

I can understand why the IPCC public relations advisers did not ensure that these statistics were presented vividly to the public, because they are no stimulus to alarm! In fact they seem to be a well-kept secret outside scientific circles.

Despite the fact that Wikipedia's entry on air pollution now includes carbon dioxide emissions in a list of "greenhouse gas pollutants"⁴⁶, CO₂ does not destroy the purity of the atmosphere, or make it foul or filthy (the Oxford Dictionary definition of a pollutant). It is not a pollutant, but part of the stuff of life.⁴⁷

As greenhouse operators recognize, plants produce better fruit and flowers when CO₂ is increased to 1000ppmv. Californian orange groves are now thirty per cent more productive than 150 years ago,⁴⁸ and some of this improvement is attributable to the additional CO₂ in the air. CO₂ is not a pollutant. It is plant food.

Animals would not notice a doubling of CO₂ and obviously plants would love it. In the other direction, humans would feel no adverse effects unless CO₂ concentration rose to at least 5000 ppmv, or almost 13 times today's concentration, far beyond any likely future atmospheric levels.

A final point to be noted in this struggle to convince public opinion is that the language used by AGW proponents veers towards that of primitive religious controversy. Believers are

45 T. V. Segalstad, "The distribution of CO₂ between atmosphere, hydrosphere, and lithosphere; minimal influence from anthropogenic CO₂ on the global 'Greenhouse Effect'", in J. Emsley, (ed.), *The Global Warming Debate: The Report of the European Science and Environment Forum* (Bourne Press Ltd., Bournemouth: 1996); cited in Carter, *Climate: The Counter Consensus*, 71-72.

46 Cf. Happer, "The Truth about Greenhouse Gases", 34.

47 Ibid.; & Cf. Carter, *Climate: The Counter Consensus*, 85-86.

48 Happer, "The Truth about Greenhouse Gases", 34.

contrasted with deniers, doubters and sceptics, although I must confess no one has dubbed me a climate change heretic.

The rewards for proper environmental behaviour are uncertain, unlike the grim scenarios for the future as a result of human irresponsibility which have a dash of the apocalyptic about them, even of the horsemen of the Apocalypse. The immense financial costs true-believers would impose on economies can be compared with the sacrifices offered traditionally in religion, and the sale of carbon credits with the pre-Reformation practice of selling indulgences. Some of those campaigning to save the planet are not merely zealous but zealots. To the religionless and spiritually rootless, mythology — whether comforting or discomfoting — can be magnetically, even pathologically, attractive.

More than anecdotes

Remember Canute. The history of climate change provides no reassurance that human activity can control or even substantially modify the global climate, although humans can effect important local changes for good or ill.

In broad outline the history is uncontroversial. For 2.5 million years, northern Eurasia and North America were covered by ice sheets kilometres deep, and the earth has seen eleven strong glacial episodes (or Ice Ages) in the past million years. We live in an interglacial period which has now lasted 10,000-11,500 years.

In passing we might note that average temperatures at many sites from 8,000 to 10,000 years ago were up to two degrees warmer than now during a period termed the “Holocene climatic optimum”, when the level of atmospheric carbon dioxide was unaffected by any industrialisation.

The warmer interglacials usually last between 10,000 to 20,000

years, occurring at intervals of about 100,000 years. By these criteria one could argue that an Ice Age is now overdue, which perhaps contributed to the cooling scare in the 1970s.

The transition into and out of an Ice Age is triggered by overlapping Croll-Milankovitch cycles, although the processes are understood imperfectly. James Croll suggested that weaker solar radiation could eventually stimulate glaciation and in 1934 Milutin Milankovitch developed this further, connecting the lower summer solar radiation reaching the earth with the shifts in the earth's orientation and orbit around the sun.⁴⁹ As well as this the output and nature of the sun's radiation varies in a solar cycle of about eleven years, manifested by sunspots.⁵⁰

Apparently the present eccentricity of the earth's orbit is small, decreasing and likely to continue for 30,000 years, meaning that our current interglacial may be exceptionally prolonged.⁵¹ A pleasant coincidence.

Controversies commence as we approach the Christian era as nobody seems too concerned about the Minoan warming of about 3,500 years ago. The Roman warming around 2,000 years ago provokes some heart burn, while we have seen attempts to erase the Medieval Warm period (850–1300AD) from history.

On February 7th, 2010 I had published a small piece on climate change in my weekly column of Sydney's Sunday Telegraph which raised some of the issues I discussed earlier. This was referred by Senator Ian MacDonald of the Australian Parliament to the Bureau of Meteorology for comment, which was duly provided.

49 Geoffrey Lehmann, Peter Farrell & Dick Warburton, "The Intelligent Voter's Guide to Global Warming", *Quadrant* 55: 3 (March 2011), 48-49; & Plimer, *Heaven and Earth*, 239-40.

50 Lehmann et al, "The Intelligent Voter's Guide to Global Warming", 49.

51 *Ibid.*

In a letter of July 8th, 2010 I replied to these comments pointing out that the Bureau acknowledged the veracity of most of my factual statements, but took issue with three of my claims. My letter was incorporated into the Hansard record of the Senate Estimates Committee meeting of October 18th, 2010.

On February 21st, 2011 Dr. Greg Ayers, Director of Meteorology, was granted leave to appear before the Committee to respond to my article and letter. His contribution was unusual, primarily for his diatribe against Professor Ian Plimer and his book *Heaven and Earth – Global warming: The Missing Science* (2009). 30,000 copies were sold in Australia in a few months, but Ayers denounced it as “simply not scientific,” “misleading to all Australians,” pseudo-science and a polemic.⁵² Plimer does have a robust approach to public discussion and has suffered flesh wounds, but his is a work of massive scholarship and his central claim remains valid; that is, the science is not adequate to establish that dangerous anthropogenic global warming will occur.

Dr. Ayers provided detailed responses on a number of issues, but a major topic was his defence of the Bureau’s claims that temperatures “in recent decades have been warmer than those of the Middle Ages”. He cites three metadata analyses. The first of these is the 2007 Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Dr Ayers said it answered “all these questions,” although he acknowledged that “there are those who feel that the IPCC is somehow biased”.⁵³

He also quotes a December 2009 report of the US Environmental Protection Agency which found that six well-mixed greenhouse gases threaten public health and welfare, without demonstrating how this is relevant to the

⁵² Commonwealth of Australia, Official Committee Hansard, Senate, Environment and Communications Legislation Committee, Estimates, 21 February 2011, EC 101-02 (Dr. Greg Ayers Director of the Australian Bureau of Meteorology).

⁵³ Ibid., 102-03.

Medieval Warming.

More important is the 2006 US National Academy of Science report entitled *Surface Temperature Reconstructions for the last 2,000 years*⁵⁴, which treads carefully in the aftermath of the hockey-stick graph debacle. The First (1990) and Second (1995) IPCC Assessment Reports had shown a Medieval Warm Period, warmer than the end of the twentieth century and followed by a Little Ice Age. Notoriously both the Medieval Warm Period and the Little Ice Age were eliminated in the 2001 Third Assessment Report following Michael Mann's 1999 study on the last 1,000 years of climate.

Two Canadian academics, Stephen McIntyre and Professor Ross McKittrick, found Mann's data misleading. The Wegman Report to the US Congress in 2006 upheld their criticisms as valid and their arguments as compelling.⁵⁵

The deficiencies in the IPCC process were given even wider publicity when hundreds of emails were leaked or hacked from the University of East Anglia website in 2009, showing censorship and evidential irregularities.

While the 2006 National Academy of Sciences report obviously did not have access to the 2009 Climategate information, its claims are more circumspect than those of the Australian Bureau of Meteorology. The NAS wrote that surface temperatures in the late twentieth century decades were higher than any comparable period in the four centuries since the Little Ice Age.

Moving back to the Middle Ages they have "less confidence" in large-scale temperature reconstructions for the period 900–1600AD; a limitation which does not prevent them from claiming that "presently available proxy evidence indicates that temperatures at many, but not all, individual locations

⁵⁴ Ibid.

⁵⁵ Plimer, *Heaven and Earth*, 87-99.

were higher during the last 25 years than during any period of comparable length since AD 900".⁵⁶

This is the best Dr. Ayers can manage from his three metadata analyses and it is hardly a ringing endorsement. In fact, even the careful claims of the 2006 National Academy of Sciences report that the late twentieth century was warmer than the Middle Ages are inaccurate. This is demonstrated from both the scientific data now available and historical evidence.

Professor Bob Carter lists eight different recent scientific studies from 2000-08 on proxy data such as tree-ring records, borehole temperature methods, and deep cores in glaciers, lake beds and ocean floors which demonstrate the existence of the Medieval Warming with temperatures equal to or higher than today. Particularly significant is the 2008 study by Loehle and McCulloch compiled from eighteen high quality proxy climate records.⁵⁷

Dr. Craig Idso⁵⁸ has collected papers over the past quarter of a century from more than 1000 scientists in 578 research institutions in 44 countries, providing evidence by a multitude of empirical methods that, taken together, establish that the Medieval Warm Period was real, was global, and was warmer than the present. The comparatively few papers that oppose this evidence are written by a small, tight-knit group of computer modellers.

The historical data are equally clear and sometimes more compelling on the existence of earlier and warmer times, followed by the Little Ice Age, a cold snap of 500 years; two contrasting periods when the level of carbon dioxide in the atmosphere did not change despite greatly differing

⁵⁶ Official Committee Hansard, Senate, Estimates, 21 February 2011, EC 102-03 (Dr. Greg Ayers).

⁵⁷ Carter, *Climate: The Counter Consensus*, 156-57.

⁵⁸ Craig Idso, *Medieval Warm Period Database 2011* <<www.co2science.org>>.

temperatures worldwide.⁵⁹

Brian Fagan is the best-known climate historian, author of a string of books and editor of *The Oxford Companion to Archaeology*. He believes in twentieth century anthropogenic warming, but has no problem in accepting the evidence that in the Medieval Warm Period average summer temperatures were between 0.7° and 1.0°C above twentieth century averages, while Central European summers were up to 1.4° C higher.⁶⁰

Commercial vineyards in England flourished 300 to 500 kilometres north of twentieth century limits. So popular were quality English wines then that the French tried to have their sale banned on the Continent.

Warm weather allowed crops to grow on marginal soils at higher altitudes than previously. In 1300 a farm owned by Kelso Abbey in southern Scotland had sheep and land under cultivation at 300 metres above sea level, well above today's limits.

In Scandinavia and central Norway farming spread 100 to 200 metres further up valleys and hillsides, disrupting the patterns of nearly a thousand years. South in the Alps farmers planted deeper and deeper into the mountains and ancient copper mines were reopened as the ice retreated. In this time forests in the Alps were between 80–200 metres higher than today.⁶¹ Bitter winters were a rarity. For example, the cold of 1258 was caused by a distant volcanic eruption.⁶²

The warmer weather also allowed significant new colonisation. For four hundred years, from 800 to 1200 approximately, Vikings or Northmen from Scandinavia roamed European waterways,

⁵⁹ Happer, "The Truth about Greenhouse Gases", 35.

⁶⁰ Brian Fagan, *The Little Ice Age: How Climate Made History 1300-1850* (Basic Books, New York: 2000), 17.

⁶¹ *Ibid.*, 17-18.

⁶² *Ibid.*, 21.

terrorising coastal areas. By 874 they had settled permanently in Iceland, although the Irish monks had preceded them by more than 150 years, without settling permanently.⁶³

Erik the Red was a violent and quarrelsome man who had to leave his home in south-western Norway late in the tenth century “because of some killings” and sailed to Iceland where he married a local woman. Two more violent quarrels resulted in his banishment.

An expert seaman he confidently sailed west (perhaps around 980) and reached south-western Greenland, where he found better grazing land and abundant fish and birds. He called the country Greenland, because he reasoned that an attractive name would bring more settlers — an early instance of climate spin.

From Iceland twenty-five ships of colonists sailed with him and fourteen arrived to establish the Eastern Settlement in south-west Greenland. Another group went further north to found the Western Settlement. These remained for nearly 400 years.

The absence of ice-floes meant easy access to the seas, for example, around Disko Bay which teemed with fish. The settlers prospered, setting up a Catholic diocese complete with bishop and a cathedral dedicated to St. Nicholas.⁶⁴

They also sailed further west to North America with Erik the Red's son, Leif, reaching Labrador and then the mouth of the St. Lawrence River which he named “Wine Land”. Fierce opposition from the indigenous population prevented extensive permanent settlement.

In the thirteenth century, sailing became increasingly hazardous because of suddenly massing sea ice. The King's Mirror is a 1260 set of instructions to the author's son on how to

⁶³ Ibid., 7-9.

⁶⁴ Ibid., 10-12.

cope with this ice around Greenland.⁶⁵

A recent study sponsored by Brown University of core measurements taken from two lakes near the Western Settlement throw new light on its collapse in the mid 1300s, while the Eastern Settlement vanished in the first two decades of the 1400s.

The study showed a temperature drop of four degrees Celsius from 1100 to 1180, which almost certainly caused shorter crop-growing seasons and less available food for livestock.⁶⁶

At least one Viking burial places still lies in the Greenland permafrost and the Medieval Warming there remains as an inconvenient fact⁶⁷, an interesting backdrop to the foolish and mistaken claim in the newest edition of The Times Atlas of the World, which redefined fifteen per cent of Greenland's ice-covered land as "green and ice-free".⁶⁸

We also find milder and more pleasant examples of this warm time. Aelfric, a noted Anglo-Saxon preacher who died in 1010, was Abbot of Eynsham near Oxford. In a homily for the first Sunday after Easter he remarked in passing that "we often saw silk worms" that "throughout the world make silk for all fine cloth." Obviously it was consistently warm enough then, even in Oxford, for a continuing silk-worm life cycle.⁶⁹

The cold-sensitive beetle *Heterogaster urticae* was found in

65 Ibid., 13-14.

66 William J. D'Andrea, Yongsong Huang, Sherilyn C. Fritz, & N. John Anderson, "Abrupt Holocene climate change as an important factor for human migration in West Greenland", *Proceedings of the National Academy of Sciences*, 108:24 (14 June 2011), 9765-69; reported in "Climate played a big role in Vikings' disappearance from Greenland", *Science News*, 30 May 2011 <<<http://www.esciencenews.com>>>.

67 Dale Mackenzie Brown, "The Fate of Greenland's Vikings", *Archaeology*, 28 February 2000. See also Terese Brasen, "The Viking farm under the sand in Greenland" (2001) <<www.freerepublic.com>>; & "Story of Viking Colonies' Icy 'Pompeii' Unfolds from Ancient Greenland Farm", *New York Times*, 8 May 2001.

68 "Times Atlas 'wrong' on Greenland ice", *BBC News*, 19 September 2011 <<www.bbc.co.uk>>.

69 Emily V. Thornbury, "Aelfric's Zoology", *Neophilologus* (2008) 92:142-3.

York in the High Middle Ages, but today is found only in the south of England.⁷⁰

In 1135 the water flow in the Danube was so low that people could cross it on foot. Somewhat earlier the Rhine had suffered the same fate. Around the middle of the Little Ice Age, the year 1540 was the warmest and driest for the millennium in Central Europe. Once again the Rhine dried up. We can only imagine the excitement such events would provoke today.⁷¹

Western Europe thrived in the Medieval Warming which saw the beginning of our great universities and the construction of many magnificent Gothic cathedrals.

As the evidence for the Medieval Warming has increased, some of the exponents of AGW have conceded its existence in the northern hemisphere but contested the claim that it extended south, despite the previously mentioned Idso database.⁷²

Once again Brian Fagan has collected the scientific evidence from deep-sea cores, pollen samples, tree-rings and Andean ice cores and conclusively established the reality of an American Medieval Warming dominated by long, catastrophic droughts.⁷³

These same centuries in the Americas “witnessed severe drought, hunger, warfare in the north and the collapse of two major civilizations to the south”.⁷⁴

70 John Steane, *The Archaeology of Medieval Britain and Wales* (University of Georgia Press, Athens GA: 1985), 174.

71 Wolfgang Behringer, *A Cultural History of Climate* (Polity Press, Cambridge: 2010), 76; & Christian Pfister, Rolf Weingartner & Jürg Luterbacher, “Hydrological winter droughts over the last 450 years in the Upper Rhine basin: a methodological approach”, *Hydrological Sciences–Journal–des Sciences Hydrologiques*, Special issue: *Historical Hydrology* 51(5) October 2006, 973.

72 Cf. note 40 above.

73 Brian Fagan, *The Long Summer: How Climate Changed Civilization* (Basic Books, New York: 2004), 213-228

74 *Ibid.* 214.

For ten centuries until 900AD, when their city states of Copan, Palenque, and Tikal collapsed, the Maya flourished in Central America, probably numbering eight to ten million people around 800AD.

Climatologist David Hodell began his research on sedimentary cores from salty Lake Chichancanab in the Yucatan in 1993. Continued work demonstrated a severe drought from 750 to 1025 AD, which coincided with the Maya collapse of the southern lowlands.

This evidence has been further clarified by a deep-sea core from the Cariaco Basin off Venezuela which shows a series of multi-yeared droughts superimposed on a generally dry period.⁷⁵ Different cities were toppled in 810AD, then 860AD, and finally 890-910AD.

The second example is Tiwanaku, a state of 50,000 people which flourished for 600 years in the first millennium, and collapsed leaving glorious ruins fifteen kilometres east of Lake Titicaca in Bolivia.

A fine-grained ice core from the Quelccaya ice cap high in the Andes, 200 kilometres away, show a dry period from 1040–1450. Good rainfall seems to have ceased at the lake around 1100AD, destroying a complex agricultural structure based on raised fields. By 1150 the people had dispersed into small villages.⁷⁶

The destruction of two civilizations after terrible droughts from the global warming of the Middle Ages overshadows even Erik the Red's colonial exploits, to say nothing of the Abbot of Eynsham's silk worms.

⁷⁵ Ibid., 237sq.

⁷⁶ Ibid., 238-46.

Conclusion

The continuing pre-eminence of the Western world depends on the continuing creative interaction which fuelled the rise; the life-generating friction between the different forces symbolized by Athens, Rome (secular in this case), and Jerusalem.

Whatever our political masters might decide at this high tide of Western indebtedness, they are increasingly unlikely, because of popular pressure, to impose new financial burdens on their populations in the hope of curbing the rise of global temperatures, except perhaps in Australia, which has two per cent of the world's industrial capacity and only 1.2 per cent of its CO₂ emissions, while continuing to sell coal and iron worth billions of dollars to Asia.

The debates about anthropogenic global warming can only be conducted on Athenian terms, by the accurate recognition and interpretation of scientific evidence. The propaganda wars, the economic self-interest of participants, the bluster and even intimidation, are peripheral to the painstaking work, sometimes contentious, among competent specialists, dedicated to the pursuit of truth, wrestling with an unruly and surprising complexity of factors, and often with one another. The evidence of historians is also vital because this is not simply a mathematical problem, not "pure" science.

Theologians do not have too much to contribute on AGW except, perhaps, to note the ubiquity of the "religious gene" and point out regressions into pseudo-religion or rudimentary semi-religious enthusiasms.

Extreme-weather events are to be expected, but are unexpected in every period. No one towards the end of the Medieval Warming in Europe expected the rapid descent into the cold and wet of the Little Ice Age, for example, or the freezing gales, winds and heavy rains, that produced the

short summers and the terrible developing famines of 1315–20. Surprises such as these will continue into the future.

For this reason (among others) I support the recommendation of Bjorn Lomborg⁷⁷ and Bob Carter⁷⁸ that, rather than spending money on meeting the Kyoto Protocol which would have produced an indiscernible effect on temperature rise, money should be used to raise living standards and reduce vulnerability to catastrophes and climate change (in whatever direction), so helping people to cope better with future challenges. We need to be able to afford to provide the Noahs of the future with the best arks science and technology can provide.

In essence, this is the moral dimension to this issue. The cost of attempts to make global warming go away will be very heavy. They may be levied initially on “the big polluters” but they will eventually trickle down to the end-users. Efforts to offset the effects on the vulnerable are well intentioned but history tells us they can only ever be partially successful.

Will the costs and the disruption be justified by the benefits? Before we can give an answer, there are some other, scientific and economic, questions that need to be addressed by governments and those advising them. As a layman, in both fields, I do not pretend to have clear answers but some others in the debate appear to be ignoring the questions and relying more on assumptions.

What are the questions? They have to do with the validity of the assumptions, and therefore the conclusions, of the IPCC and, importantly, the relationship of costs and benefits in both monetary and human terms. In other words, we must be sure the solutions being proposed are valid, the benefits are real

⁷⁷ Bjorn Lomborg, “Bootleggers highjack climate change debate”, *The Australian*, 22 July 2011.

⁷⁸ Carter, *Climate: The Counter Consensus*, 245-46; & Robert M. Carter, “Climate Change in Natural Context” (typescript, n.d.), 4-5

and the end result justifies the impositions on the community, particularly the most vulnerable. You will gather that I have concerns on all three fronts.

Sometimes the very learned and clever can be brilliantly foolish, especially when seized by an apparently good cause. My request is for common sense and more, not less; what the medievals, following Aristotle, called prudence, one of the four cardinal virtues: the “*recta ratio agibilium*” or right reason in doing things. We might call this a cost-benefit analysis, where costs and benefits are defined financially and morally or humanly and their level of probability is carefully estimated. Are there any long term benefits from the schemes to combat global warming, apart from extra tax revenues for governments and income for those devising and implementing the schemes? Will the burdens be shared generally, or fall mainly on the shoulders of the battlers, the poor? Another useful Latin maxim is “*in dubio non agitur*”: don’t act when in doubt. There is no precautionary principle, only the criteria for assessing what actions are prudent.

When Galileo was placed under house arrest primarily because of his claim that the earth moved around the sun, he is said to have muttered “*Eppur’ si muove*”; and yet it moves.

As for Galileo so for us, the appeal must be to the evidence, not to any consensus, whatever the levels of confusion or self-interested coercion. First of all we need adequate scientific explanations as a basis for our economic estimates. We also need history, philosophy, even theology and many will use, perhaps create, mythologies. But most importantly we need to distinguish which is which.

Vote of Thanks

Lord Lawson

Chairman of the Global Warming Policy Foundation

It has been great to see so many people here and thank you also for the excellent questions, which you have put to His Eminence.

We have not time for any more because His Eminence deserves to have a good dinner tonight! We could have gone on a long time, and I apologise to those of you, who wanted to put questions but have not had time to do so. We have had some excellent questions and of course excellent answers too, in my judgement, from Cardinal Pell.

Above all, I would like to thank His Eminence for having come all the way from Australia to deliver the second Annual Global Warming Policy Foundation Lecture. It was profound, it was well informed and it was elegant. And we are all extremely grateful to you and I think none of us here, who were present tonight, will forget this event.

Thank you very much.

The Global Warming Policy Foundation is an all-party and non-party think tank and a registered educational charity which, while open-minded on the contested science of global warming, is deeply concerned about the costs and other implications of many of the policies currently being advocated.

Our main focus is to analyse global warming policies and their economic and other implications. Our aim is to provide the most robust and reliable economic analysis and advice.

Above all we seek to inform the media, politicians and the public, in a newsworthy way, on the subject in general and on the misinformation to which they are all too frequently being subjected at the present time.

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