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Comments at Launch of

NINE FACTS ABOUT CLIMATE CHANGE

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by

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Thank you for inviting me to speak at this launch of *Nine Facts About Climate Change* by Ray Evans.

Let me first of all establish my position: I am not a climate scientist, or a scientist of any kind, but I do have a technical background and spent much of my working life trying to make sense of what experts told me. Having some understanding of the geological history of the Earth, I have been amused by the slogans “*Stop climate change*” and, more recently, “*Climate change is real*”. That the climate is changing is not in question, it always has and always will. The issue is much narrower: whether carbon dioxide emissions arising from human activities, unless checked, will cause disastrous global warming.

For the last 20 years I have tried hard not to pre-judge the issue but to listen with an open, although critical, mind to the arguments of both, the so-called ‘believers’ and the ‘sceptics’. I am still trying to do so. It has been a confusing and frustrating, but also an educational experience.

I was brought up to believe that scientists not only welcome but encourage questioning of their conclusions. If their science is solid, they can by presenting the evidence answer the questions. If they cannot do so, it must mean that there is uncertainty. Genuine scientists are committed to resolving the uncertainties and looking for the truth.

I still like to think that most scientists behave in this way, but in the case of global warming what started out as a scientific assessment has gradually become something quite different. While science remains at the bottom of the issue, politics, social agendas, ideology, and even a semi-religious fervor have come to overshadow it and dominate the public debate. One must admire the skilful way in which the public has been led to believe that there is no longer any uncertainty, and that disastrous climate change caused by humans is imminent.

The appointment of Mr. Al Gore as adviser to the UK Government on climate change is a good example. I am not aware of Mr. Gore’s ranking as a climate scientist, but he has undoubted credentials as a politician and someone who knows how to influence public opinion. His film *The Inconvenient Truth* has been widely publicised, has been seen by, and has influenced millions of people around the world. It has been severely criticised for deliberately and grossly exaggerating and distorting the issues and I understand that the recently published Summary for Policymakers by the Intergovernmental Panel on Climate Change (IPCC) contradicts a number of Mr. Gore’s major contentions. This, in contrast, has had virtually no publicity and no effect on the public.

Mr. Gore's film was followed by the Stern Review, released with alarmist headline publicity late last year. The scientific and economic content of the Stern Review has been analysed in detail by a group of distinguished scientists and a group of distinguished economists respectively. They found that it was biased and alarming, neither accurate nor objective. As far as I am aware, this criticism has not been answered. Published as a 68-page article in the specialist journal *World Economics*, it has had very little publicity and no impact on public opinion. Very few people even know about it.

Early this month the Intergovernmental Panel For Climate Change (IPCC) released with much publicity the Summary for Policymakers of its Fourth Assessment Report. Media headlines before, during, and after the release – '*Ten years to reverse the global meltdown*' was typical - once again predicted an imminent catastrophe. Remarkably, the report of which the Summary created such headlines is not available and will not be finalised until May this year. There has been no explanation of the reasons for such an extraordinary procedure.

The scientists analysing the scientific content of the Stern Review pointed out that:

'In its last Assessment Report, the IPCC still rated the "level of scientific understanding" of nine out of twelve identified climate forcings as "low" or "very low", highlighted the limitations and short history of climate models, and recognised large uncertainties about how clouds react to climate forcing. Since then, major scientific papers have claimed, among other things, that the forcing of methane has been underestimated by about a half, that half the warming over the twentieth century might be explained by solar changes, that cosmic rays could have a large effect on climate, and that the role of aerosols is more important than that of greenhouse gases. Generally speaking, none of these suggestions is included in current climate models though, as mentioned later, aerosols are used, without any proper or rigorous basis, to cancel greenhouse warming which would otherwise be far in excess of what we have experienced.'

This is hardly consistent with recent claims that "the science has now been settled".

It will not be known until May what new evidence has overcome these major uncertainties to justify the upgrading of IPCC's assessment of human influence on global warming from '*likely*' to '*very likely*'. I, for one, am looking forward to finding out. In the meantime the evidence supporting the conclusion cannot be assessed. How could the conclusion have been reached without the report being finalised and why the rush to publish the Summary before the report itself?

Other questions remain unanswered. For example, some time ago Henderson and Castles pointed out that the basis of the projections of future human-caused carbon dioxide emissions in the 2001 IPCC report did not make economic or statistical sense. Has this been corrected? We do not know.

There are other pointers that science has been relegated to the background. Open efforts have been made to prevent research which may not support the views of the 'believers', and even to prevent people from expressing critical views. It has been sad to see even some otherwise respected scientific institutions participating in such unbelievable behaviour.

An uninvolved observer has to conclude that there has been a concerted and well-organised campaign to create worldwide apprehension and alarm.

Reading and listening to the media and to political discussion, this campaign has succeeded. In fact, it may have succeeded too well. Public sentiment can be swayed by skilful propaganda in the short term, but people are not fools. Exaggeration and excessive publicity hype will eventually be seen through and are likely to backfire. Exaggeration there certainly has been, reminiscent of Sir Humphrey Appleby's memorable statement in "Yes, Minister":

'This is a catastrophe. A tragedy. A cataclysmic, apocalyptic, monumental calamity'.

My brother back in Estonia, where I was born, rang me the other day after watching a television programme informing the viewers that, because of disastrous climate change, Australia will become uninhabitable in 20 years. He wanted to know whether he should start preparing for my return there as a refugee!

A number of overseas scientists believing in the seriousness of human-caused warming have recently expressed in public their concern that the campaign has gone too far, in the words of one, *"Some of us are wondering if we have created a monster"*. In Australia, climate scientist Dr. Graham Pearman was recently quoted in *The Australian* as saying:

"We should be cautious about stirring up anxieties about what may not come about. In reality it is very difficult to be sure about what will occur for a region or a city".

This is very unusual, because up to now such scientists have said nothing critical, regardless of how extreme or outrageous the claims.

Politicians naturally keep close track of public sentiment. Big business today is also very conscious of public opinion. It is therefore not surprising that the recent publicity successes of the alarmist views on climate change have been reflected in both government and business attitudes, in business also because there is the promise of great scope for new business ventures in carbon trading and in subsidised industries. The entrepreneurs are naturally always looking for opportunities. It was surprising, however, to see a very senior Australian businessman quoted in a newspaper the other day as saying that he was influenced to become a believer by Mr. Al Gore's film, hurricane Katrina, and cyclone Larry. One hopes that our business leaders base their judgements on more relevant evidence.

The political reality is that politicians of all persuasions, keeping an eye on the electorate, today have to be supportive of activities to reduce carbon dioxide emissions. This can now be changed only by the onset of global cooling (which, incidentally, may be not too far away.) Meanwhile, the hard question remains: what can sensibly be done about it? No one can argue with developing better technology, being more efficient and less wasteful, but the proposals go beyond it.

Exaggerations and hype do not survive the cold hard light of the reality that many of the proposed actions will affect the living standards and even livelihood of large numbers of people, and that in the absence of similar action by all countries these measures will not have a significant effect. We should be grateful to Dr. Flannery and Senator Brown for being a great help with this sobering up process by making outlandish claims and, most recently, by calling for shutting down Australia's coal mining industry. Perhaps Senator Brown should be the next Australian of the Year?

Does the effect of the recent publicity campaign on public sentiment mean that we should no longer question the validity of its scientific base? On the contrary, I believe that today it is more important than ever that valid questions continue to be asked. What is more, we should insist that the proponents of human-caused global

warming answer the questions. Before we even contemplate expensive and disruptive measures, we must surely understand very clearly why we are doing it.

One Australian climate scientist was recently reported as saying that the sceptics should '*stop spending so much of our time re-answering questions that were answered 15, 20 years ago....*'

If there are good answers to the questions, it would surely not take any time to just repeat these answers again. The problem, I suggest, has been the opposite: in the past the proponents of man-made global warming have simply ignored many of the questions that have been repeatedly asked. There has been little dialogue and much talking past each other.

By producing *Nine Facts About Climate Change*, Ray Evans and the Lavoisier Group have issued a challenge. Ray expresses his arguments and conclusions in clear and simple language and leaves no doubt about what he believes to be true. Those who think he is wrong should have no difficulty in pointing out where and why. It will be very interesting to see whether this challenge is taken up.

Reading Ray's paper led me to reflect on a number of matters.

Ray does not say so, but from another source I understand that by far the most important so-called greenhouse gas is water vapour, which is responsible for most of the greenhouse effect. By comparison, carbon dioxide is a minor greenhouse gas.

I am sure most people do not know this. The popular perception is that there is a great and growing blanket of carbon dioxide smothering the skies and doing the damage. In fact the present CO₂ content of the atmosphere is 375 parts per million, or less than four one hundredths of one per cent – a very faint trace. At twice or three times this level it will be still a very faint trace.

The popular image of CO₂ is influenced, as Ray mentions, by the habit of the media to illustrate stories of global warming with pictures of chimneys belching black smoke. Quite apart from carbon dioxide emissions being colourless, if there were emissions of particulates, these would have a cooling, not warming, effect. Not infrequently there are even clearly falsified photographs showing the impossible feat of water-cooling towers belching black smoke.

Ray makes another important point: while the concentration of CO₂ in the atmosphere is increasing and a part of the increase is due to human activities, there is a saturation effect - the resulting warming is not linearly proportional to the concentration. A doubling of atmospheric CO₂ does not produce twice the warming, again something not understood by the public. In fact I understand the relationship is logarithmic, in which case the additional warming effect with increasing concentration tapers off very quickly.

Ray also points out that the annual emissions of carbon dioxide into the atmosphere as a result of human activities are at present less than 4 per cent of the natural annual emissions from the biosphere and the oceans. Why is just the increase in this small percentage catastrophic? What about changes in the 96% from other causes?

How is it, then, that we can get so worried about the greenhouse effect caused by increasing CO₂ emissions from human activities? The reason, I am told, is that the computer models assume that very small increases in CO₂ concentrations produce a greatly amplified water vapour and cloud effect. At the same time it is apparently agreed, including by the IPCC, that the critical science of the formation and behaviour of clouds is either not at all, or at best very poorly understood. The warming calculated by computer models on the assumptions made can be, I understand, more

than three times higher than the actually observed warming and must be arbitrarily reduced to make it match.

To the uninitiated, like myself, this does not add up to great confidence in the models or the results or in the resulting projections for up to a hundred years ahead. The IPCC report to be released in May is certain to be keenly examined for explanations of how these deficiencies have been dealt with.

Another intriguing aspect of the whole issue, as Ray mentions, is that there are scientists who believe that periodical changes in solar radiation and magnetism have an overwhelming influence on our climate. They predict that the period of high solar activity in the last hundred years or so is coming to an end, and that global cooling will begin just a few years from now. This view will be tested shortly, certainly within a decade or two, much sooner than the alternative of an alarming warming. Who knows, before long we may be urged to burn more coal to avoid a deep freeze!

When dealing with popular perceptions of any kind, we would do well to remember John Stuart Mill's advice:

"It often happens that the universal belief of one age, a belief from which no one was free or could be free without extraordinary effort of genius or courage, becomes to a subsequent age so palatable an absurdity that the only difficulty is to imagine how such an idea could be credible".

May I congratulate Ray Evans and his Lavoisier colleagues on the publication of *Nine Facts on Climate Change*, a most timely contribution to public discussion of this issue. I am not sure what one should do to launch it but, whatever it is, consider it done. May it contribute to rational and sensible discussion and help in reaching wise decisions.