Global Warming through Increasing Pollution – I'll Drink to That

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Well, is it or isn't it? Is the earth warming up or not, and if so, is it because of what people are doing to it? Global warming has gone from being a phenomenon to become a catch-all phrase used to explain just about everything that we think is changing in the natural world from the migration of birds to what the weather does. It is held out as a dreadful consequence of the damage we are doing to the planet through pollution. Because we continue to burn carbon-based fuels which produce the greenhouse gas carbon dioxide, we are liable to end up destroying ourselves. The spectre is raised that the greenhouse effect once started will inexorably continue until the ice-caps melt, and even, perhaps, all life is extinguished. Fortunately, we have a little time to prepare and maybe mend our ways. Computer simulations of the Earth's climate project that, if atmospheric concentrations of greenhouse gases increase as predicted, the average global temperature will increase by 1–3.5°C by the year 2100.

Models are all very well, but what is really going on? The models of climate change favour the views of the 'green' lobby, but are they justified in believing them. It is always good to have a stick to beat people with if you wish to make them accept your ideas. Global warming, it seems, is such a stick. Stop polluting the planet at once, or you'll kill us all. In the real world, though, it all comes down to interpretation. Ten years ago, the Alps had a virtually snowless winter. Environmentalists blamed global

warming. A Swiss lobbying group, Alp Action, wrote in 1991 that global warming would put an end to winter sports in the Alps by 2025. Last year, the Alps had their greatest snowfall in 40 years. Greenpeace blamed global warming. Humpty-dumpty would have liked global warming because it means whatever you want it to mean. Global warming causes good weather, and global warming causes bad weather. And that is official. After all, who could be more authoritative than the United Nations and their Intergovernmental Panel on Climate Change (IPCC). They have given the 'green' light to the global warming lobby who can now blame any weather event on greenhouse gas emissions. In 1995, the UN IPCC wrote: 'Warmer temperatures will lead to ... prospects for more severe droughts and/or floods in some places and less severe droughts and/or floods in others'. Whatever the weather, it's due to global warming.

Having cleared that up, what can be done about it? Unfortunately, reaction and action always come down to what is politically acceptable; to the minor concessions that governments grudgingly concede. We have only to look at international agreements on climate change, such as the Kyoto Protocol, to see that they are based on a very general, if not vague, understanding of some causes and characteristics of global change. Every report is couched in the language of compromise. It is all about the developed nations trying to explain to the developing ones what they should or should not do, even though developed

nations are still doing as they have always done. The official position would be that current proposals for dealing with projected climate change focus on mitigating predicted anthropogenic global warming through severe compulsory limiting of developed countries' greenhouse gas emissions. (The mind-set of the bureaucrat tends to be pervasive.) The argument against this is that implementation of such proposals would significantly weaken the global economic system; for which we should read vested interests and look at the foot dragging that accompanied the Kyoto conference. The reality is that if anything happens at all after such International happenings, it happens very slowly.

However, it seems that politics and breast-beating are running far ahead of science. If the Earth's climate is changing, and it seems that it is, that may be for many reasons, and we do not have sufficient evidence to say that the people on the planet are responsible. It is true that through burning all the fuel we have burnt, we may well have supplied a bit of greenhouse warming, but we don't know if it is a very significant amount. There are still large gaps in our understanding of the causes of climate change. According to a new study by the National Research Council, 'Global Environmental Change: Research Pathways for the Next Decade', in which the available data were reviewed, the Earth has indeed warmed by about half a degree Celsius in the past century. In fact, surface temperatures in the past two decades have risen at a rate substantially greater than average for the past 100 years. However, nearly all of the half-degree rise over the last century occurred before 1940; nearly all of the increases in greenhouse gas concentrations occurred after 1940. So, the rise may not necessarily be representative of any long-term climate change caused by greenhouse gas emissions. It is important to remember the distinction between greenhouse warming and global warming. Unfortunately, this distinction is often all but ignored by policy makers and interest groups, who seize on such findings to further their own agendas. Many scientists do believe that increasing greenhouse gases or other anthropogenic changes are responsible for the temperature rise, but others have reasonable doubts.

Therefore, before we spend money or change our behaviour, we should learn more about the fundamentals of the science behind climate changes. Policy-makers should not assume that we know everything there is to know about climate just because politicians across the world are negotiating to mitigate the effects of global warming. The rush to create policy decisions has pushed the debate too far beyond our scientific understanding. In

a speech made by astrophysicist Sallie Baliunas of the Harvard-Smithsonian Center for Astrophysics, Washington, DC, in 1998, she postulated that any global warming resulting from increased greenhouse gases in the atmosphere would be slow and insignificant compared to natural climate changes spurred by the sun. Recent scientific evidence suggests a link between solar variability and shifts in climate. The climate has been improving simply because the world has been recovering from the 'Little Ice Age', which started in the fifteenth century, a 450-year period of much colder temperatures that destroyed settlements in Greenland and led to crop failures and famine over much of Europe. Evidence suggests that it is warmer today than in the year 1400, but temperatures were warmer still 1,000, 3,000 and 6,500 years ago, and there is no correlation with carbon dioxide levels. The Earth, she said, has already experienced warmer temperatures and more rapid climate changes than those forecast by the current models of climate change. Other evidence suggests that even during the ice-age of 300,000 years ago there were warm periods, heatwaves even, when elephants and rhinoceroses wandered the marshes of Southern Britain. As for rapidity of onset: at the end of the last ice-age, 11,000 years ago, evidence has been found in Canada that glaciers melted fast enough to produce floods which overwhelmed forests. Excavations have found intact trees, bark and all, still standing.

Accepting that climate changes could exist, anthropogenic or otherwise, the American Council on Science and Health wrote a position paper on 'Global Climate Change and Human Health' which considered whether adverse impacts on the health of the human population could result. Not that they had any intention of debating the hypothesis that such climate change could occur, but if it did, what then? They recognised that it could cause an increase in the number of extreme weather events, and if sea levels rose, there could be coastal flooding. Would such changes in environmental conditions be detrimental to human health? For example, could the pattern of infectious diseases change, and if so, how should policy-makers respond to the prospect of climate-change-related health effects? Pragmatically, they took the opportunity to say that, regardless of whether human-induced climate change would occur, policies were needed for coping with infectious diseases and severe weather impacts of natural origin to help cope in the future with any adverse health impacts of human-induced climate change.

There has never been any lack of merchants of doom when a possibility of catastrophe exists – however remote.

The end of the world has been nigh countless times. But is it all bad? Cannot some benefit be derived from a warmer world? Scientists studying how commercial wine-making in Europe will alter with climate change say that areas currently too cold to support wine production, such as the far north of England and southern Scotland, will be able to produce sufficient vinous fruit, and thence wine, which could rival that from Alsace and the Rhineland. Already, the combination of better weather in recent years and improved viticulture methods have seen the grape return to northern sites where it has not been grown commercially since the Romans left. Six vineyards in the northerly counties of Cheshire, Yorkshire and Humberside are

already producing wine for sale. This sounds more dramatic than it is. The grape vine is, in fact, hardy in all part of the British Isles, although the Scottish Highlands are not ideal. Growing vines and producing a commercial crop are of course quite different things. A warmer climate reduces growing times and improves the chances of a good harvest. Perhaps, as predicted by scientists at the Environmental Change Institute at Oxford University, global warming will eventually allow wine-making in Southern Scotland and could turn even Denmark and Norway into white wine producers in the foreseeable future.

I'll drink to that.