Bethlehem and the rat-hole problem

By Christopher Monckton of Brenchley

In the closing minutes of the final plenary of the U.N.'s Doha climate summit, when no one else had anything further to add, I spent a few seconds telling the delegates something that the bad scientists and the malicious media have done their level best to conceal. There has been no global warming for 16 years.

In the real world, this surely welcome news would have been greeted with cheers of relief and delight. Since the beginning of 1997, despite the wailing and gnashing of dentures among the *classe politique,* despite the regulations, the taxations, the carbon trades, the windmills, the interminable, earnestly flatulent U.N. conferences, the CO2 concentration that they had declared to be Public Enemy No. 1 has not stabilized. It has grown by one-twelfth.

Yet this startling growth has not produced so much as a twentieth of a Celsius degree of global warming. Any warming below the measurement uncertainty of 0.05 C° in the global-temperature datasets is statistically indistinguishable from zero.

The much-vaunted "consensus" of the much-touted "ensembles" of the much-heralded "models" has been proven wrong. The much-feted "modelers" had written in 2008 that their much-cited "simulations" ruled out, to 95% confidence, intervals of 15 years or more without global warming. To them, 16 years without warming were as near impossible as makes no difference.

Yet those impossible years happened. However, you would never have known that surely not uninteresting piece of good news from reading the newspapers or watching ABC, BBC, CBC, NBC, *et hoc genus omne.* The media are not in the business of giving the facts or telling the truth any more.

Precisely because journalists no longer bother to provide the inconvenient truth to their audiences, and because they are no longer willing even to provide the people with the straightforward facts without which democracy itself cannot function, the depressingly ill-informed and scientifically-illiterate delegates in Doha can be forgiven for not having known that global warming stopped a long while back.

That is why they should have been excited and delighted when they heard the news – nearly all of them for the very first time.

But this was the alternative reality that is the corrupt, self-serving U.N. Howls, hoots and hollers of dismay and fury greeted my short, polite announcement. This absurdly inappropriate reaction raises a fascinating question.

How are we to dig a rat-hole wide enough to allow the useful idiots and true-believers to escape as each passing year makes it more and more obvious that their fatuous

credo has all the plausibility of the now somewhat discredited notion that the world was to be snuffed out at this year's winter solstice?

Every student of the arts of diplomacy in the civil-service and staff colleges of the U.K. hears much about the rat-hole problem. How does one let the other side off some hook on which they have imprudently impaled themselves, while minimizing their loss of face?

A cornered rat will fight savagely, even against overwhelming odds, because it has no alternative. Give the rat a way out and it will instinctively take it.

The first step in digging a diplomatic rat-hole is to show that one understands how one's opponents came to make their mistake. One might make a point of agreeing with their premise – in the present instance, the long-proven fact that adding a greenhouse gas to an atmosphere such as ours can be expected, *ceteris paribus,* to cause some warming.

Then one tries to find justifications for their standpoint. There are five good reasons why the global warming that they – and we – might have expected has not occurred for 16 years: natural variability in general; the appreciable decline in solar activity since the Grand Maximum that peaked in 1960; the current 30-year cooling phase of the ocean oscillations, which began late in 2001 with the transition from the warming phase that had begun in 1976; the recent double-dip la Niña; and the frequency with which supra-decadal periods without warming have occurred in the instrumental record since 1850.

The next trick is to help them, sympathetically, to focus the blame for their error on as few of their number as possible. Here, the target is obvious. The models are to blame for the mess the true-believers are in.

We must help them to understand why the models got it so very wrong. This will not be easy, because nearly all of our opponents have no science or math at all.

We can start our deconstruction of the models by pointing out that – given the five good reasons why global warming might not occur for 15 years or more at a time – the modelers' ruling out periods of 15 years or more without warming shows they have given insufficient weight to the influence of natural variability. We can poke gentle fun at their description of CO2 as " the tuning-knob of the climate", and help them to put things into perspective by reminding them that Man has so far altered only 1/10,000 of the atmosphere, and may alter 1/3000 of it by 2100.

We cannot altogether avoid the math. But we can put it all in plain English, and we can use logic, which is more accessible to the layman than climatological physics. Here goes.

The fundamental equation of climate sensitivity says temperature change is the product of a forcing and a climate-sensitivity parameter.

The modellers' definition of forcing is illogical; their assumptions about the value of the climate-sensitivity parameter are not Popper-falsifiable; and their claims of reliability for their long-term predictions are empirically disproven and theoretically insupportable. Let us explain.

The IPCC defines a forcing as the net down-minus-up flux of radiation at the tropopause, holding surface temperature fixed. Yet forcings change that temperature. A proposition and its converse cannot simultaneously be true. That is the fundamental postulate of logic, and the models' definition of forcing manifestly offends against it.

No surprise, then, that since 1995 the IPCC has had to cut its estimate of the CO_2 forcing by 15%. The "consensus" disagrees with itself. Note in passing that the CO_2 forcing function is logarithmic: each further molecule causes less warming than those before it. Diminishing returns apply.

We can remind our opponents that direct warming is little more than 1 C° per doubling of CO_2 concentration, well within natural variability. It is not a crisis. We can explain that the modelers have imaginatively introduced amplifying or "positive" temperature feedbacks, which, they hope, will triple the direct warming from CO_2.

Yet this dubious hypothesis, not being Popper-falsifiable, is not logic and, therefore, not science. If a hypothesis cannot be checked by any empirical or theoretical method, it is not – *stricto sensu* – a hypothesis at all. It is of no interest to science.

Not one of the imagined feedbacks is empirically measurable or theoretically determinable to a sufficient precision by any method. As an expert reviewer for the IPCC's *Fifth Assessment Report*, I have described its strongly net-positive feedback interval as guesswork – and that, in logic and therefore in science, is exactly what it is.

There is a powerful theoretical reason for suspecting that the modellers' guess that feedbacks triple direct warming is erroneous. The climatic closed-loop feedback gain implicit in the IPCC's climate-sensitivity estimate of 3.3[2.0, 4.5] C° per CO_2 doubling falls on the interval 0.62[0.42, 0.74], though you will find no mention of the crucial concept of loop gain either in the IPCC's documents or – as far as I can discover – in any of the few papers that discuss the mathematics of temperature feedbacks in the climate object.

Process engineers building electronic circuits, who invented feedback mathematics, tell us any loop gain much above zero is too near the singularity – at a loop gain of 1 – in the feedback-amplification equation. At a gain as high as is implicit in the models' climate-sensitivity estimates, the geological record would show violent oscillations between extremes of warming and cooling.

Yet for 64 million years the Earth's surface temperature has fluctuated by only 3%, or 8 C°, either side of the long-run mean. These fluctuations can give us an ice-planet at

one moment and a hothouse Earth the next, but they are altogether too small to be consistent with a feedback loop gain anywhere near as close to the singularity as official estimates imply, for homeostatic conditions prevail.

The atmosphere's lower bound, the ocean, is a vast heat-sink 1100 times denser than the air. Since 3000 bathythermographs were deployed in 2006 no significant ocean warming has been found.

The upper bound of the atmosphere is outer space, to which any excess heat radiates harmlessly away.

Homeostasis, then, is what we should expect, and it is what we get. Accordingly, the climatic loop gain – far from being as impossibly high as the IPCC's central estimate of 0.62 – cannot much exceed zero, so the warming at CO_2 doubling will scarcely exceed 1 C°.

It is also worth explaining to our opponents the fundamental reason why models cannot do what the modelers claim for them. The overriding difficulty in attempting to model the climate is that it behaves as a chaotic object. We can never know the values of its millions of defining parameters at any chosen moment to a sufficient precision to permit reliable projection of the bifurcations, or Sandy-like departures from an apparently steady state, that are inherent in all objects that behave chaotically. Therefore, reliable, very-long-term prediction of future climate states is known *a priori* to be unavailable by any method.

The modelers have tried to overcome this constraint by saying that the models are all we have, so we must make the best of them. But it is self-evidently illogical to use models when reliable, very-long-term weather forecasting is not available by any method.

This fundamental limitation on the reliability of long-term predictions by the models – known as the Lorenz constraint, after the father of computerized or "numerical" weather forecasting, whose 1963 paper *Deterministic Non-Periodic Flow* founded chaos theory by examining the behavior of a five-variable mini-model of the climate constructed as a heuristic – tells us something more, and very important, about the climate.

Bifurcations (or, in our opponents' intellectual baby-talk, "tipping-points") in the evolution of the climate object over time are not a whit more likely to occur in a rapidly-warming climate than in a climate which – like our own – is not warming at all.

Sandy and Bopha, and the hot summer in the U.S., could not have been caused by global warming, for the blindingly obvious reason that for 16 years there has not been any.

However, there are many variables in the climate object other than CO2 concentration and surface temperature. Even the tiniest perturbation in any one of these millions of parameters is enough, in an object that behaves chaotically, to induce a bifurcation.

Nothing in the mathematics of chaos leads one to conclude that "tipping-points" are any more likely to occur in response to a large change in the value of one of the parameters (such as surface temperature) that describe an object than in response to an infinitesimal change.

The clincher, in most diplomatic discussions, is money. Once we have led our opponents to understand that there is simply no reason to place any credence whatsoever in the exaggerations that are now painfully self-evident in the models, we can turn their attention to climate economics.

Pretend, *ad argumentum,* that the IPCC's central estimate of 2.8 C° warming by 2100 is true, and that Stern was right to say that the GDP cost of failing to prevent 3 C° warming this century will be around 1.5% of GDP. Then, at the minimum 5% market inter-temporal discount rate, the cost of trying to abate this decade's predicted warming of 0.15 C° by topical, typical CO2-mitigation measures as cost-ineffective as, say, Australia's carbon tax would be 48 times greater than the cost of later adaptation. At a zero discount rate, the cost of action will exceed the cost arising from inaction 36 times over.

How so? Australia emits just 1.2% of Man's CO2, of which Ms. Gillard aims to cut 5% this decade. So Australia's scheme, even if it worked, would cutting just 0.06% of global emissions by 2020. In turn, that would cut CO2 concentration from a predicted 410 µatm to 409.988 µatm. It is this infinitesimal change in CO2 concentration, characteristic of all measures intended – however piously – to mitigate future warming that is the chief reason why there is no economic case for spending any money at all on mitigation today.

The tiny drop in CO2 concentration would cut predicted temperature by 0.00006 C°. This pathetic result would be achieved at a cost of $130 billion, which works out at $2 quadrillion/C°. Abating the 0.15 C° warming predicted for this decade would thus cost $317 trillion, or $45,000/head worldwide, or 59% of global GDP.

Mitigation measures inexpensive enough to be affordable will be ineffective: measures expensive enough to be effective will be unaffordable. Since the premium exceeds the cost of the risk, don't insure. That is a precautionary principle worthy of the name.

When the child born in Bethlehem ~2012 years ago grew up, He told His audience the parable of the prodigal son, who had squandered his inheritance but was nevertheless welcomed by his father with a fatted calf when he returned and said he was sorry.

However vicious and cruel the true-believers in the global-warming fantasy have been to those few of us who have dared publicly to question their credo that has now been so thoroughly discredited by events, we should make sure that the rat-hole we dig for their escape from their lavish folly is as commodious as possible.

If all else fails, we can pray for them as He prayed looking down from the Cross on the world He had created.

Father, forgive them, for they know not what they do.