

20 A Descent into Sceptics' Hell

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To enter the lost city, go through me.
Through me you go to meet a suffering
Unceasing and eternal. You will be
With people who, through me, lost everything.

No one who wants a quiet or sociable life would be a climate change sceptic. I like dinner parties as much as the next man, but expressing doubts as to the coming climate Armageddon can really ruin what might otherwise be a fine evening.

One recommendation (Marohasy 2017a) is to arm oneself with some arguments, and a genteel manner, and seek some kind of dialogue. Sadly, this rarely works, as too often the interlocutors are zealots who will brook no discussion, or aren't really that interested in climate change, but, rather, are reciting standard opinions in order to make conversation.

My last experience of dinner party popularity was when I worked for an energy company that dominated the Australian market in 'green energy' (renewables only), and where a major part of my job was securing permits for its wind farms. When networking in my professional life, and also at dinner parties, all of this was greeted with admiration; it was clear to everyone that I was living a virtuous life and was most likely a similarly virtuous person. When I told them I was a manager of 'Sustainability', the approbation was a wonder to behold.

Sadly, for my professional life and my reputation in polite society, I was progressing from holding a genuine interest in global warming

and the need for carbon-reduction strategies, to daily becoming more uncomfortable with the outlandish claims and the failed predictions of the global-warming movement.

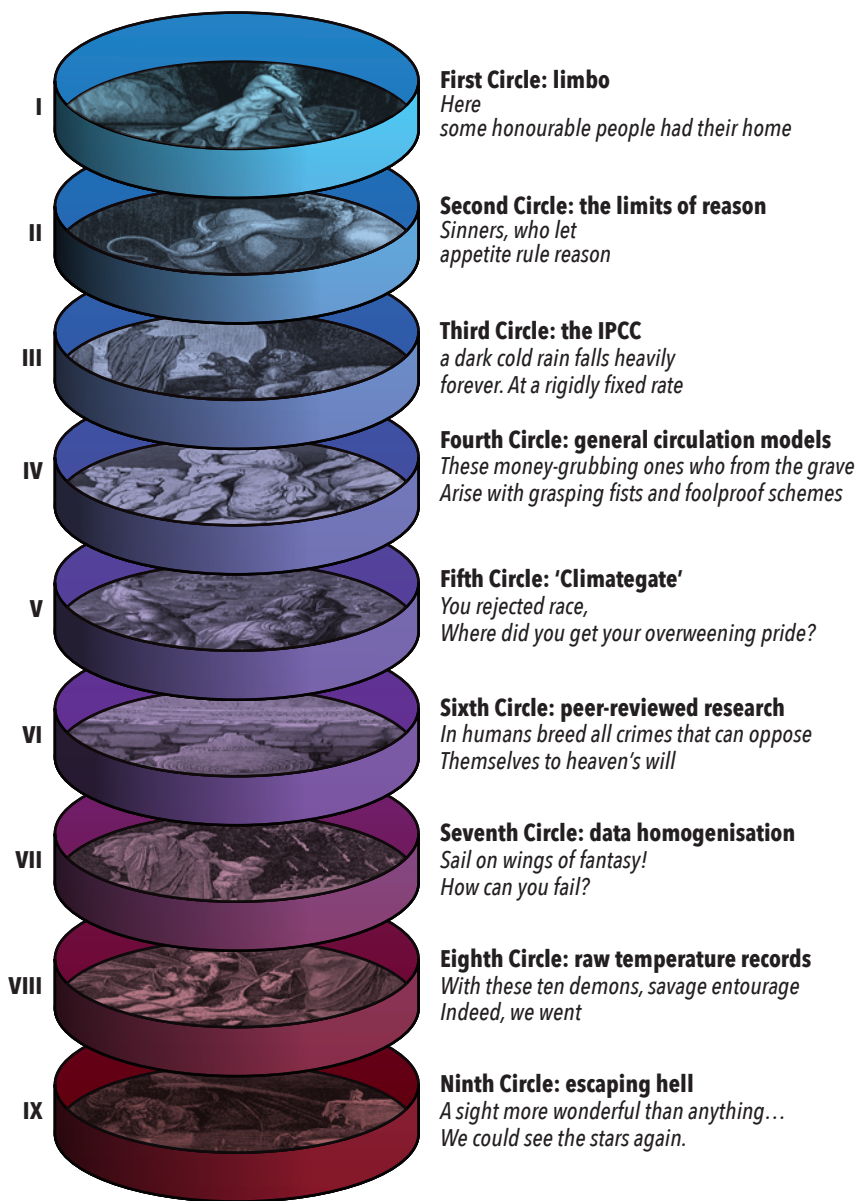
My first tilt towards scepticism involved renewable energy. As many of my colleagues at the energy company understood, wind and solar are terrible vehicles for accomplishing carbon reduction. They combined a belief in anthropogenic global warming (AGW) with a commitment to rigorous public policy analysis, and an expectation that when a price is put on carbon the subsidy schemes for renewables will just wither away, being no longer necessary. I, on the other hand, was much closer to the renewable energy lobby and its political milieu, and so was much less surprised when a carbon price was introduced in Australia and yet the subsidy schemes remained. The rent-seekers clothe their arguments in the language of carbon reduction, but their actual positions when lobbying are based on naked self-interest.

Over time, and once I examined the critiques of the institutions and research that supports the AGW industry, I could not help but descend further into sceptics' hell. This naturally accelerated when I joined the staff of the Institute of Public Affairs.

I will describe my descent into scepticism by taking inspiration from the epic poem, the foundational work of Italian literature, the *Divina Commedia* (*Divine Comedy*) of Dante Alighieri (1265–1321). In the first of three books, *Inferno*, Dante describes his descent through the nine circles of hell. On his journey, Dante was protected by the ghost of the Roman poet Virgil and could indulge old grudges by including his enemies in various places and have them suffering ever-more-inventive torments. For me, I have a succession of guides rather than a lone poet, and being increasingly cut off from mainstream opinion feels like it is me not my enemies who are in hell. As in Dante's journey, the further the descent, the further from the stars.

In *Climate Change The Facts 2017* (Marohasy 2017a) the great Clive James (1939–2019) skewered the catastrophist tone in the media that cherry picks the worst-case scenarios from official bodies, such as the Intergovernmental Panel on Climate Change (IPCC), and which through a combination of mendacity, stupidity and concern for repeat

Figure 20.1 Dante's circles of hell



Source: Image adapted from Dante's Inferno, Cantos VI thru XI by Manny, Ashes from Burnt Roses blog: <http://ashesfromburntroses.blogspot.com/2018/02/dantes-inferno-cantos-vi-thru-xi.html>.

sales aims to keep readers and viewers in a permanent state of fear. It is only fitting, then, that in adapting Dante's structure of hell I can draw upon the brilliant translation by James (Alighieri 2015), in which the great man renders an 800-year-old Italian poem into English that is both accessible and beautiful, and which has echoes of the original's rhymes, metaphors and puns. To the extent that he started people on a journey of inquiry into the whole AGW project, James should have included in his climate-change writing the same warning that appears above the gates of hell, and which appears at the start of this chapter. (His wit and erudition are greatly missed.)

First Circle: limbo

Ahead of us, beginning as a bar
Of light, it swelled to form a hemisphere
Of fire that through the shadows burned a dome –
And from a good way off I guessed that here
Some honourable people had their home.

For Dante this is the home for eternity of the great poets and thinkers of the past who had the misfortune to be born before the Christian saviour arrived on the scene. Thus Homer, Plato, Aristotle, Cicero and other giants of Graeco-Roman civilisation are here condemned to eternity, not suffering, but yet without the gift of grace.

This is the realm reserved for anyone who is not necessarily a sceptic, and who has a life. They may not actively deny AGW, but they are more interested in other social and economic problems or – to their shame – they are more concerned with what Aristotle called human flourishing (eudemonia), which involves learning, virtue, work, society and family. To Extinction Rebellion¹ and others protesting 'climate breakdown', someone who does not share their apocalyptic sense of urgency may not (immediately) deserve punishment, but they are certainly cast out of decision making.

1 A socio-political movement with the stated aim of using civil disobedience and nonviolent resistance to protest against climate breakdown, biodiversity loss, and the risk of social and ecological collapse. Wikipedia.

My guide through limbo was former Australian prime minister John Howard, a champion of the centre-right who was goaded into proposing a domestic carbon cap-and-trade scheme in 2007. His technocratic solution was cloaked in a neutral language of risk mitigation and economic considerations, and was blocked in the Senate by his Australian Labor Party and Australian Greens political opponents. They much preferred the formulation that climate change was ‘the great moral challenge of our time’ (Rudd 2007) and held out for something much more dramatic. Howard and his legislation were in limbo, the first circle of sceptics’ hell.

Second Circle: the limits of reason

I understood this was the punishment
 For carnal sinners, who let appetite
 Rule reason, and who, once drawn, are now sent –
 Like winter starlings by their wings in flight –
 Across the bleak sky in a broad, thick flock.

In 1988 it would have been hard to argue (successfully) against the establishment of the IPCC (although the Institute of Public Affairs was doubtful from the start). Its model was that commonplace in public policy – an expert panel called to prepare a report for policy makers. This was reason in action, science at its best, replacing the ignorance, self-interest and prejudice of the political class. It was more Woodrow Wilson and the technocrats than the Jacobin approach.

My guide through the second circle of hell was Bjorn Lomborg. His radical approach is to take as gospel all the conclusions of the IPCC, and to build on the promise of reason made at its foundation. Importantly, the IPCC’s climate predictions are typically less catastrophist than portrayed by activists and used in the media (where journalists tend to cherry pick the outliers from the model runs). Swedish doctor and humanitarian Hans Rosling was a man committed to evidence-based policy making and so – despite being concerned about AGW – he was appalled by a conversation with Al Gore in which the latter said ‘We need to create fear!’ To his credit, Rosling replied, ‘No!’ (Rosling et al. 2018).

In Dante's second circle, those who let passion overwhelm reason (like the story of the tragic lovers Paolo and Francesca related by Dante) suffer by being blown about by endless winds ('Here, there, now up, now down, the winds dictate their track').

Lomborg also uses the output of the IPCC climate models as inputs to his cost–benefit analysis (Lomborg 2017). This determines that investments in low-emissions technology should be supported (to produce technology better than what we have now), but economy destroying measures should not:

... remember that any realistic policy that we are going to embark on in the next 50 years will have a trivial impact on climate change and hence also a trivial impact on the risks of these tail events. So, in reality, a lot of people seem to be saying, 'I really, really, really worry about this far out thing that could happen, like extinction of some sort. And therefore, I'm going to pursue very costly but incredibly ineffective policies.' (Roberts 2019).

My colleague Daniel Wild (2018) adapted Lomborg's approach to economic impacts of the Paris Accord on Australia, and calculated that the 'economic cost of Australia meeting its emissions reduction requirement under the agreement (was) estimated to be \$52 billion in net present value terms, over the period 2018–2030'.

Third Circle: the IPCC

And here there was no fire, and nothing burned.
Instead, a dark cold rain falls heavily
Forever. At a rigidly fixed rate ...

The descent into the third circle comes with the onset of doubts about the veracity of the IPCC. This might arise by following the systematic critiques of the IPCC's work, and there is no shortage of those. Aynsley Kellow (2018) has, for instance, pointed out that the IPCC's 'Summary for Policy Makers' – which is edited by committee rather than by the technical specialists who assemble the research – is the result of a deeply politicised process.

Evidence abounds of IPCC perfidy. Simon Breheny (2017) pointed out that between its first (1991) and third (2001) reports (ten years apart)

the IPCC literally ‘ironed out’ the natural ups and downs in temperature, instead preferring neat straight lines and thus eliminating both the Mediaeval Warm Period beginning around AD 985 when the Vikings settled southern Greenland, and the Little Ice Age beginning around AD 1200 when Greenland became too cold for human habitation.

Beyond such analysis, it is good to doubt an organisation like the IPCC from first principles. ‘Mainline economics’ (Mitchell & Boettke 2016) tells us that principals in institutions have incentives just like actors in a marketplace, and we can make predictions based on those incentives. Call me cynical (and people at dinner parties do, in this context), but the IPCC is an example of the Shirky Principle, which is that ‘Institutions will try to preserve the problem to which they are the solution’.

Also, even with a less cynical reading, there is flaw built into the very concept that the IPCC is responsible for ‘government sanctioned assessments’, as Judith Curry (2015) pointed out. These assessments do not account for, or admit:

- ... the very substantial disagreement about climate change that arises from:
- Insufficient observational evidence
 - Disagreement about the value of different classes of evidence (e.g. simulation model output versus observations from satellites)
 - Disagreement about the appropriate logical framework for linking and assessing the evidence
 - Assessments of areas of ambiguity and ignorance
 - Belief polarization as a result of politicization of the science.

Out of such systemic exclusion of evidence is built the apparent consensus.

So far reason is our guide, but Dante’s third circle was reserved for the gluttons, and I think his insight into the nature of sin is applicable. It is more than *ad hominem* to observe that the inaugural head of the IPCC, Rajendra Pachauri (1940–2020), was forced to resign under a cloud of allegations around governance and sexual harassment. He denied them all (Worrall 2016) but, like Caesar’s wife, the head of such an important body should be above suspicion. Yet he served for thirteen years, basking in the afterglow of the Nobel Peace Prize he shared with Al Gore.

Fourth Circle: general circulation models

These money-grubbing ones who from the grave
Arise with grasping fists and foolproof schemes,
And these with hair close-cropped to show they gave
As those took – a two-sided robbery ...

I barely require a guide through the fourth circle, which is scepticism about modelling. The credulity with which the latest outcomes of model runs is greeted never ceases to astound. I wouldn't know one end of a *climate* model from the other, but my own training in economics and finance has predisposed me to doubt.

In my Master of Business Administration (MBA) degree, undertaken in the late 1990s, we learnt the relatively new and fashionable theories that had revolutionised corporate finance. The Black-Scholes-Merton models promised a way to price options (call options, put options) using historic data. This would enable a market of perfect information in which risk could be calibrated (as indeed it can, so long as the future looks like the past). The markets were so impressed by the cleverness of the model that in 1994 they backed a hedge fund known as Long Term Capital Management, in which Robert C. Merton and Myron Scholes were directors and principal advisers on the modelling used to guide investments. As it happened, the fund operated for only three years before the Asian Financial Crisis sent it into a tailspin. Models are only as good as the assumptions and the data fed into them, which don't necessarily scale or interact in predictable ways.

So, Judith Curry was really waiting for me at the entrance to the fourth circle when she published *Climate Models for the Layman* (2017).

There is growing evidence that climate models are running too hot and that climate sensitivity to carbon dioxide [CO₂] is at the lower end of the range provided by the IPCC. Nevertheless, these lower values of climate sensitivity are not accounted for in IPCC climate model projections of temperature at the end of the 21st century or in estimates of the impact on temperatures of reducing carbon dioxide emissions.

How can the decision makers of the world mortgage our futures off the back of a mode of analysis with inherent limitations, undertaken by

people with an institutional bias toward demonstrating a warming trend, whose models can't predict the past let alone the future?

The modellers also have an interest in proclaiming that big data can provide the answers, when they do not have the expertise in physics and actual climate science to generate or test falsifiable hypotheses. As the great Richard Lindzen (Linzen 2019, pers. comm. 21 July) has observed:

... almost all reports of model results are from people who played no role in developing models, and have no idea of their properties and shortcomings. They are pretty much used as Ouija boards selected for their ability to produce ominous results.

Fifth Circle: 'Climategate'

You outcasts from the sky,' the angel cried
 On the ghastly threshold. 'You rejected race,
 Where did you get your overweening pride?
 Why fight against the will none can outface
 And which so often has increased your pain?
 By flouting the decrees of providence
 Some call the fates, what can you hope to gain?

Any sceptic who has descended below Lomborg's second circle knows the experience of being branded a conspiracist as well as a 'science denier' and/or a 'shill for oil companies' (in fact the company I worked for made money from renewables, and even more money supplying the gas to fast-response power plants necessary to compensate for their intermittency; I chose my current job to reflect my beliefs, not the other way around).

The charge of conspiracist is often first launched when I've deployed an institutional argument from the third circle, and the charge is made by those with a touching belief in national and international climate bodies that they have only the 'public interest' at heart. The heirs of Plato (380 BC), they believe in the wisdom of the guardians.

But how was it possible to avoid the charge of being a conspiracist when the 'Climategate' emails revealed that there really was a world-wide conspiracy to (a) bring to the fore only worst-case predictions,

(b) suppress research which did not fit the narrative, and (c) seek to destroy the careers of those who wished to research and publish genuine but non-conforming research?

It's hard to imagine a reader of this book unfamiliar with the Climategate emails, a leaked trove of emails, but if you are such I commend to you the compilation published by the Australian-based Lavoisier Group, co-founded by the indefatigable Ray Evans (Costella 2010). Here is a sample email from Keith Briffa, as he looks over some data provided in good faith by an American:

The data is of course interesting but I would have to see it and the board would want the larger implications of the statistics clearly phrased in general and widely understandable (by the ignorant masses) terms before they would consider it not too specialised.

'Larger implications' being code for 'we're all gonna fry!' – an approach deemed necessary for the 'ignorant masses'.

Hugh Morgan, a *bona fide* businessman and sceptic, puts it well in his introduction:

... a very small cabal of climate scientists, based at the University of East Anglia and at Penn State University, were able to control the temperature record fed into the IPCC reports and which comprised the foundation on which the whole global warming structure was based. The only data base which they could not influence was the satellite measured temperature data which John Christy and Roy Spencer, from the University of Alabama, had established from 1979 on.

That this was a real conspiracy is beyond argument. The word 'conspiracy' is used by the players themselves. In any conspiracy there is a tight inner core and then successive rings of collaborators, who accept the leadership of the central core.

And so I found myself descended to the fifth circle, rejected and labelled a conspiracy theorist for pointing to an actual, admitted, conspiracy.

Sixth Circle: peer-reviewed research

Don't you recall how Aristotle shows,
In the *Ethics*, that three different kinds of state
In humans breed all crimes that can oppose
Themselves to heaven's will? Incontinence,
Malice and brutishness?

At the hypothetical dinner party, it is somewhere between the mains and desserts that you'll be told you are a 'science denier' because 'the science is settled'. There are of course strong methodological arguments against the notion that science is, or can be, settled. But it is usually hopeless trying to point out that the 'consensus' of '97% of scientists' is nothing more than a meme, artfully established and repeated *ad nauseam*.

The claim was originated by Cook:

Among abstracts (in peer-reviewed literature) expressing a position on AGW, 97.1% endorsed the consensus position that humans are causing global warming. (Cook et al 2013)

My objection is always that even if true, this does not establish the key question we might ask those scientists, which is, 'what do you mean by "causing"?''. As Andrew Montford found:

- ... the consensus referred to is trivial:
- that carbon dioxide (CO₂) is a greenhouse gas;
 - that human activities have warmed the planet to some unspecified extent.
- (Montford 2014)

In any event, no sane person puts complete faith in peer-reviewed research. As Dr Peter Ridd – who was sacked by James Cook University for questioning some of the more alarmist claims of his colleagues – said on my podcast:

Scientists will go on about peer review as though it's a dozen scientists (who) pore over the work for a month on end and they repeat the experiences ...

[In fact] you read the work maybe for a couple of hours. You might spend a whole day on it, [but] usually not ... You can't do the experiments. You're not being paid for it.

And that's peer review ...

[T]his is not proper quality assurance, and they're finding that when you actually try to replicate peer-reviewed literature, it tends to be wrong around about half the time. (Berg & Hargreaves 2019)

John Ioannidis (2005) started something big with his paper on research in medicine, 'Why most published research findings are false', and now there is a full-blown debate (although perhaps not in Australia, or in climate science) about the replication crisis in science, described as a 'methodological crisis in which it has been found that many scientific studies are difficult or impossible to replicate or reproduce'.

With my own openness to institutional explanations, and the application of the public choice theory embedded in mainline economics, I was always going to be concerned with the potential of big government to skew big science.

Seventh Circle: data homogenisation

Your star, if always by your star you steer,
You can't fail to make glorious harbour. Had
I sensed this rightly in your life so fair,
And not too soon died, seeing Heaven glad
To help you would have made me take more care
To aid your work.

Dante referred to the last three circles of hell as the *City of Dis* – a dark world of imaginative torments ruled by Satan, a city surrounded by steep walls.

These walls deter many, even among the group of sceptics who might have reached the sixth circle. My colleague Jennifer Marohasy has lamented that most sceptics doing their own critiques of 'consensus' climate models will use the official temperature records while reluctantly acknowledging they may be an invention of the very small cabal of climate scientists, based at the University of East Anglia, and their colleagues.

It has been a small but dedicated group of scientists and journalists – such as Jennifer Marohasy, Tony Heller, Jaco Vlok, Jo Nova, Anthony Watts and Tom Quirk – who have delved deep into the mysteries of

how raw temperature data is ‘homogenised’ into the official temperature records, and the warming bias that results (Vlok 2019; Nova 2017; Quirk 2017; Marohasy & Abbot 2016; Marohasy & Abbot 2015; Marohasy 2017b).

The necessity for some form of ‘homogenisation’ is not contested; no one could argue that, say, moving a weather station is not a break in the series, or that some account shouldn’t be taken of the urban heat island (UHI) effect (Quirk 2017). But they remodel in the wrong direction, as Anthony Watts explains:

All the key institutions apply adjustments to the actual measurements, which has the effect of exaggerating, rather than correcting for, the urban heat island (UHI) effect. (Watts 2017)

Further, these same institutions keep cooling the past even when there have been no further changes to the equipment or location of the weather station. This is the situation at Rutherglen and Darwin in Australia, for example, where a cooling trend in the record before 1950 was changed to a warming trend in the first official homogenisation, and then this warming trend further increased with each new iteration of the Australian Climate Observations Reference Network for Surface Air Temperatures (ACORN-SAT), as Marohasy explains in Chapter 16 of this book.

I know firsthand how difficult it is to engage with the critique. For my own part, I first read Marohasy’s material in 2016 and found it difficult to follow. At this stage she had been working on it for five years and was still having trouble convincing even members of the global sceptics’ conspiracy to acknowledge the problem, lest they would have to begin with the raw temperature data themselves and engage in much more tedious analysis.

The walls of Dis are steep, too steep even for many sceptics who would rather walk with Lomborg in the second circle, or perhaps with Peter Ridd and John Ioannidis in the sixth circle, but it rewards the effort. Once inside, you’ll never again trust the official climate record, which is homogenised to accord with the outputs of the climate models. I commend to you the work of Marohasy and her collaborators as

detailed in Chapters 5 to 10 of the previous book in this *Climate Change The Facts* series (Marohasy 2017a).

Eighth Circle: raw temperature records

With these ten demons, savage entourage
Indeed, we went: but you know how things are –
Pray with the saints, drink with the sots.

There I was, comfortably in the seventh circle, thinking there could be nowhere further to slide. We couldn't trust the homogenised data, but at least the raw temperature data was clean, wasn't it?

In September 2017, the Australian Bureau of Meteorology published a 71-page internal report entitled *Review of the Bureau of Meteorology's Automatic Weather Stations* (Bureau of Meteorology 2017). The report begins by explaining that the Bureau has 695 automatic weather stations spread across Australia, and that the data from this network underpins all of the services the Bureau delivers. The report then goes on to admit that two of these weather stations are 'not fit for purpose' – Goulburn Airport and Thredbo. The Bureau subsequently accepted that many weather stations across Tasmania, Victoria and the ACT were also not relating temperatures below -10°C (Lloyd 2017a).

The review (Bureau of Meteorology 2017) was forced by Marohasy who had been getting up in the early hours of the morning to compare the temperatures measured at the coldest part of the day versus the values archived by the Bureau in the Australian Data Archive for Meteorology (Lloyd 2017b). In the process she had evidence to prove that a strict limit of -10°C had been set (Lloyd 2017b). There would be no more 'record' cold days, because there were now processes to correct *even* the raw temperature data (Marohasy 2017c). That was until this limit was lifted, and, as a consequence, the temperatures plunged at Thredbo (Lloyd 2017c).

Since 1996, the Bureau has been transitioning from manual recordings of daily temperatures to the automated system using electronic probes, with the probes more responsive to fluctuations in temperatures and, therefore, likely to record both hotter and colder for the same weather.

You might think it prudent to have maintained the two methods of measurement alongside each other for some period of time, to determine whether any biases were being introduced that might, say, exaggerate a warming trend. This was done at 22 of the 695 locations with new Automatic Weather Stations (Bureau of Meteorology 2012) generating parallel measurements. That is, an alcohol in glass thermometer used for manual measurement of minimum temperatures and a mercury in glass thermometer used for manual measurement of maximum temperatures were recording temperatures in the same Stevenson screen as the new electronic temperature probes. But the equivalence, or otherwise, of temperatures from these different measuring systems appears to have never been established by way of any report or technical paper published by the Australian Bureau of Meteorology. Furthermore, the reams of manually recorded data have never been digitised or analysed.

On 25 August 2015, Marohasy first asked for access to the parallel measurements for Wilsons Promontory lighthouse. On 16 October 2017, John Abbot made a formal Freedom of Information (FOI) request for the parallel data for not only Wilsons Promontory, but also the desert location of Giles for where there should be parallel data for the last 25 years, and also Mildura (an agricultural region in western Victoria) for which 34 years of parallel daily data exists.

It took the intervention of the then Federal Minister for the Environment, Josh Frydenberg, in order for the Mildura parallel data to be released, and only then because the latter was under pressure from the highly influential (and informed) broadcaster, Alan Jones. It is telling that the information released was in the form of 10,000 separate scanned records, which at no time have been tabulated by the Bureau. That task fell to Marohasy, who has established that the current electronic probe at Mildura often records 0.4 °C hotter for the same weather and that first electronic probe recorded cooler, by a statistically significant 0.3 °C (Marohasy 2018). The parallel data for Wilsons Promontory, Giles and the other eighteen locations for which it must exist according to one of the Bureau's own technical reports (Bureau of Meteorology 2012) is still being refused, most recently in correspondence to John Abbot dated 14 April 2020.

While I am not qualified in any of the relevant technical disciplines, I *am* a former Manager of Sustainability acquainted with the concept of data assurance. For the sustainability reports of the type I assisted in producing, the gold standard was external assurance by a reputable authority. In this case, we observe that the Bureau has chosen to use its own standard rather than the global one, and there is no independent verification that it actually applies that standard. This is acknowledged on page 11 of the AWS review report:

To address measurement quality, the WMO recommends that national meteorological agencies have ISO 17025 accreditation of key measurement processes. Accreditation covers the technical procedures and processes that ensure the traceability and integrity of measurements, as well as the technical competence of the staff making the measurements. While the Bureau does not currently hold ISO 17025 accreditation, it has internal processes, technical procedures, and measurement traceability and integrity that are largely in accordance with ISO 17025 requirements. (Bureau of Meteorology 2017)

In the absence of such quality assurance and real research into the different results arising from switching from analogue to digital temperature measurement, no reliability can be placed on any claim to 'record hot days', or on an accelerated warming trend or anything similar.

Ninth Circle: escaping hell

Ah, Genoese, you that know all the ropes
Of deep corruption yet know not the first
Thing of good custom, how are you not flung
Out of this world?

What you've read so far is pretty much my descent into climate scepticism. It is true that I have made new friends along the way, but there is no doubt it has contributed to a form of social and professional hell. Nothing like what the sacked Professor Peter Ridd, formerly of James Cook University, may have suffered, to be sure, but not fun either. Last year, it was with some regret that I had no choice but to walk out of a dinner with a friend of 30 years' standing who not only thought I was wrong (his prerogative) but that I was exercising bad faith and was, essentially, bad.

But the new friends can also be problematic. Inside the City of Dis, in the ninth circle, I find those determined to prove to me that CO₂ cannot possibly be a greenhouse gas, and that any theory that it does so violates the second law of thermodynamics, or something. Some are labelled, or label themselves, ‘Dragon Slayers’, for a reason I learnt once but can’t seem to remember.

My physics and chemistry don’t extend beyond first-year university, so I have difficulty challenging them, but my lack of qualifications also means I can’t agree with them, either. They see me as a ‘luke warmist’ – someone who acknowledges that the Earth may be warming (probably is, very slightly, at the moment) and that CO₂ *could* have something to do with that (most likely, but a small contribution), and so I am. And I further believe catastrophist arguments are built on shoddy data and even shoddier modelling, and that nearly every idea that has been proposed for radical action is very bad indeed.

So, just as Dante moved past the stationary figure of Satan, moored at the bottom of hell, I will do the same and reach towards mere *Purgatorio*, the middle place that provides the opportunity for redemption found in the next book of Dante’s *Divine Comedy*. There, real data informing real science and real policy analysis will lead to much better decisions about the path forwards. I hope for what Dante experienced:

And up we went, her first, I second, to
 The point where I could see an opening.
 And it was there I saw, when I looked through,
 A sight more wonderful than anything –
 Some of the loveliness revealed to men
 By Heaven. We could see the stars again.

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