Underlying trends and Neglected Narratives in the Planetary Crisis

Simon Kerr - Center for Freshwater Ecology, Life Sciences,
La Trobe University ... among other things

For the record, I am trained in sociology, then natural resource management, and then political ecology. A social scientist with a large dollop of eco-philosophy lurking somewhere in my brain.

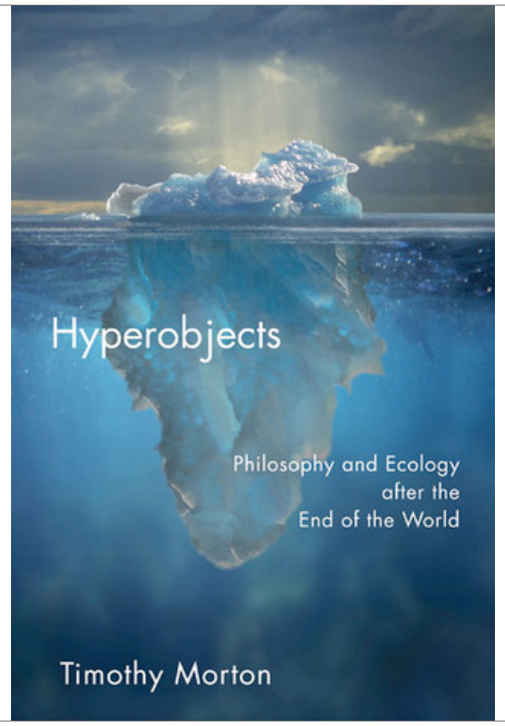
Underlying Trends and Neglected Narratives in the Planetary Crisis

I have spent the last 25 years learning about climate change
Partly it is through compulsive reading the science, humanities and social science literature. My professional life working across multiple disciplines, much in natural resource contexts and 10 years in the arts/music/climate space with *Music for a Warming World*.

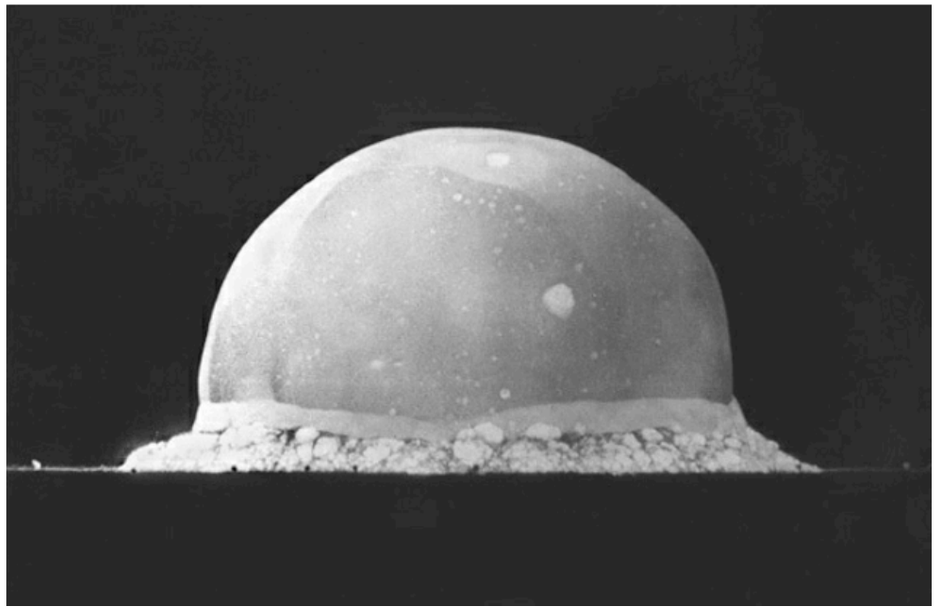
These are some brief reflections about what I am seeing; big picture snapshots

Mostly, it is about change ... a theme I have spoken and written about for far too long. I am struck, if not disorientated, by see how time horizon has shrunk – when I first started paying attention the science was calibrated to 2100. Now, it is ... now.

So this is an attempt to, yet again, rethink where we are at in this weird world of climate disorientation.



Some people like Tim Morton, some, not so much. Personally, I find their work helpful.
Hyperobjects are things that are too vast and fundamentally weird for humans to wrap their heads around. Black holes, the internet, solar system, climate, nuclear explosions, ...



Trinity test at 0.016 seconds, July 16, 1945. Los Alamos National Laboratory.

Trinity Nuclear Test: The first detonation of a nuclear bomb by the US military. For some time this picture was banned, since it was considered far more provocative than the habitual mushroom cloud. The tiny shapes on the horizon are trees. If you have watched 'Oppenheimer' you will glimpse, but only ever glimpse, what a Hyperobject can be ... Hyperobjects teach us something about the world we are now in or rather, the end of the world that began with Descartes and led to modern science and much of contemporary social life.
Image from Morton's book.

“The world”—a place that revolves around human beings and is defined by what we can see and feel—is simply too small to cope with reality anymore. Faced with massive forces whose impacts defy our physical perceptions, from global warming and extinction events to the Covid-19 pandemic, our parochial idea of the world falls away like the set of a movie being torn down.

Laura Hudson, *At the End of the World, It’s Hyperobjects All the Way Down*, Wired, Nov 16, 2021

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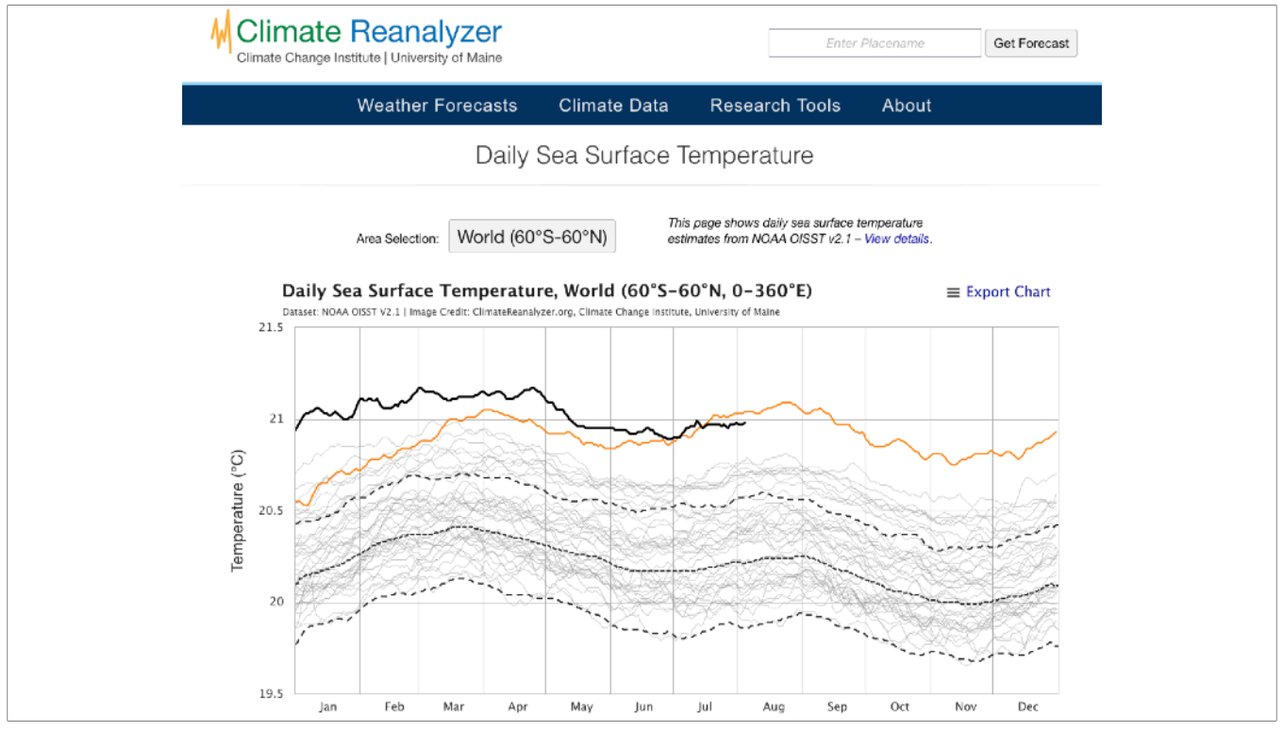
Humans’ existing structures, institutions, and problem-solving methods are revealed as not only trivial in scale to the hyperobject, but also mismatched towards the true nature of the problem. This provides a key insight––the hyperobject demands a hyper-response; a solution that is not moored to existing institutional, governance, or conceptual practices

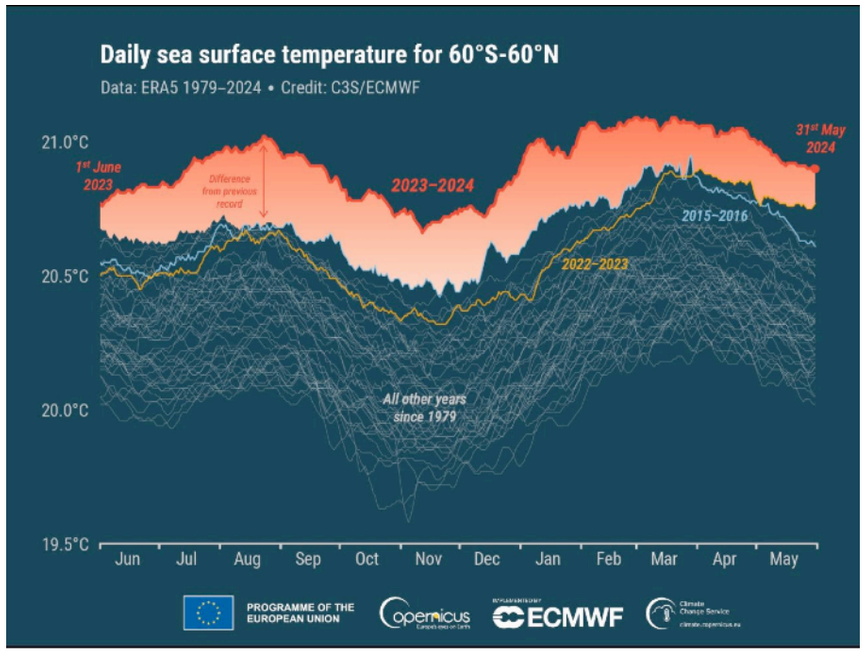
https://www.wired.com/story/timothy-morton-hyperobjects-all-the-way-down/

There is a growing sense that things are nor working as they used to.
We are now in a discontinuity (Alex Steffen) – an unstable and difficult to predict future
Until the development of data records, algorithms and statistical analysis, global warming was invisible. We only had weather.
The word *hyperobject* offers a useful shorthand for why threats like global warming are so difficult to understand or accept: They threaten our survival in ways that defy traditional modes of thinking about reality and humiliate our cognitive powers, a disorienting shift that sends many people reeling into superstition, polarization, and denial.
(Laura Hudson 2021 story in WIRED).
We are inside the climate system, this hyperobject

A Quick Climate Update



Large spike in temperatures - see graphs



https://twitter.com/WeatherProf/status/1798753779002818953/photo/1

This shows the quite remarkable jump in sea surface temperatures, which impact terrestrial temperatures, from the previous record (the orange gap).

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WORLD VIEW | 19 March 2024

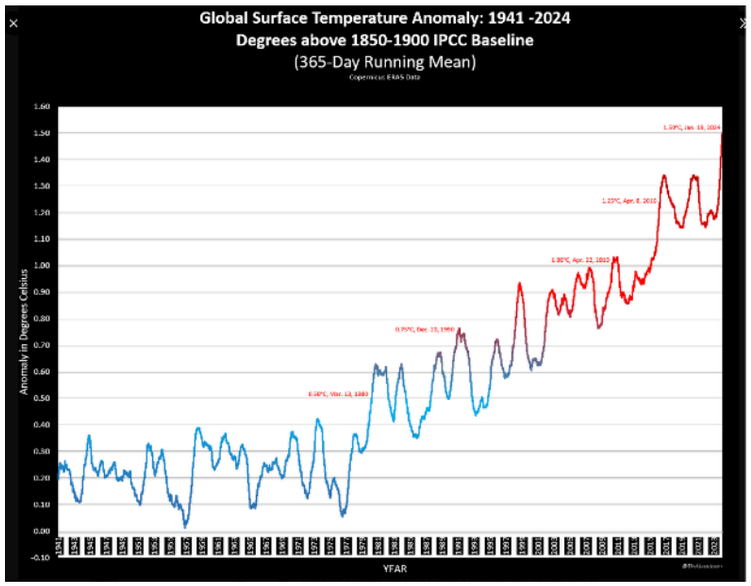
Climate models can't explain 2023's huge heat anomaly — we could be in uncharted territory

Taking into account all known factors, the planet warmed 0.2 °C more last year than climate scientists expected. More and better data are urgently needed.

By Gavin Schmidt

When I took over as the director of NASA's Goddard Institute for Space Studies, I inherited a project that tracks temperature changes since 1880. Using this trove of data, I've made climate predictions at the start of every year since 2016. It's humbling, and a bit worrying, to admit that no year has confounded climate scientists' predictive capabilities more than 2023 has.

Climate scientists are currently investigating the quite stunning jump in recent global temperatures to see if this is an anomaly or indication of acceleration of hearting. My money is on acceleration ... but the jury is still out.

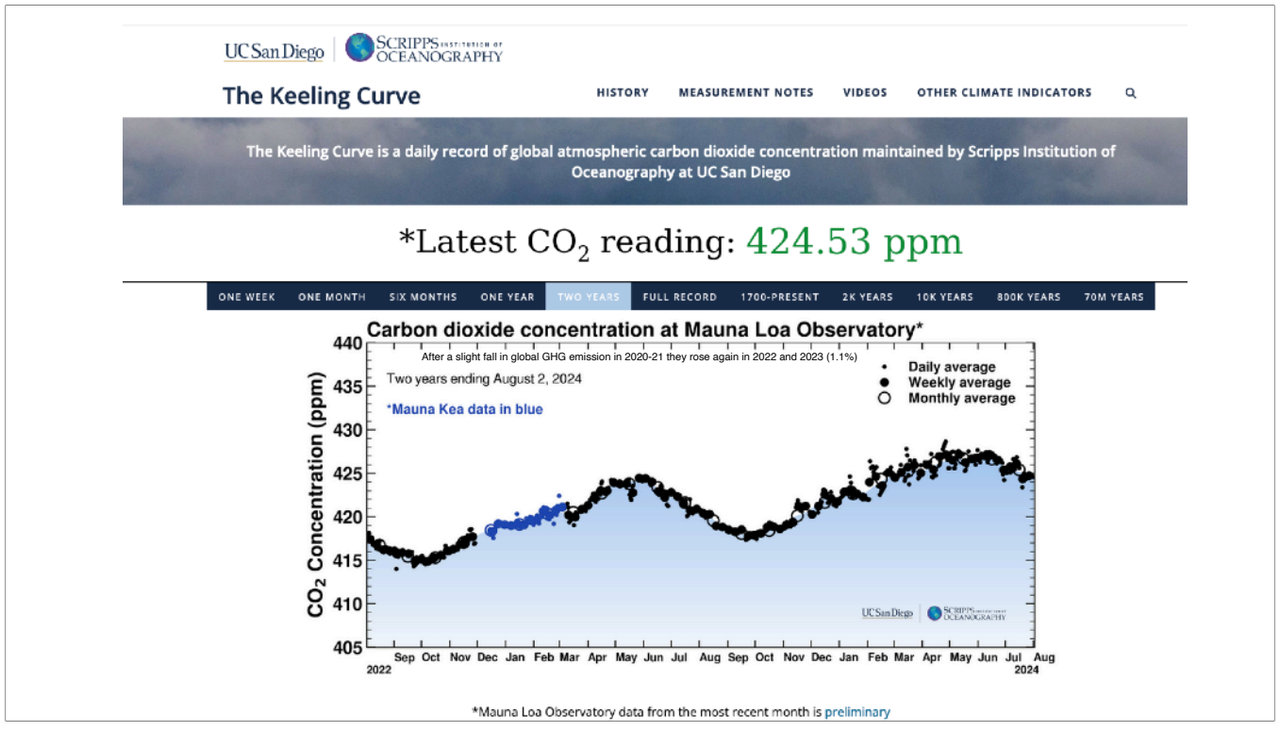


For the first time in recorded history, the 365-day running mean reached the Paris limit of 1.50°C in ERA5 data. The graph below shows the 365-day running mean ... Data: https://climatereanalyzer.org/clim/t2_daily/

https://twitter.com/EliotJacobson/status/1750949313067516184/photo/1

Another of the many graphs I could have showed, indicating their weird and crazy jump in global surface temperatures (that is, sea *and* land temperatures combined). This does not yet mean we have passed the Paris target of 1.5°C. That would require several years of consistently high temperatures. But there is now little doubt the 1.5°C goal is almost certainly kaput.

What about GHG emissions?



After a slight fall in global GHG emission in 2020-21 they rose again in 2022 and 2023 (1.1%). While the rate of increase in global emissions has slowed since 2015 (Paris agreement), they are still rising. However they are close to the peak and are expected to start to bend on downwards in then next 2-3 years. But all far too slow to halt increasingly dangerous temperatures.

UNEP 2023
Emissions Gap report

“Temperatures hit new highs,
yet world fails to cut emissions (again)”

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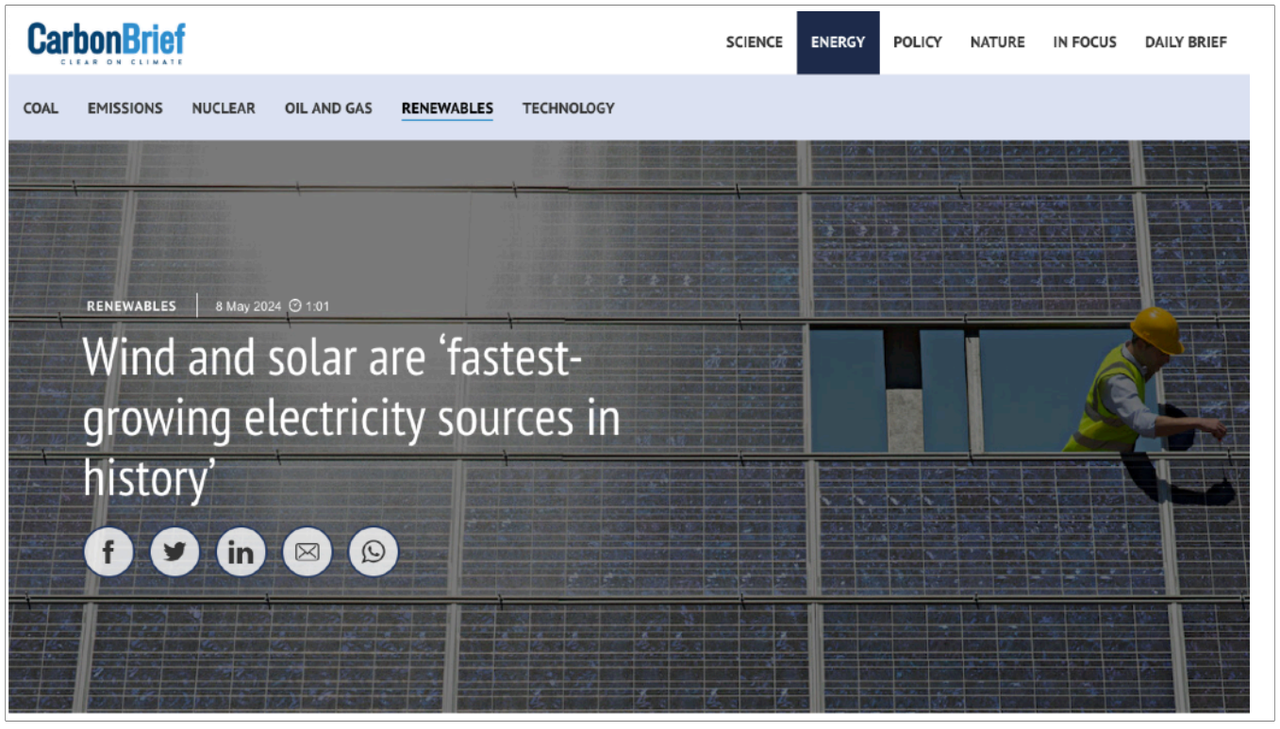
2020-21 they rose again in 2022 and 2023 (1.1%)

Self explanatory

Renewables and Energy



This is a positive trend and is in fact extraordinary. So while emissions are trending up marginally, this is a counter trend that will, sooner or later, start the drive the emissions trajectory downwards.

Regardless of whether the world heads for net zero or it ultimately proves a stretch too far, the era of **fossil fuels' dominance is coming to an end**. Even if the transition is propelled by economics alone, with no further policy drivers to help, renewables could still cross a 50% share of electricity generation at the end of this decade.

Bloomberg New Energy Outlook 2024

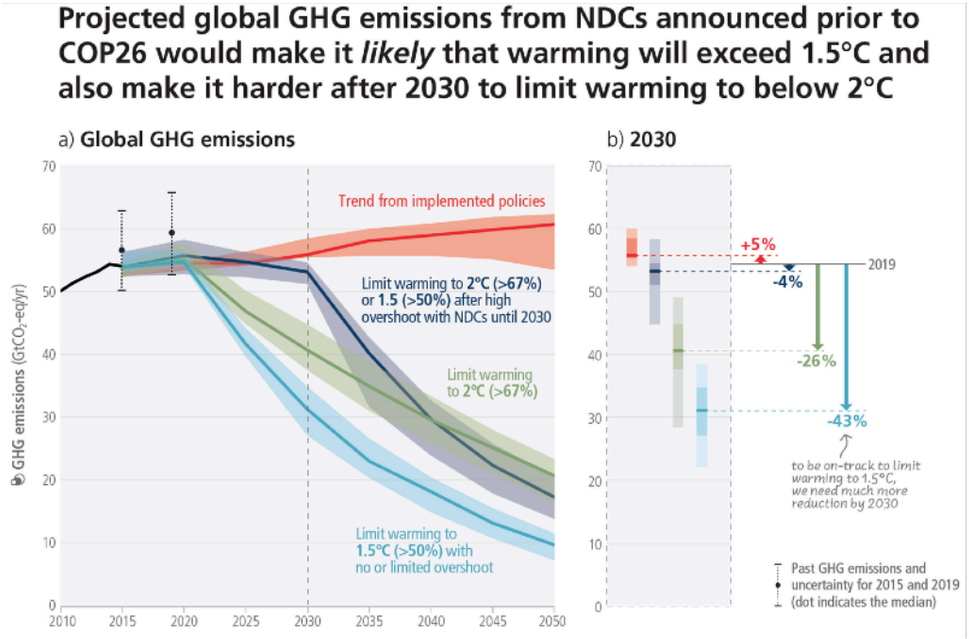
https://about.bnef.com/new-energy-outlook/

this is another important piece of the puzzle ... but while FF dominance will end, it will not go down without a fight. Google 'predatory delay'. Think of it this way; it is now the FF industry that has its back against the wall (despite recent super high profits), because they are fighting for a future they cannot win. What they produce is just too expensive.

There is a **structural shift** in energy systems –
it is **all about speed now**

Power sector emissions must plunge by 93% by 2035 to create headroom in the carbon budget for other sectors.

93% is a herculean task. And this is just energy production. It does not account for the very large contribution from agriculture, with a recent estimate putting animal agriculture's contribution at 16.5% of global emissions (https://www.mdpi.com/2071-1050/13/11/6276) . When I was born the world slaughtered about 7 billion animals a year. Now it is around 80 billion. That is, by any calculation, too much methane and other GHGs for the planet to manage, even with a bit of seaweed supplement for cows!! This would be significantly resolved with a plant based diet. Just saying!



https://www.ipcc.ch/report/ar6/syr/downloads/figures/IPCC_AR6_SYR_Figure_2_5.png

Ignore the numbers, look at the scale of transition needed.

The stories we tell
ourselves ...

Neglected narratives(?)

1) Can’t ‘solve’ climate change and return to a slightly 'greener' version of the past. That ship has now sailed. Yes, we can reduce future warming and how hot it will ultimately get, but this is now a predicament we have to learn to live with, living in the long emergency.

2) **It is clear now that there is nothing we can do in Australia that will stop the dangerous warming of the earth**. Australia’s current contribution to global GHG emissions is 1.3% (unless we include scope 3 emissions at about 3.7% to make it 5% of global emissions). But even at 5%, if Australia went to zero emissions tomorrow, including banning all exports of FFs, the difference it would make to global temperature if in the margin of error of future projections, In other words, negligible. **Australia’s future climate is now no longer in our direct control.** .
(Yes, we must still reduce emissions, we have a moral obligation to do what we can and there are good economic reasons for this as well)

Neglected narratives(?)

1) Our predicament cannot now be ‘solved’

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2) Australia cannot stop dangerous warming

“Decisions about how soon global carbon emissions reach a peak and how quickly they then decline will be made not in Canberra but in Delhi, Moscow, Washington, Brussels and, above all, Beijing”

Clive Hamilton and George Wilkenfeld, 2024,
Living Hot: Surviving and Thriving on a Heating Planet

Neglected narratives(?)

1) Our predicament cannot now be ‘solved’

2) Australia cannot stop dangerous warming

There is a significant gap between the scale of environmental challenges we face, and our current level of preparation to address them (Alex Steffen)

Climate Change and Environmental Degradation:

The world is experiencing increasingly severe and frequent climate-related events such as heatwaves, droughts, floods, and storms. These events highlight the escalating impact of climate change.

Despite decades of scientific warnings and international agreements aimed at reducing greenhouse gas emissions, global emissions continue to rise, exacerbating the climate crisis.

Societal Unpreparedness:

Many societies and governments have not sufficiently invested in climate resilience and adaptation measures. This includes infrastructure upgrades, emergency preparedness, and policies that mitigate climate risks.

The lack of preparedness is not just about physical infrastructure but also about social, economic, and political systems that are not equipped to handle the rapid changes and disruptions caused by climate change.

I am doing work in the Murray Darling Basin and while I can see some places surviving, even thriving, many will die given the impacts of significant shifts in climate and the disruption that ensues.

Insurances issues will undermine many people’s economic wellbeing and many wealth bubbles will burst in the near future.

If we do not have much control of the future climate (a tough pill to swallow admittedly, though I think hard to argue against) what do we have control of? Quite a lot is seems!

Adaptation is now the new priority – but there are limits – we will have to change

Learning to live in the long emergency

It is very material …

Neglected narratives(?)

1) Our predicament cannot now be ‘solved’

2) Australia cannot stop dangerous warming

3) We are about to encounter the reality of our unpreparedness

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3) We are about to encounter the reality of our unpreparedness

4) A new priority – a resilient society and hardened systems

Neglected narratives(?)

Just a quick comment that we are already seeing climate induced migration, and that trend will spiral rapidly as many people look for a safer place to live. This includes many in Australia. They will all need new homes, and those homes need new infrastructure and services. **We have little choice but to build this new future.** I predict we will see an enormous building boom in the next 2 decades. If that doesn't happen, our cities (which is where most people will move to) will be a tough place to live.

Neglected narratives(?)

5) Migration and the Big Build

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6) Grappling with difficult realities: An ‘orderly transition’?

An ‘orderly transition’ is no longer possible

Alex Steffen - ‘An "orderly transition" is no longer possible’
https://alexsteffen.substack.com/p/an-orderly-transition-is-no-longer?utm_source=publication-search

I was wish this was not true, but I just can’t see how, having left our run so late, that any transition we undertake will be the orderly managed process many of us (including myself) have been trained to expect and plan for. For the academic community, the big question is how we can do this **at the pace needed** (demanded by the acceleration of climate disruption) **and still attend to justice**. I suspect we will need to rapidly reorganise our cognitive maps of the future and redefine what climate justice is.

An ‘orderly transition’ is no longer possible

The journey ahead will not be predictable, optimized, collaborative, nor restore a sense of continuity to our society... **we've delayed too long**.

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How holding to the idea that an orderly transition is our only path forward actually **makes the work of predatory delay by slow interests easier**.

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5) Migration and the Big Build

6) Grappling with difficult realities: an ‘orderly transition’?

7) Justice might now mean ‘speed of change’

Climate justice is foundational to many of us. The delays in response have already set the seeds for massive ongoing injustice.

There is **no scenario I can think of where delay in action will make a safer world** with fewer long terms costs.

The estimations of trade-offs are greatly inflated (we win far more from faster action at any speed than we stand to lose, because the costs of inaction are so massive and irreversible). Keeping a more habitable planet is unquestionably a better deal than any other alternative on offer.

Finally, we misunderstand the degree to which **faster speeds of action unlock more opportunities and advantages for humanity**. Speed of action involves not just costs of action, or the benefits of avoided losses, but the possibility of truly transformative gains.

Neglected narratives(?)

5) Migration and the Big Build

6) Grappling with difficult realities: an ‘orderly transition’?

7) Justice might now mean ‘speed of change’

8) Fracturing of long held professional practices and skills

published 2023-2024	sustainability	climate action	resilience	adaptation
Rethinking Academia in a time of climate crisis	5	7	0	1
Academic capture in the Anthropocene	22	43	0	3
Agents of (un)sustainability	54	5	0	3
Harvard climate education report	18	1	0	2
No research on a dead planet	10	2	1	0
	109	**58**	**1**	**9**

Finally, I offer some thoughts on the **institutional implications for Universities.** Above is a back of envelope look at 5 articles I have in my files on Universities and sustainability/climate action type themes. See where the emphasis is! Lowering GHG emission, while essential. will not make Universities more adaptive as institutions. We must pivot strongly to adaptation.

What we face is not just another environment issue (yawn!); It is a **mutation of our world** (Bruno Latour).

Oddly, I am terrified and overwhelmed, but also excited by the future – because if we pivot to preparedness then we and our kids have a **decent chance of learning to live in this long emergency and hotter world.**

Thanks for listening

Time for some dialogue

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