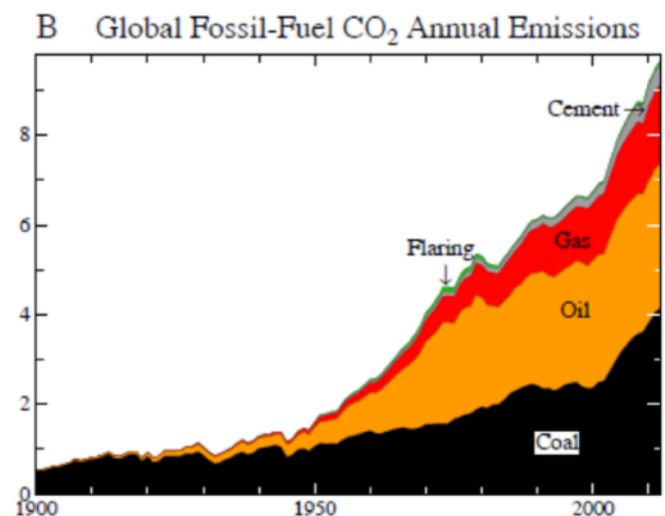


Capitalism and the Climate: or ... why has the climate problem been so hard to fix?

I'm starting this essay with a point of view - namely that the response of human societies to the climate problem has been an extraordinary anomaly, and needs some explanation. In case you have any doubts about this, consider the following:

- Our understanding of the climate problem is (roughly speaking) as complete and confident as was our knowledge in the 1950's of how germs cause disease. That is to say, back then, nobody could have been aware of the facts and reasonably denied the germ theory. Everything we've learned about microbes since then has just strengthened and deepened an idea that was, for all practical purposes incontrovertible 60 years ago. Same with climate science. Every year, puzzles get solved, discoveries made, measurements improve, and predictions sharpen, and this idea - that various human economic activities are changing the climate - becomes more solid, detailed and complete. The intellectual absurdity of denying this is about the same as saying that measles is not caused by a virus.
- Anyone who cares to look around can find evidence of the changing climate for themselves. Eroding shores and coastal flooding; erratic and extreme weather; thawing Arctic; shrinking glaciers; extraordinary heat waves, and lots more. If you've got the right gear and know-how, you can measure the accumulation of heat in the planet's surface quite precisely; you can track the steady rise in CO₂ concentration in the air, and acidity in the ocean.
- Very clever studies tell us a lot about how Earth's climate behaved in the past - how much the sea rose when it was warmer, and how the temperature responded to increased CO₂. Because this knowledge is empirical - that is, it comes from observations rather than hypotheses - it doesn't depend on the accuracy or otherwise of climate "models".
- Despite knowing about this problem for at least 30 years, and being fully aware of the cruelty and injustice of leaving it for our descendants to cope with, we've done remarkably little to fix it. 30 years ago, if we'd made up our minds, it wouldn't have even been very hard or expensive. But we didn't, and until the Paris agreement there was very little to show for all the concern and all the talk. Emissions - the thing we have to stop - just kept rising as if there were no problem at all.



from: Hansen et al, 2015. Plos One 8, 12, e81648

- Many explanations have been offered to account for this perversity. They are all discussed in detail in George Marshall's fascinating book; but essentially, they come down to psychology and cognition.¹ This problem is special: it doesn't frighten us the right way - or, it frightens us too much, so we look away. This is certainly true, as George shows. We'd know exactly how to respond if it were discovered that the North Koreans were, after all, causing the climate problem by some fiendish trick. It's been said that our paralysis is somehow related to our complicity. Knowing at some level that we are all contributing to the problem by just doing what we do every day - this knowledge erases our motivation and makes us (as Saul Griffith ruefully says)² uneasy hypocrites.
- As well as these, there are good reasons to blame some of our institutions - politics and the entanglement of politics with business. But here, we have a real conundrum ... there don't seem to be any good guys. No political party (at least not in the rich world, where it would count most) has articulated or enacted a policy that is even close to what is needed. It's exactly as if the problem were just too hard for everyone.

Think about this for a moment and it should seem strange. Why would parties that live by their progressive agenda be unable to design and promote a climate remedy consistent with our best scientific understanding? You would think this project ought to be well within the capacity of a modest organisation - after all, the scientific stipulations are all quite clear, and a remedy could be sketched on one page. But if there's one thing typical of every proposal it's timidity. Just as if our decision-makers, on learning of the urgency of the problem, reach for the hobbles instead of the whip. But why?

Personally, I can't see that this is fully explained by the unhealthy co-dependency between corporations and governments - though that certainly makes things harder.

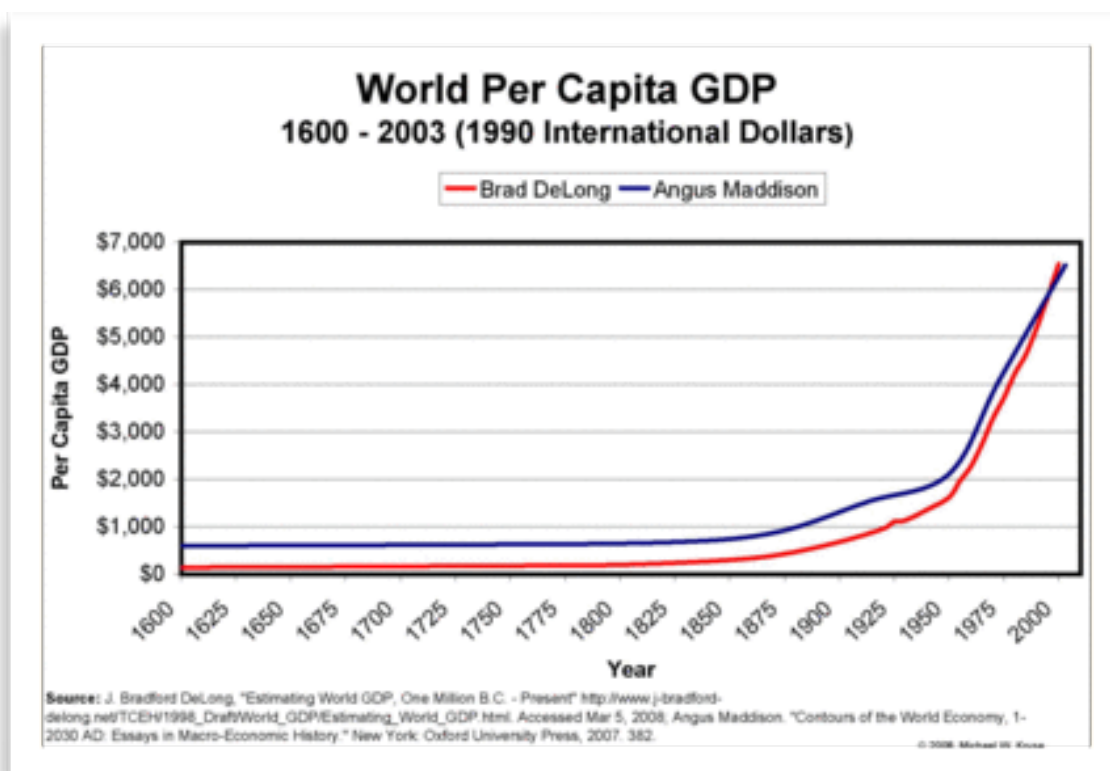
If that were the reason, we'd be entitled to impugn the integrity of all politicians - but that's not what we see. It turns out the best informed and most concerned policy-makers are no more capable of confronting this thing than their lukewarm or corrupt colleagues are.

And well-intentioned business people are just as constrained as politicians. The ambition of "greening" capitalism has been attempted many times. Some eco-friendly business projects have definitely had more to do with appearances than substance, but even the most earnest ones have hardly been able to make a significant difference to their business' effects on the climate problem or any of the other grave ecological consequences of globalised corporate capitalism. Examining instances of this failure, as several authors have done, leaves one with an impression that in each case, ambition was thwarted either by something in the market, or by resistance in their organisations.

And this thought brings us to what I believe is a core insight. Undoubtedly, the climate problem has been caused by the normal operation of the economic system we call industrial capitalism. All the sources of heat-trapping gases - fuel combustion, deforestation, mechanised agriculture, industrial processes, mass consumerism, and the rest - are due to it. They are not avoidable accidents, but essential products of its success. Our own great prosperity and comfort, and the damage to Earth's living surface have the same source.

And not only is modern capitalism a powerful polluter, it is a voracious consumer. And its appetite is both vast, and insatiable. The system cannot stand still, but must be constantly enlarging and renewing itself. Its nature is restless, inventive, and hungry. And it induces these qualities in us all, preferring competition over cooperation, consumption before satisfaction, and wealth instead of fulfilment.

Students of capitalism have understood these characters in the system for at least a century and a half. All that can be said in its defence is that it has certainly produced a vast increase in well-being for countless millions of people - and we really do not know of any other set of economic arrangements that could have done the same - or any that could replace it. This is (as far as I know) indubitable. Seen this way, it has been an enormous achievement and this author, and probably all of his readers are its beneficiaries.³ It's when we come to consider the costs of that success that things get messy. That's where we should find some insight.



Two estimates of the growth of average wealth since 1600 AD. All such studies come to much the same conclusion: "economic growth", the magic that makes us prosperous, began with the industrial era, and accelerated remarkably after World War II. We live in a kind of bonanza, unique in history, and unrepeatable.

Capitalism, like an organism, must grow to survive. As far as any amateur like myself can tell, this is accepted as a fact by (nearly) all economists, and has been since the founding of the discipline. The system can survive periods without growth, or even contraction, but not for long. It only produces benefits when it is expanding. Otherwise it is in a kind of crisis in which unemployment and devaluation cause lots of damage. All governments and all politicians know this. Not a single one of them ever advocates a course of action that would interfere with the growth of the economy - unless it is the kind of adaptation that's designed to eventually induce more growth. Capitalism is after all an adventurous way of doing things and absolutely requires the sort of upheaval that Joseph Schumpeter famously called "creative destruction".

The imperative to continually increase economic output means consumption of resources must tend to grow over time too. And because accumulation of capital is the one irrevocable motive of the system, there has to be a ceaseless search for ways to cut the cost of those inputs - by using cheaper labor and materials, "externalising" liabilities, seeking subsidies, monopolising markets, and so on. Over time, the effect of this relentless pressure is a trend to concentrate more and more of the profits of their enterprises in the hands of the owners of capital, and at the same time debilitate all manageable sources and contributions.

That's why we see profits rise at times of unemployment when wages fall; why, in the globalised economy, enterprises move to places where costs are lowest; why the most cost-competitive enterprises tend to forbid labor organisation; why abandoned mines rarely get rehabilitated by their owners - and generally, why environmental damage is never counted as a cost of doing business unless the law requires it.

As a system, then, capitalism is bound to produce both exploitation, and depletion of natural assets - not because its human agents are evil, but because that's just the way it works. The system cannot help itself. If it is producing good things for its lucky beneficiaries, it must be producing loss and hardship somewhere else.

¹ Marshall, George, 2014. *Don't Even Think About It: Why Our Brains Are Wired to Ignore Climate Change*. Bloomsbury

² The New Yorker, May 17, 2010. David Owen; *The Inventor's Dilemma*.

³ The figure illustrating the coincidence of modern wealth with modern industrial production is taken from Kruse Kronicle, March 6, 2008. http://www.krusekronicle.com/kruse_kronicle/2008/03/charting-histor.html#.VwdR-8daKT8 The thing to notice is how absolutely abnormal our own era is. Nothing like it ever happened before, and when it is over, it will never happen again. Strange thought. Try imagining how you could explain this to your grandkids.