

A TIDE OF HORSESHIT

— Review article by David Runciman —

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- *Why Are We Waiting? The Logic, Urgency and Promise of Tackling Climate Change* by Nicholas Stern
MIT, 406 pp, £19.95, May, ISBN 978 0 262 02918 6
- *Natural Capital: Valuing the Planet* by Dieter Helm
Yale, 278 pp, £20.00, May, ISBN 978 0 300 21098 9
- *Climate Shock: The Economic Consequences of a Hotter Planet* by Genot Wagner and Martin Weitzman
Princeton, 250 pp, £19.95, February, ISBN 978 0 691 15947 8

It's hard to come up with a good analogy for climate change but that doesn't stop people from trying. We seem to want some way of framing the problem that makes a decent outcome look less unlikely than it often appears. So climate change is described as a 'moonshot problem', though of course it isn't, because the moon presents a fixed target and climate change offers anything but – how will we know when we've landed? Or it's a 'war mobilisation problem', though of course it isn't, because there is no clear enemy in view (the enemy is us). Or it's a 'disease eradication problem', like ridding the world of smallpox, though of course it isn't, because getting rid of a disease is good news all round, whereas tackling climate change creates losers as well as winners. These analogies are intended to capture the scale of the challenge – it's going to be a major effort – while keeping alive the thought that we can succeed. The problem is that climate change is nothing like anything we've encountered before. Just because we did all those things doesn't mean we can do this one.

So what about a different kind of analogy, from the other end of the scale? Perhaps we have to think small to get a real sense of how difficult it's going to be. Think about what's involved in trying to write a book. Some books get written and some don't. Sometimes they don't get written even when the would-be author has a very strong incentive. This is particularly true for academics, whose careers often depend on getting something out between covers with their name on it. 'Publish or perish' is the ugly mantra in my line of business. Nevertheless, significant numbers of academics find it very hard to write the book on which their survival depends. Why don't these books get written when the incentives are so clear? Why indeed. Climate change is like a nasty case of writer's block.

As anyone who has failed to write a book will know, it's the timing that kills you. When something is long overdue, it's hard to get going because the moment is never right. Why start now? If you find that the words start to flow you'll feel like an idiot, because that means you could have done it long ago and

spared yourself a lot of grief. Displacement activities abound, fuelled by the lingering fear that it may already be too late. What if you write the book and it's no good, or at least not good enough to rescue your tattered reputation? What if by the time the book comes out the field has moved on? Before you can get going you need to bring your thinking up to date, which turns out to be just another displacement activity. If they ever got really serious about firing you it would already be too late, because no one can write a book overnight. So once the threat materialises there won't be enough time to do anything about it; if there is still enough time then the threat must be distant. The threats and incentives are never productively aligned.

Climate change is a lot like this. The unmissable wake-up calls will almost certainly arrive too late to be effective: once we discover the planet is serious about making our lives hell we will have no time left to do anything about it. In climate politics too, displacement activities abound. Further delay, rather than adding to the urgency, creates barriers in the way of decisive action, since any decisive action makes a mockery of our reasons for delay. We don't even have the luxury of waiting for resource scarcity to send an unmistakable signal that time is short. In the topsy-turvy world of climate politics, Malthusians turn out to be the optimists, because they believe that limited resources must soon produce the crunch point that will bring us to our senses, unpleasant as that will be. Peak oil will force the painful transition to a low carbon economy, or so it's hoped. But that's wishful thinking: technological ingenuity means that there are still vast amounts of untapped fossil fuels to be extracted, allowing us to delay the moment of truth long past the point when it could make any difference. The shale gas revolution is just the latest stage in this process. As Dieter Helm says, 'there is enough oil, gas and coal to fry the planet many times over.' Waiting for the oil to run dry is like waiting for new information to run dry so the book can finally get written: it's not going to happen.

Still, the situation is not hopeless. Books do get written, even long delayed ones. The key is to avoid fixating on the book itself. Threats, pledges, artificial deadlines don't work. You have to find reasons for writing that go beyond the need to create the final product. Write something – anything – simply to find a way of getting going. Try to take pleasure in the act of writing, or at least to find some reason to do it other than the crudely utilitarian one. If you don't keep asking yourself if you have a book then at some point you might have something that starts to look like a book. Writing, instead of being displaced, can be the displacement activity. Nicholas Stern's new volume on climate change, which updates his report from 2006, indicates that this kind of tangential approach may now be what's needed to address the threat of a rapidly warming planet; indeed, it may be all we have left.

Stern doesn't think the facts have changed since 2006, which means that the situation is more urgent than ever. At current rates of emission we are due within little more than a decade to breach the 450 ppm (parts per million) of carbon dioxide equivalent in the atmosphere that signals a 50/50 likelihood of average temperature rises of 2°C or more above pre-industrial levels. Without a significant correction we're on course for something much worse than that: at 550 ppm there is a real risk of rises exceeding 4°C; at 650 ppm there is a 10 per cent chance of rises above 6°C, which would be cataclysmic for human civilisation. At current rates we are heading towards 650 ppm long before the end of this century. So why are we waiting? We are caught between the twin blocks of uncertainty and inevitability. These figures conceal all sorts of hedges and caveats: for instance, what I called the 'real risk' of temperature rises of more than 4°C at 550 ppm is estimated by Stern at somewhere between 5 per cent and 55 per cent. Given that even a risk of 55 per cent would be far from a done deal (might happen, might not), and given that we can't be sure what a temperature rise on that scale would mean

(might be utterly calamitous, might not), such a wide range of risk makes any future outcomes profoundly uncertain. At the same time, rising carbon emissions often appear inevitable regardless of what we do. A shift to a low carbon economy will take years if not decades; while it's happening, current infrastructure will continue pumping carbon into the atmosphere. Nothing we do – barring a technological miracle – will make that carbon go away. To take an analogy: environmental optimists like to point to the example of the manure that was piling up on the streets of New York at the end of the 19th century, when increasing demand for horse-drawn transport indicated that the city would soon be buried under a tide of horseshit. But then along came the motorcar and the problem went away. Doom-laden projections from current trends often neglect the possibility of transformational solutions. But climate change is like imagining a future in which all the horseshit that has ever been dumped has to sit on the streets of New York for ever, and cars and roads have to navigate their way around it.

Neither uncertainty nor irreversibility diminishes the urgency: there is a big difference between driving around the horseshit and drowning in it. Stern reckons there is still a twenty-year window in which the most significant risks can be ameliorated by a concerted shift towards a low-carbon economy. But uncertainty and irreversibility – that is, the thought that it might both be too soon and too late – make the space for decisive political action ever more squeezed. Stern has changed his mind about some things, including the value of legally binding international agreements, collective targets and other big-picture, cost-benefit-driven proposals for effecting change. The evidence of the past few decades is that an emphasis on the growing risks of inaction doesn't incentivise collective action; if anything, it discourages it. No nation can solve climate change on its own. But attempts to bind the nations of the world together to get a solution big enough for the scale of the problem haven't worked. Stern takes the defection of Canada from the Kyoto agreement as emblematic of this: if Canada can't stick to its commitments, who can? Maybe Canada, given its location, has been distracted by the fact that it's one of the places where the bad news about climate change is liable to arrive last; but Australia, which has much more at stake in the short run, is also wriggling out from under the weight of its obligations. Yet in other countries, significant steps have been taken: Brazil, South Korea, Bangladesh, even Ethiopia have all moved towards lower emission targets (and in Ethiopia's case this is from a base of very low emissions to start with). Where there is progress, it tends not to be driven by a desire to 'solve' the wider problem of climate change; rather, domestic pressures, local incentives and tangential benefits are the motivating factors. Low-carbon policies can be adopted for all sorts of reasons: to reduce pollution, to secure aid, to kick-start development, to rebalance the economy, to drive innovation, to disrupt entrenched monopolies. Governments are much more likely to stick to commitments made to domestic interest groups than to international bodies. These interest groups rarely have the long-term sustainability of the planet at heart. This is climate politics by the back door.

Stern doesn't believe that a continuing focus on the costs of taking action is getting us anywhere, even if the costs aren't as great as we might think (which has long been his view). Nor does he think that we have to be able to make our sums add up in order to be confident that what we're doing is worth it. Talk of pain today, gain tomorrow only breeds more fatalism. Instead, he wants to encourage talk of unplanned-for benefits and unanticipated breakthroughs. The pursuit of a low-carbon economy doesn't have to be presented as a sacrifice needed to forestall something worse. It could trigger a big improvement on where we are now. The theme of Stern's book is that there isn't a choice to be made between sustainability and growth or sustainability and development. A sustainable economic future will have to be dynamic and flexible by definition, drawing on the full range of human ingenuity to achieve the best possible outcomes. If we keep exploring the options and pushing the boundaries, even

if we don't have the final answer in view, we might find we have something that looks like an answer before we know it. And not just to the problem of climate change: Stern thinks we could stumble across all sorts of ancillary benefits as well, including poverty reduction, a more equitable distribution of global wealth and greater international co-operation. These things tend to look like forbidding obstacles when you face them head-on. So don't. Come at them via another route.

Needless to say, there are serious risks to this approach. One is that it fuels the popular mistrust of climate politics. A striking feature of climate scepticism is its propensity to generate conspiracy theories: people who don't believe in global warming also tend to suspect that it's part of a plot to foist government intervention on recalcitrant citizens. In the United States there is particular suspicion of climate change as a Trojan horse for world government: invent a problem that needs co-ordinated global action and – hey presto! – the UN suddenly has a stick to beat the rest of the world with. Goodbye national sovereignty, hello global tyranny. Stern seems to be admitting that the conspiracy theorists are half-right. National governments are unlikely to embrace co-ordinated action on their own, so co-ordination has to be smuggled in without anyone really noticing. The difference is that Stern doesn't think it's a conspiracy. He views it as a happy accident. His hope is that governments pursuing their own agendas will discover unexpected synergies that bind them together. Moreover, it doesn't have to be national governments that make the connections: cities, where a lot of the most innovative policy-making is taking place, offer the chance to forge new kinds of alliance (Rio-LA-Barcelona is a better bet for collective action than Brazil-USA-Spain). Similarly, unelected experts and officials can join the dots at places like the World Economic Forum in Davos, where they can explore what there is to be learned from one another. For Stern this is all in the spirit of openness and experimentation: collaboration achieved through a series of constructive encounters facilitated at high-level meeting places around the world. But for anyone whose antennae are attuned to elite attempts at circumventing electoral politics, it's going to stink. There doesn't have to be an actual conspiracy to get the conspiracy theorists going. The mere mention of Davos is usually enough.

Popular suspicion of a hidden agenda will only become a serious problem if what Stern is proposing works: there would have to be actual progress towards a radically different model of energy consumption before most people started to wonder how we got there and whether they'd voted for it. The bigger risk is that it won't work. Relying on happy accidents opens the door to unhappy accidents as well. Germany was making excellent progress on its own initiative towards a low-carbon future when in 2011 it suddenly decided to pay attention to what was happening in Japan; more specifically, to what had just happened at the Fukushima nuclear power plant. The disaster at Fukushima sent German national politics into a convulsion of anxiety and unscrupulous horse-trading, the result of which was a rapid retreat from nuclear power and a return for the short term to a reliance on fossil fuels. The hope that cumulative small steps will get you to the big prize can easily be punctured by chance mishaps. Without a binding long-term agreement to fall back on, the final outcome remains a hostage to fortune.

Stern is very aware that the progress some cities and some countries are making towards a more sustainable, low-carbon future is not enough. There needs to be more concerted action, and soon: any delay makes the barrier of irreversibility harder to overcome. At the same time he is conscious that harping on the urgency and scale of the problem tends to be counterproductive, because it makes individual actors feel relatively powerless. Why bother? Small progress keeps alive the idea that real progress is possible but it also encourages the false hope that small progress is all we need. In that sense, Stern is stuck: make the scale of the action required match the scale of the problem we face and

people will give up; downplay it and they won't try hard enough. Stern's way of squaring the circle is to look for points where manageable goals – particularly at the domestic level – have the potential to morph into transformative outcomes. He wants more investment in R&D, more pooling of knowledge, a greater emphasis on trust-building rather than legal obligations, no more talk of game theory and a much bigger emphasis on what has been achieved rather than on what hasn't. He wants to make it sound doable. The danger is that he makes it sound too easy and too idealistic at the same time.

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This is where Dieter Helm, a persistent critic of Stern's entire approach, comes in. From Helm's perspective, what Stern is offering is both too demanding and nowhere near demanding enough. Where it asks too much is in assuming that we are all motivated, deep down, by an idea of justice. If that were true, then parlaying action to tackle climate change into a way of remedying deep-seated injustices would make us more likely to swallow it. But if we aren't so bothered about justice, then that approach isn't going to work. It will simply put people off by treating them as more high-minded than they really are. Where Stern makes it too easy is in suggesting that these remedies can be achieved without major sacrifice. Talk of synergies supposes that tweaks to our current arrangements could kick-start the kind of change we need. Helm isn't buying it. If we are serious about a low-carbon future then we're kidding ourselves if we think it won't hurt. We have far too much invested in fossil fuel infrastructure, we are far too reliant on cheap energy and we are much too far from sustainable technological fixes for the transition to be anything other than a massive wrench. Everything else is wishful thinking.

The focus of this dispute is the discount rate that Stern thinks we should apply to the current costs of reducing carbon emissions. If you believe that money spent in the present is worth a lot more than money spent in the future (either because people currently alive are worth more than future people, or because future people are going to be richer than those alive at present), then you will apply a high discount rate. That makes climate change a very costly problem easily deferred. But if you think that future generations count just as much as present ones and that it's best not to make heroic assumptions about long-term economic growth (particularly if the effects of climate change are likely to have a negative impact on global GDP), then taking action now makes sense, because it's relatively inexpensive. That remains Stern's position. Though he has shifted on the value of legally binding international agreements he has not shifted on the discount rate: he still thinks tackling climate change should be relatively cheap. He describes the costs involved as 'investments' and prices them at around 2 per cent of current GDP. At low discount rates, this represents just a very small dent on future growth (as Stern says, 'to place this additional investment in perspective, 2 per cent of GDP per year in extra investment, if the aggregate average growth rate were 2 per cent, would essentially mean hitting a given consumption level in 2051 rather than 2050'). For Helm, this is a false prospectus. It makes heroic assumptions about the value that present consumers place on doing right by future consumers, as though jam tomorrow were worth much the same as jam today. At the same time, it neglects how invested our consumption currently is in cheap fossil fuels. Weaning consumers off that isn't something that can be slipped through without anyone noticing the difference. If it isn't hurting, it isn't working.

Helm takes climate change as seriously as Stern and shares the view that without urgent action we're in deep trouble. He also agrees with Stern that 'environmental fundamentalism' is a dead-end: there is no viable future in a zero-growth economy, because without growth everything stagnates (they're both

economists, after all). However, Helm thinks that we're deluding ourselves if we believe that there is a 'just' solution to climate change that leaves everyone feeling better off. He wants 'realism', not boosterism. Tangential approaches, skirting round the hard truths, will simply miss their targets. For instance, Helm has pointed out that while policy-makers have been making a big fuss about reducing carbon production – by moving to renewables, imposing targets, insulating our homes – carbon consumption remains relatively untouched. In Britain, carbon production fell by 15 per cent between 1990 and 2005 but carbon consumption rose by 19 per cent over the same period: anything we were gaining from wind farms and other such schemes was being outweighed by our relentless appetite for cheap goods, especially from China, where mass production remains heavily dependent on fossil fuels. For Helm, the only solution is to price carbon at a level that changes consumer behaviour. This reverses Stern's two basic assumptions. It takes for granted that what really matters for consumers is the money in their pockets, so no more cheap talk about justice for future generations. And it presupposes that money is tight, so no change is possible without a big stick behind any dangling carrots. Helm compares the move to a low-carbon economy to the kind of shift required in transitioning from a peacetime to a wartime economy on the scale of World War Two. Creating the capacity for new kinds of production had to be effected by squeezing consumption. That meant rationing. Yet, as Helm acknowledges, analogies with wartime don't do justice to the scale of the challenge faced in effecting this sort of transition in peacetime.

In his 2012 book, *Carbon Crunch: How We're Getting Climate Change Wrong and How to Fix It*, Helm made this case against Stern. His new book, *Natural Capital*, argues that we also have to start thinking about how to price long-term ecological sustainability into our current economic calculations. In particular, we need to focus on the damage we're doing to renewable sources of natural capital, which can't be replaced. Measures of GDP take no account of this: a nation's economy could be growing happily even while destroying the biodiversity and ecological infrastructure on which any sustainable future depends. Helm wants natural capital added to the balance sheet. Under this scheme any economic policy would be vetted to assess whether it adds or detracts from the stock of natural capital. Long-term economic growth won't be possible unless we guard against squandering renewable resources in our pursuit of growth based on non-renewable ones. Non-renewable energy sources like fossil fuels tend to be substitutable: in fact, they had better be, because something will have to replace them when they finally run out. But it would be a huge gamble to assume that renewable natural resources are also substitutable – that we can use up a species, or a landscape, or an entire ecosystem in the expectation something will come along to replace it. If we waste goods that naturally renew themselves we're squandering our best bets for the future. Helm thinks we can't afford to borrow against present consumption to drive economic growth if that means using up the things that can't be replaced. A sustainable economy would be one that achieved a natural capital surplus.

In some respects, this represents a challenge to economic orthodoxy. As Helm says, it requires a move away from marginal costs to looking at systemic choices. It also poses a challenge to the Keynesian assumptions of many environmentalists, for whom the best route to sustainability is to have governments willing to spend more in the short run, even if that incurs large debts. For Helm, this risks long-term damage since running a deficit ultimately draws down on natural capital, for which there is no substitute. 'Environmentalists,' he says, 'need to understand how big the gulf is between Keynesian macroeconomic management and the goals they aspire to.' At the same time, his approach is highly conventional in the austerity of its demands. He is channelling Hayek when he argues that all debts eventually have to be paid and that it's a delusion to imagine there is a shortcut to long-term

sustainability: 'It is thrift, savings, asset maintenance and investment that provide the foundations of a sustainable growth path, not deficits, money-printing and ever greater indebtedness.' In pursuit of this goal, Helm relies on the two linchpins of Hayekian economics: disinterested markets and dispassionate regulators. If we can get public spending under control and get the costs of carbon consumption priced in by means of a carbon tax then market forces should take care of the rest: consumers will adjust their behaviour given the appropriate incentives, thereby driving new forms of production. But for that to happen we need independent overseers to get the framework right. In *Carbon Crunch*, Helm wrote:

The trouble with taxation is that governments tend to be short-lived and this is a long-term problem. The way to square the circle is to design a set of institutions that embed the tax and the expectations about its future levels. The 450 [ppm] target could be made a legal requirement. Carbon committees can act like central bankers, setting the carbon tax as bankers fix the interest rate. There can be cross-party agreements.

Similarly, when it comes to accounting for natural capital, what's needed are public bodies willing to hold governments to standards of sustainability. Helm doesn't think that including natural capital in the national balance sheet is going to solve the problem of climate change. Its merit is that it makes a real difference on a more local scale. What he calls 'the aggregate natural capital rule' (which states that 'the aggregate level of natural capital should not decline') 'may not make much difference when it comes to a genuinely global problem such as carbon emissions, but it does to biodiversity, and it does to the inheritance of the next generation at local and national level'. The idea is to stop spendthrift governments squandering the family silver. That means empowering the accountants.

There are big risks with this approach too. It places a high premium on technical expertise and a low premium on democratic participation. The global experience of the past decade suggests that relying on a combination of markets plus regulators is extremely dangerous. They are meant to correct each other but they are just as likely to feed each other's delusions. Hayekian political economy tends to evade the question of what is actually to be done with democratic participation: are national electorates being permanently sidelined because they can't be trusted to get their sums right, or are they simply being held at arm's length until it's safe to let them loose again? Hayek argued that he was only ever trying to preserve democracy: that is, preserve it from its own worst instincts. But in doing so he ended up treating it like one of those precious renewables that needs to be held in surplus for fear of running it down. It's true that democracy *is* a renewable: indeed, that is its point, to be able to keep reinventing itself. In theory, democracy shouldn't run out of legitimacy, unlike autocracy, which can suddenly find that the well is dry. In that sense, autocracy is substitutable (as China's current rulers may discover), whereas democracy ought not to be. But democracy isn't the kind of renewable that needs to be husbanded and protected. It only maintains its vitality through use. It's not a fragile ecosystem or a site of natural beauty. Treating it as such risks stifling it; or worse, it can lead to a violent counter-reaction. The attempt to rescue democracy from itself always risks doing it permanent damage. Just ask the Greeks.

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This is the hardest political question of all posed by climate change: given the reluctance of national electorates to face up to the scale of the challenge, are we going to have to find a way round democracy? Neither Stern nor Helm wants to put it in such stark terms. Sacrificing democracy for the sake of the planet seems self-defeating, since democracy is one of the things we need to preserve if

we're to have a sustainable future. Yet at any given moment democracy looks more like part of the problem than part of the solution. Helm's answer is to take the long view: tighten up the economic wiggle room available now so that democracy will ultimately have the space in which to flourish. Stern takes the opposite line: give policymakers the freedom they need to experiment now and they will ultimately find ways to rein themselves (and their publics) in. This is in some ways a rerun of the argument between Hayek and Keynes. Hayek insisted on present discipline as the only way to secure future latitude; Keynes advocated present latitude as the only way to achieve lasting discipline. But Helm v. Stern is more complicated than that. Stern, who ostensibly sides with Keynes, describes his approach as 'Hayekian', given the premium he places on unforeseen advances in knowledge generating unanticipated breakthroughs, which was the reason Hayek always gave for not trying to prejudge the future. The stakes are in many ways higher now than they were for Hayek and Keynes, whose dispute was about the political consequences of economic failure and the economic consequences of political failure. The worst-case scenarios for climate change take us beyond economics and politics: some of the risks that come with temperature rises of 6°C or more are outside anything we can meaningfully assess in either political or economic terms. What should the role of the state be under conditions of civilisational collapse? God knows. But it is also true that some of the ostensible best-case scenarios for climate change are equally beyond the scope of our political imaginations. The prospect that there could soon be a technological fix – some means of engineering our way out of the problem – raises the possibility that we might be able to bypass politics altogether. One of the risks posed by climate change is that it tempts us to think that we don't need politics at all. Even Hayek never countenanced that.

In *Climate Shock*, the economists Gernot Wagner and Martin Weitzman give a sense of these risks in their discussion of what they call the 'free driver problem'. Most of us are familiar with the 'free rider problem': the idea that collective action can be destabilised by lazy or unscrupulous people who surf off the hard work of others. Climate politics has always seemed particularly vulnerable to free riders: if everyone else cuts their carbon emissions then what's to stop me carrying on as before in the knowledge that someone else has taken care of the baleful consequences? One of the reasons Stern wants to banish game theory is to stop this fixation on the inevitability of free riding (on the grounds that, as with so many things, talking about it just encourages it). The 'free driver problem' looks at things from the other end of the telescope. Free riding assumes that it is cheap for anyone to back out of a collective solution. But what if it were cheap for anyone to attempt a unilateral solution to climate change? The pace of technological advance means that all sorts of rogue players might have a go at geo-engineering a fix. Wagner and Weitzman write: 'It would be so cheap to crudely geo-engineer the planet's temperature that one person, or more likely one country's concerted research effort, could do it.' At the moment the focus of this research is on mimicking volcanic eruptions that pump sulphur into the atmosphere, which has been shown to have a significant cooling effect. The risks of geo-engineering schemes that tinker with the earth's climate are twofold. One is that they don't work and cause more harm than good (potentially a lot more harm). The other is that they do work and persuade people that this is a problem for someone else to take care of. The root cause of what's wrong is in both cases the same: an abdication of political responsibility.

We live in an age where the temptation to give up on politics is everywhere. Technology opens up the possibility of machine-based solutions to intractable problems, of which climate change is perhaps the most intractable. At the same time, politics, particularly in the democratic West, seems stuck in a rut: petty, insular, narrow-minded, uninspiring. Bypassing politics is one way out of this rut but it risks undermining the possibility of democratic accountability on which our long-term future depends. If we

take a back seat and trust to scientific ingenuity to keep us safe then we won't know what to do when we veer off course. Both Stern and Helm, despite coming at the problem from different directions, recognise that the fundamental challenge posed by climate change is to sustain politics in the face of it. This is liable to be incredibly difficult. Our politics is the block in the way of taking action, but we can't act in a sustainable way without it. The longer we delay, the harder it gets.