



Sea change: climate politics and New Zealand

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I have a copy of his 44-page book (Stock 1874a), which is referenced in Chapters 9 and 16. And he published a useful topical handbook (Stock 1874b), which is referenced in Chapters 9, 14, 15 and 16.

I have seen (in the Hocken Library, I think) a long letter which Stock received from The Astronomer Royal of Scotland Charles Piazzi Smyth, telling that he had sent a spectrometer for Stock and giving detailed instructions about how to mount that spectrometer on his telescope and how to operate it. Piazzi Smyth's scientific colleagues were much embarrassed by his fervent promotion of Pyramidology, in which he interpreted the Great Pyramid of Giza as a Biblical prophecy made of stone. And Archdeacon Stock became one of the many ardent disciples of Piazzi Smyth.

In 1876 Commander B. W. Tracey, RN, wrote:

In the far South much and earnest interest has been manifested in the Great Pyramid subject in the Australian and neighbouring colonies: especially by the Venerable Archdeacon Stock, of Canterbury and Wellington, New Zealand, who has read all the works published on the subject, keeps them circulating in and about his locality, and has also publicly lectured on the Great Pyramid in its sacred, as well as scientific, character. (Tracey 1876, pp.74–75)

For Archdeacon Arthur Henry Stock the Index has a sub-sub-entry (p.674)

Astronomical observatories, Wellington
Colonial Observatory
Stock, Arthur, 252–254.

In addition, there is an erroneous entry on p.685: Stock, A.A, 498.

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Sea change: climate politics and New Zealand, by B. Hayward, Wellington, BWB Texts, 2017, 120 pp., NZ\$14.99 (paperback), ISBN 9781988533285

Climate change is an exceptionally broad-ranging subject, seemingly touching all aspects of our existence on Earth. It starts with physics: how carbon dioxide absorbs and re-emits infra-red radiation, how the seas rise, how the Antarctic ice sheets fracture; how the climate has acted naturally in the past. It covers impacts: on agriculture, of sea level rise, on extreme

weather events and civil unrest. It includes technology: the stored energy of fossil fuels that changed everything, the clean technologies of solar power and batteries that, it is hoped, will save us, the unknown technologies of the future. It touches on food, transport, buildings, cities, consumption, recreation. Solutions involve economics: carbon tax or emissions trading? How to deal with competition in global industries? Rich vs poor? They involve diplomacy, for this issue is truly global in nature: although the big emitters of the past, Europe and the US, bear most of the responsibility for the present situation, fixing it really does involve everyone. Solutions must involve politics, for action requires sweeping transformations of society that needs widespread support over long periods to succeed. Thinking about climate change leads finally to questions of philosophy and ethics: what is it about human nature that has brought us here? What do we really owe the future? What is our relationship with, and our responsibility to, the natural world?

In Gauguin's words: Where do we come from? What are we? Where are we going?

Bronwyn Hayward, Associate Professor in Political Science at Canterbury University, has written *Sea change* to 'bring citizens and their experiences, hopes and values back into a more democratic conversation about climate change'. The publisher, Bridget Williams Books, is certainly doing their part in fostering that conversation. This is their sixth book in the BWB Texts series to touch on climate change. The year 2015 saw Veronika Meduna's *Towards a warmer world: what climate change will mean for New Zealand's future*, covering the science and impacts on New Zealand through interviews with scientists, and *Time of useful consciousness: acting urgently on climate change* by policy expert Ralph Chapman. In 2016 Rod Oram reported on Beijing, London and Chicago's approach to 2050 in *Three cities: seeking hope in the Anthropocene*. In 2017 Jonathan Boston, like Hayward a political scientist, came out with *Safeguarding the future: governing in an uncertain world* about how a pervasive 'presentist bias' in our political system systematically rips off the future; and—this time not an academic, but still a public policy expert—Sefton Darby wrote *The ground between: navigating the oil and mining debate in New Zealand*. BWB, keep them coming please!

It's striking that most of these lean towards the policy and politics side. The science side is broadly understood—indeed, Arrhenius's 1896 estimate of the global warming potential of carbon dioxide is consistent with present-day understanding—although now that massive changes in the climate are, in fact, underway, the details are getting more exciting and more vital. Renewable energy technologies have been around for a long time: in our local electric vehicle rally, the star attraction was a 1916 Detroit (the same model that Donald Duck's grandmother used to drive), and, although the story of the spread of clean technology is highly topical and, frankly, thrilling, the combined effect of continuing growth in emissions and limited progress in international talks has been pretty sobering. Economists may dispute whether a carbon tax or a cap-and-trade system is more effective at reducing emissions, but they have been in agreement that some kind of economic tool will work. So why haven't we adopted them quickly enough to cut emissions?

There are numerous plausible culprits. Deniers have used the media bias known as false balance to promote disinformation far beyond all reason. Some fossil fuel companies have used the same playbook. But in other areas fossil fuel companies have a pretty strong defence: their products are, in fact, essential at the moment, are highly desired by the public and are strongly backed by most governments. Governments, in turn, have a defence that there has not been a strong push for action from their citizens. When electric cars became available, they were not bought in large numbers. Thus all roads seem to lead to the idea that it is to politics and society that we must look for answers. Since 2016, with Brexit, Trump, 'post-truth' and an apparent loss of confidence in 'experts', this feeling has grown into a kind of desperation.

Sea change starts by making the case that we have a responsibility to cut emissions. We are high emitters and we are vulnerable to climate change, especially in some of our poorer communities and in the Pacific islands. Moreover, we have not done a good job so far: 20 years of policy adjustments have resulted in net emissions rising 64% since 1990. I could add that if we look locally things aren't much better: Oban, a community of 400 on Stewart Island, has extremely expensive, high-emission electricity supplied by diesel generators. Over the years, 32 studies into lower-emission and cheaper alternatives have come to nothing. Transport emissions rose enormously from 1990–2015 and, with record-breaking volumes of car imports in recent years, emissions from cars are up by a third in just the past 5 years. The public seemed to be generally in favour of stronger action on climate change, but in election after election failed to register it as a key issue. (An exception was 2008 when the National Party campaigned on moderating the impact of the emissions trading scheme.)

The whakataukī, *He waka eke noa*, we are all in the same waka, is seen everywhere these days, and for good reason. It's not a good idea to spend time arguing when you are in a waka far from shore with a storm blowing up. Hayward cleverly turns this on its head in a section called 'We are not all in this together'. Climate change impacts, especially sea level rise and extreme weather events, are affecting different communities very differently. Communities also vary in their ability to respond resiliently—3 months after Hurricane Maria, half of Puerto Rico's 3.4 m people are still without power. Rich countries (and individuals) do have the option of circling the wagons as impacts increase. This places climate justice at the heart of the issue.

Climate justice is the first of the two major themes that distinguish *Sea change*. The Paris Agreement is not just about the 2° target or the carbon neutral target, it is about sustainable development, poverty and inequality. Hayward argues that climate justice must be addressed in order to make meaningful progress. This is broken down into:

Procedural justice: are our processes reasonable, public and inclusive?

Distributional justice: are costs and benefits shared fairly?

Ecological justice: do we take responsibility for the harm we have caused?

Intergenerational justice: what, precisely, do we owe future generations?

None of these are easy questions and none, I think, will find unanimous answers. Human settlement of Aotearoa New Zealand destroyed a paradise, but created something in its place: maybe not a paradise, certainly not for extinct and threatened species, but at least something that we value. We are also grateful for some of the inheritance of our forebears: universal suffrage and some fine neo-gothic buildings, to use just two examples from Hayward's home city of Christchurch. Moving these questions into centre stage—where existing questions of economics and technology will have to make some room for them—is extremely valuable.

The second major theme is, perhaps, even more provocative. Hayward argues that we need a massive expansion, almost a revolution, in the concept of citizenship, in order to address climate change. Our failure to cut emissions is due to the neoliberal revolution, which limited citizens' ideas of possible action to choosing what product to buy, and handed power over to political donors and large corporations. Her vision is summed up in the SEEDS model of citizenship, which involves: social agency (we know we have the power to effect change); environmental education (especially through developing deep attachments to places and ecosystems); embedded justice (here, climate justice especially); decentred deliberation (public conversations that cross local, regional and national spaces, and develop over time); and self-transcendence (thinking not just of ourselves but of the widest possible implications). This model, developed from interviews with children in Hayward's 2012 book *Children, citizenship and environment*, is expanded here to apply to the whole of society. Successful

examples of SEEDS citizenship include many inspiring tales from our history: land rights, Save Manapouri, Nuclear-free New Zealand, MMP. In the words of Margaret Mead: ‘Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it’s the only thing that ever has’. Maybe so, but I am afraid that neoliberalism was brought to New Zealand by just such a small group. And, unfortunately, a small group of thoughtful, committed citizens may also fail to change the world. I’m no political scientist, but I stand with Tolstoy’s view of history: it’s complicated.

The SEEDS model is contrasted to a more neoliberal, or at least mainstream, model—SMART. SMART citizens exhibit: self-help (making lifestyle changes); market participation (buying green products); a priori universal justice (based solely on laws and contracts); representative decision-making (vote, and then leave it up to the experts); and technological imagination (technology will sort it out). Put like that, it is indeed a recipe for disaster. But I was rather startled to see Generation Zero listed as an example of SMART citizenship. Gen Zero’s campaign for a Zero Carbon Act was adopted by Labour, New Zealand First and the Greens; will become a reality in 2018; and may well be supported by National as well. Jan Wright’s call for a Climate Commission, which we are also now going to get, is likewise seen by Hayward as risky—a panel of experts will tell us what to do, may not achieve widespread support and will not ‘[challenge] the underlying economic and social drivers of climate change and climate injustice’.

I see Gen Zero more as a role model for how we can get things done and as a hopeful model for future change. They certainly embodied some of the principles of SEEDS. They may not have carried everybody along with them yet, but through the processes of setting up the Zero Carbon Act and the Climate Commission, there will be plenty of opportunities for flax-roots discussions. *Sea change* went to press during the final stages of the 2017 election campaign; perhaps the long struggle for climate action was dispiriting and caused Hayward to underrate the effectiveness of existing approaches (it certainly dispirited me). Still, considering the current state of debate in Australia and in the US, it is undeniably important for everyone to understand how democracy works, and how it might work.

For Hayward has a yet third model of citizenship up her sleeve. FEARS citizens are clouded by: frustrated agency (belief they cannot affect their own lives or contribute to problem-solving); environmental exclusion (no safe places where they belong); authoritarian decision-making (which breeds resentment); retributive justice (they find someone to blame); and silenced democratic imagination (they struggle to imagine positive change). The aftermath of the Christchurch earthquakes provides compelling examples of FEARS, SMART and SEEDS citizenship. The long-term decline in citizens’ participation in democracy—now widespread in the west—and the rise of Trump and the extreme right illustrate some of the threats of FEARS.

In many ways the conclusions of *Sea change* are the same as those of Naomi Klein’s 2014 bestseller *This changes everything: capitalism vs. the climate*, summed up by John Perkins as:

The responsibility for climate change lies with radical capitalists—the neoliberals—who decry regulation and have created “free trade zones” that trample the ability of ordinary citizens to change the world’s energy economy. Peaceful rebellion by citizens is the solution to ending the reign of the neoliberals, and many successful operations already show promise.

Even though Hayward is an academic, not an activist, her book does not describe politics as it is, but as she would like it to be. It is an inspiring vision. (She doesn’t go as far as Klein, who I think rejects SMART approaches entirely). For me, the jury is still out. We are faced with one difficult problem—decarbonising the economy—and are asked to add to it the tasks of

defeating neoliberalism, ending growth and revolutionising citizenship. If the first is too hard, how about the others?

There are other approaches to understanding why addressing climate change is difficult that are not mentioned at all by Hayward (or by Klein, for that matter). It is widely accepted by environmental economists that the most useful framing of the entire issue of climate change is that of the Tragedy of the Commons. Individuals acting in their own self-interest will deplete a shared resource, even if it is in no one's long-term interest for this to happen. By driving a petrol car, I get some immediate benefit, but the costs are borne by others—borne by many, many others, who are mostly far away, both now and far into the distant future. Simply stating that this is wrong will not, unfortunately, stop it happening. Developed by Garrett Hardin in 1968, the phenomenon of the Tragedy of the Commons was actually discovered as long ago as 1833, by the English economist William Foster Lloyd, in a rebuttal to Adam Smith. When I was at school we learned about the invisible hand of Adam Smith; we didn't learn about the Commons. It is, in fact, a fundamental objection to neoliberalism, and seems to explain everything about our failure to act on climate change. Individuals, companies, national industries, nation states are all trapped in a vast Tragedy of the Commons. Why should I cut my emissions? That won't help. Even if I do inspire others to follow suit, that will only free up fossil fuels for others to burn. Why should the New Zealand dairy industry pay a carbon tax? It would ruin the economy, shift production to other countries and not help the climate one bit. Why should any country cut their emissions when others are not?

On reflection, aspects of the Commons are all around us in many aspects of our society. Voting, taxes, vaccination, rubbish, labour laws, health and safety, and human rights are all areas that share some of the features of climate change. They are all areas where progress has been made, slowly and with great difficulty, in many countries, and areas where there is a constant risk of free riding and backsliding. To address any of them requires collective action.

Elinor Ostrom won the Nobel Prize in Economics in 2009 for her work on management of the Commons. She wrote that success requires shared, reliable information; an agreement to jointly share responsibility; knowledge of what everyone else is doing; and a desire to be seen as a trustworthy reciprocator. These are the principles that are embodied in the Paris Agreement. They are why many people consider it to be a major step forwards in climate negotiations. They are the principles we need in New Zealand, too. Ostrom's 'polycentric' approach to climate change, in which it is addressed at all levels starting with the grass roots, discussed face-to-face, and shaped to cultural norms, is quite compatible with Hayward's vision of SEEDS.

Another BWB Text, Ralph Chapman's *Time of useful consciousness*, puts what I would call the consensus view on how New Zealand should act to cut emissions. For example, it includes a higher price on carbon (\$100/tonne and rising) and a rapid transition to a fully green, sustainable economy. However, by the end of the book he has come to a very similar conclusion to Hayward: neoliberalism is stifling action, there is a need for broad public support, and youth movements can change things. A \$100/tonne carbon price is no use if there is a massive backlash against it. Some of this is now widely accepted: the Productivity Commission, currently investigating the low-emissions economy, asked in the final question of their issues paper, 'What does your long-term vision for a low-emissions economy look like? Could a shared vision for New Zealand be created, and if so, how?'. The 130 submissions received present a cross-section of current views (including neoliberal and SMART ones!). (One submitter, the Motor Industry Association, which represents the sellers of 140,000 new cars in New Zealand each year and surely bears at least some part of the responsibility for their emissions, noted sourly, 'In our experience, most shared visions are neither visionary nor shared'.) The industry submissions tended to take the line: we believe in the low-emission transition.

Look at all this great stuff we have done already. But, we can't do any more and anyway, our industry is special.

Note, though, that they said this just before the election. The public debate is now changing rapidly. An example of a striking development came on 14 November 2017 when Fonterra, who earlier in the year was refusing to even discuss its massive expansion of coal, announced that it would reduce emissions from transport and processing of milk by 30% by 2030, and eliminate them entirely by 2050—matching the national goal. As we move into 2018 there will be many opportunities for citizens, businesses and whole sectors to contribute to the shape of our new climate action. As Hayward rousingly concludes:

The tide has turned, the sea is rising but so are we, and when ordinary people act together we can and will achieve extraordinary things.

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