



The First to See the Light
Waiapu River, Mt. Hikurangi: Agnes Arnold

HAU ORA: THE WIND OF LIFE

SANDERSON MEMORIAL LECTURE

Royal Forest and Bird Society, Wellington

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Ko te wai e hora nei, Raukawa-moana; ko te marae e takoto nei, koutou aku rangatira kua pae nei, tena koutou

I am deeply honoured to be invited to give this Sanderson Memorial Lecture. Captain Sanderson was a man to be admired, and emulated. Not content with being appalled by what had happened to Kapiti Island, 'the forest playground of his youth,' he rolled up his sleeves, and helped to create an island haven for endangered species.

Out of this emerged the Royal Forest and Bird Society - 'he totara whakaruruhau' – a sheltering totara tree for all those who care about this country and its native birds, plants and animals. Like Captain Sanderson, many of us are affronted by the way in which the landscapes of our childhood and the habitats of endangered plants and animals are being despoiled – whether by mining companies on the Denniston Plateau, or forestry companies on the East Coast, or fishing fleets out on the ocean.

As the late Sir Paul Callaghan observed, of 179 countries, New Zealand has the highest percentage of indigenous plants, birds, invertebrates and fish at risk. This statistic is unacceptable. At present, we are 'smoothing the pillow' of these dying species. This is Homo Hubris at work, humanity at its most arrogant, not realising that the lives of these plants and animals and our own are fundamentally interconnected.

And yet these are the original inhabitants of Aotearoa. Long before any of our ancestors arrived, these species occupied the sea, the rivers and lakes, the hills and mountains. They have their own right to prosper alongside those of us who came later. We need a pact – a Treaty - to protect their interests. Maybe we should get Kiwi to sign it with the Crown!

As scientists around the world tell us, anthropogenic impacts on the Earth are becoming catastrophic. Collectively, we are despoiling the ecosystems that support us, heedless of our own interests, those of other life forms, and of our own children and grandchildren. Part of the reason I think, is philosophical. As I argued recently, we need a change of heart, not just here in New Zealand, but at a global level.

This will not be easy. The habits of mind involved are so deeply entrenched as to be almost invisible. To make a long story short, one can trace their origins back to seventeenth century Europe, where the philosopher Renee Descartes had a new vision of reality, at once powerful and intoxicating. In his vision, the Cogito – the thinking self' or Subject – became the eye of the world, which in turn was transformed into an Object for human inspection.

As Subject was separated from Object, Mind from Matter and Nature from Culture, people were divided from the world around them. Reality was partitioned into abstracted, bounded entities – objects or things - that could be measured, counted, classified, exchanged and controlled for human purposes.

This 'Order of Things,' as Michel Foucault has called it, was at the heart of the Enlightenment. Its characteristic expression was the grid, as reflected in Linnaean taxonomy, quantification, and the development of instrumental measurement, including cartography and surveying.

Usually, the grid was hierarchical – the Great Chain of Being, for example, with God at the apex followed by the angels, divine Kings, the aristocracy and successive ranks of

people, animals and plants. Coupled with notions of 'progress' and 'improvement,' these ideas gave an air of virtue to imperial expansion, the industrial revolution and in our own time, models of technocratic control.

As Peter Reill has argued recently, however, this was not the only strand in the Enlightenment vision. The 'Vitalist' tradition, associated with Benjamin Franklin in America, Comte de Buffon in France, the Humboldt brothers in Germany, Joseph Priestley and Erasmus Darwin in England and many of those involved in the Scottish Enlightenment saw the world differently - as webs of relations among different phenomena, animated by living, complementary 'forces that merge and oppose each other without ever destroying one another' – the 'Order of Relations,' one might call it.

In this web of life, people are just one life form among many, and the world is constantly changing. Here we find the origins of modern ecology, and much contemporary anthropology, earth sciences, cosmology and evolutionary theory. This vitalist tradition supported ideas of transformation, in both the cosmos and social life, attacking models based on binary opposition, stasis and control. In the eighteenth century, it had (and perhaps it still has) revolutionary potential.

Together, these divergent strands in the Enlightenment produced passionate debates about topics as varied as land use, imperialism, slavery, taxation and economic arrangements, education and the rights of ordinary people (including the rights of those living in colonies, commoners, women and indigenous people) – debates that in many ways, we are still having.

Science in this period was exciting, provocative and often dangerous. This was the era of scientific agriculture (including enclosure), the noble savage (alongside imperial exploitation), arguments in favour of peace (in the midst of almost incessant fighting), Adam Smith's *The Wealth of Nations* (at a time of frequent food riots), Tom Paine's *The Rights of Man* (just before the French Revolution and the American War of Independence).

How does this intersect with our own history? As it happened, it was on the very brink of these events that the *Endeavour*, commanded by Lieutenant James Cook, brought the first Europeans ashore in New Zealand. In many ways, the *Endeavour* expedition was a travelling sideshow of the Enlightenment, and these ideas and debates were part of its cargo.

The *Endeavour* expedition had been sent into the Pacific to observe the Transit of Venus and discover Terra Australis, the great unknown Southern Continent. The ship was funded by the Admiralty, and the expedition sponsored by the Royal Society. The scientific party on board, headed by Joseph Banks, a wealthy, well-connected young man who had studied Linnaean taxonomy, was lavishly equipped. As one of his colleagues wrote to Carl Linnaeus, the great Swedish naturalist:

No people ever went to sea better fitted out for the purpose of Natural History, nor more elegantly. They have got a fine library of Natural History; they have all sorts of machines for catching and preserving insects; all kinds of nets, trawls, drags and hooks for coral fishing; they have even a curious contrivance of a telescope, by which you can see the bottom to a great depth, when it is clear... They have two painters and draughtsmen, several volunteers who have a tolerable notion of Natural History; in short Solander assured me this expedition would cost Mr. Banks ten thousand pounds.

As a member of the landed gentry, Joseph Banks found the ideas of the 'Great Chain of Being' and 'progress' and 'improvement' congenial. At the time of the voyage and afterwards, Banks would hold fast to the 'Order of Things' and its hierarchical models, fit for imperial purposes.

James Cook, on the other hand, a brilliant practical sailor trained in hydrography and astronomy, had been apprenticed to a Quaker shipowner, John Walker. The Quaker movement was closely linked with the vitalist tradition in Europe. No doubt Cook was also influenced by the 'Hints' that he had been given at the outset of the voyage by the Earl of Morton, a Scottish astronomer and President of the Royal Society, who urged him to avoid any kind of violent confrontation with people in the places he visited.

In the event, however, when the *Endeavour* party landed in New Zealand on 6 October 1769, the Earl of Morton's instructions were literally blown out of the water. As Banks and his scientific companion Dr. Solander went botanising on the west bank of the Turanganui River in Gisborne, collecting an array of plants unknown to Western science, four boys who had been left in charge of the boats were challenged by four warriors with spears. As one of the warriors lifted his spear to hurl it in challenge, the coxswain shot him in the heart.

After hostile exchanges with local Maori the next day, muskets were fired into the water. Eventually, the high priest Tupaia managed to persuade a warrior to swim across the river. As he stood on a sacred rock, Te Toka a Taiau (which was later blown up by the Harbour Board, and held the *mauri* for the fisheries in the bay), Captain Cook put down his musket and went to meet him. They pressed noses, mingling their *hau* (breath of life), together.

Encouraged by this affable gesture, many of his companions now crossed the river and mingled with the strangers, trying to exchange weapons with them. When one of them seized a sword worn by Green, the astronomer, and brandished it in the air, affronted by this 'insolent' gesture, Joseph Banks shot him. In the melee that followed, more men were wounded, and one was killed. The first encounters with Maori had been botched.

Cook liked and admired Maori, and later, during his second Pacific voyage, he questioned the wisdom of the imperial enterprise that had brought him to New Zealand:

What is still more to our shame as civilized Christians, we debauch their morals ... and introduce among them wants and perhaps disease which they never before knew, and which serve only to disturb that happy tranquility which they and their forefathers enjoyed. If anyone denies the truth of this assertion let him tell me what the natives of the whole extent of America have gained by the commerce they have had with Europeans.

Despite Cook's humanitarian impulses, however, there is no doubt that during this and successive Pacific voyages, the 'Order of Things' was dominant. This is illustrated by the ships' charts, gridding space by latitude and longitude and the depth of soundings, and the logs, gridding time into years, months, days and hours, with instrumental measurements of wind directions, the ships' speed, bearings and so on. Local harbours were assessed for settlement, and local plants (especially timber and flax) for imperial uses.

Later, by the same logic, New Zealand was transformed into a nation state, enclosed by borders. Surveyors divided up the land into blocks – cutting up the land, as Maori bitterly called it, and laid out gridded settlements. Over time, fish were transformed into quota; water into water rights; the atmosphere into frequencies; knowledge into intellectual property, and time into calculable units, all with boundaries and prices, transformed into property to be traded on the markets.

Eventually, even people themselves were transformed into bounded isolates, cost-benefit calculating individuals pursuing their own interests. Steeped as we are in these conceptions, it is difficult to realise how far they are cultural artefacts, peculiar products of a particular way of being in the world.

From the first encounters, however, there have always been those who thought differently – from the Earl of Morton, who insisted on the rights of Maori to their own lands; to William Martin, the first Chief Justice of New Zealand who in the midst of the Land Wars, railed at the dishonouring of the Treaty of Waitangi, and those who have lamented the way that the land itself has been treated, Captain Val Anderson for example, and the Green movement. Over successive generations, too, many Maori have stubbornly contested the imposition of the ‘Order of Things’ on their own ways of being, most recently in front of the Waitangi Tribunal.

There is no denying the power of this partitioning logic, and it will not vanish any time soon. But is it adaptive? As soon as one tries to take care of a particular landscape, or a waterway, or an endangered species, one quickly confronts its divisive power. As we have seen, the land and sea are partitioned into bounded units, with owners and property rights; or into bundles of rights – mining rights, for example, or rights to drill for oil and gas, or water rights, for example.

Without doubt, these boundaries and rights are artificial, cutting across the patterns of the living world. Most species (including people, and plants through their seeds) are mobile, ranging across land and waterways; while habitats are interconnected, so that forests felled in inland headwaters damage shellfisheries in the harbour; or water taken out of an aquifer and mixed with chemicals causes water shortages, or pollutes the land on which it is dumped, for example.

As applied to people, this logic denies their life as social beings, transforming them into autonomous units and defining it as a virtue that they should pursue their own interests, even at the expense of others – ‘I can do what I like with my own land,’ for example. As organisations become increasingly impersonal (in corporations, for example), the more ruthlessly such interests are pursued. Power and wealth are accumulated, politicians lobbied and funded, rules rewritten, environmental regulations subverted and local communities and other species brushed aside. The pity of it is that this is also profoundly self-destructive, despoiling living planetary systems without which human beings cannot survive.

If we are trapped in a kind of logic that puts our future at risk, what can we do about it? Surely, not more of the same. I don’t think that putting a price on environmental services, or cost-benefit analyses for the restoration of particular species, or setting aside a few fortified sites for their survival, or public-private partnerships for restoration projects will give back life where it is needed – **although we may have to do all of these things in the meantime.**

Here, I have time only to sketch some possibilities. In doing so, I'd like to return to that moment when Captain Cook and the Rongowhakaata warrior greeted each other on Te Toka a Taiau, when other futures seemed possible. If time is a spiral, then that moment still holds potentials that we can explore.

In particular, I'd like to return to the vitalist legacy from the Enlightenment, with its Order of Relations, and some striking resonances with Maori philosophy that may offer new ways of thinking. According to the cosmological chants, for instance the world began with a burst of energy, which generated thought, memory and desire. Next came the Kore, Nothing, the seedbed of the cosmos, and then the Po, long aeons of darkness, and the celestial phenomena – sun, stars, moon, and planets, and the earth and sky. From the union of earth and sky, the ancestors of the winds, the sea and waterways, and plants and animals were generated, including birds, fish, reptiles, insects and people.

Here, as in vitalist philosophies, there are no Cartesian splits between mind and matter, nature and culture. People, plants, animals, winds, sea and earth are entangled in one over-arching, multi-dimensional web of relations. This is animated by the hau ora, the wind of life that drives the cosmos. In this kind of order, the fundamental unit is the relation, not the thing. Life is about negotiating relations, seeking those points of equilibrium where all is prosperous and well – a process that applies to plants and animals and other life forms, as well as people. This is very like the vision of reality espoused during the Enlightenment by Buffon, or the Humboldt brothers in Germany, for example, and later by James Lovelock and many exponents of earth sciences.

Here, the web of life is structured at different scales, with different networks nested within them. Time is a spiral, moving up and down the genealogical lines from the most remote, founding ancestors to grandparents and parents, and future generations, and back again. Patterns very like this are expressed in cutting edge evolutionary research. The timescales of reflection are long, and the aim is to maintain the life force. It works the same way with space. One can move from the entire cosmos, to one island, one waterway, one piece of land, down to one life form, nested one within the other, and back again, up and down the cosmic scale.

As both Buffon and Humboldt contended, when science is conducted in this way it brings together 'two seemingly opposite qualities of the mind: the wide-ranging views of the ardent mind that embraces everything with one glance; and the detail-oriented labouring instinct that concentrates only on one element. In the same way, the tools of the Order of Things - quantification and classification, for example, can be deployed within this wider, relational vision. One can see this reflected today in projects such as Digital Earth, for example, based on the best of contemporary science.

This vision of reality is neither sentimental, nor romantic, but vital for our survival. In the Order of Relations, relationships are not always positive, and survival is not guaranteed. Alongside gifting and generosity, utu or reciprocity requires that negative forces are required. At the same time, though, the impetus to strive for equilibrium, while never final, draws attention to relations with other beings and the land and sea, and other people.

At each scale, one must consider all the relations at play. People are part of the relational net, and their interests are very much part of the picture. Like any other life form, they are entitled to aspire to prosperity and ora. This, too, is resonant with many

of the social philosophies generated by the vitalist tradition in the Enlightenment, and much of contemporary science.

As applied to economics, for instance, if relational models such as the Muir web (taken from landscape ecology) could be animated through time, it should be possible to more accurately estimate the costs and benefits of particular activities, and how they are distributed in the networks of relations.

This would avoid the radically misleading cost-benefit studies we see at present, that calculate the costs and benefits of an activity within artificially narrow limits. Such approaches allow governments to ignore the long term costs of their policies, for instance, or industries and corporations to mislead themselves as well as the public, privatising the benefits gained by their activities while socialising many of the costs by foisting them onto the environment, or taxpayers or future generations.

These ideas are not abstract and impersonal, but embedded in everyday life. As with vitalist ideas, the Order of Relations is grounded in the world, in particular places and people. Each of us will have a special landscape [or landscape] in our hearts, with its plants and animals, which brings me to my own experiences with ecological restoration. For me, that special place is the Tai Rawhiti, the East Coast of New Zealand, where I grew up, with its bare-boned hills, long sandy beaches, rocky reefs, bush and long, winding rivers, including the Waimata, which runs past Te Toka-a-Taiau on its way out to sea.

When I was young, my brothers and sisters and I grew up on the Waimata River. We used to cycle up a gravel road beside the river, and go swimming in the waterhole at Longbush. When Jeremy and I were courting, we visited Longbush and thought what a magical place it would be to live. Like many people in Gisborne, our family has special memories of this place, which is no doubt why one of my twin brothers makes Longbush wines, and the other makes Waimata and Longbush cheeses.

Twelve years ago, Jeremy and I drove up the same gravel road and saw a sign on the fence that said, 'For Sale: Farming or Forestry.' We walked into the bush beside the river, and a couple of kereru came and had a chat. We couldn't bear the thought of Longbush being covered in pine trees, and that weekend we put in an offer, and began to learn the hard way about ecology and conservation.

Over the past 12 years Longbush has taught us about the challenges of pest and weed control. We began by restoring the riverside bush, one of the few remaining in the region, planting trees and removing tradescantia, old man's beard and Jerusalem cherry. Luckily, soon after we'd realised what a mission that this was going to be, we met Steve Sawyer of Ecoworks, a young man who was just leaving DOC to set up his own business, restoring endangered species.

Before we knew it, Steve was helping us to apply to the Biodiversity Fund (to which all homage!) to restore the bush and create wildlife corridors, and native orchids began to appear in Longbush, and tomtits in the hills. A former student, friend and colleague of mine, Maureen Lander, who was teaching weaving in Maori Studies at the University of Auckland, told me about the Orchiston harakeke collection – 60 different varieties of flax, collected and documented by a woman from Gisborne.

When we contacted Renee Orchiston, and asked her permission to establish the collection at Longbush, she gave her blessing. Soon we were making contact with local weavers, some of whom now take care of the collection. We also planted groves of berry-bearing trees for the birds around the flax bushes, and to stabilise foothills that had slumped during Cyclone Bola.

We set up a charitable trust, and after a while, Steve Sawyer (who became one of our trustees) had the idea of bringing toutouwai (native robins) back to Longbush, and contacted the Gaddums family at Matawai, where the robins were located. As you can see, networks of relations are at the heart of the Longbush project. As our plantings expanded, they were carried out by Andy Carrie and the Conservation Corps at Tai Rawhiti Polytechnic, and then by Kojak Oterangi and his students at the Turanga Ararau PTE in Gisborne.

Most recently, Steve became entranced by the idea of establishing an inland colony of titi, to link up with a cliff-top colony of petrels that he had restored at Young Nick's Head. He invented a new kind of pest-proof enclosure, one that can be built and maintained by local labour, and Jeremy drew it up for him. The first lot of titi arrived before Christmas last year, courtesy of John and Amy Griffin at Young Nick's Head, were put in artificial burrows and fed, and successfully took off on their Pacific migration, fortunately avoiding the bright lights of the Rhythm and Vines festival.

Since 1999, we have learned that no restoration project is an island – the birds, for instance, may come from other places, and need other safe places to roost. Sometimes these are far away. Although the Gisborne District Council, other agencies and neighbours have been very supportive, 'cross-boundary' issues of the kind that I described earlier have been our biggest challenges. There have been trials and tribulations – above all, perhaps, learning to cope with forestry in the valley and in the headwaters of the Waimata River.

At present, the river is in bad shape, with high sediment flows from gullies and bare, muddy banks that collapse when it rains, especially when the forests up river are clear felled. Forestry has its merits in erosion-prone country, but the forestry companies do not always honour the international environmental standards by which they are bound. From what I have seen of the auditing processes of the Forestry Stewardship Council in NZ, they need an extreme makeover.

The purpose of the FSC is to guarantee that timber is sustainably produced. Under its standards, 10% of each exotic plantation is supposed to be in native bush, with pest and weed control, for example, and every permanent waterway is supposed to have a 10 metre bush buffer on each bank. Look on Google Earth at many FSC registered plantations in our region, however, and you will see that many forests have been clear felled right down to the waterways. It is no wonder that when it rains, the rivers turn to liquid mud.

Nor are natural heritage objectives under the District Plan always upheld. Despite our best efforts, large areas of closed canopy, regenerating bush have been sprayed right next to Longbush and an adjacent Protected Management Area, habitats for rare and endangered species, although this sort of thing is not supposed to happen.

How can this be? At different levels, from global to national to local, forces tip the balance towards short-term profit, and away from sustainable uses. Forestry

companies, for instance, seek to sway politicians and officials, the environmental rules that are set and whether or not they are enforced. There are gross disparities in resources and power between these companies and community members.

There are also abdications of responsibility. While collaboration is an ideal model for environmental projects, it is not acceptable, for instance, for a Government to delegate responsibility for environmental monitoring and outcomes to impoverished communities such as those in the Tai Rawhiti.

Longbush is teaching us how different scales of relationships operate. With respect to space, at the global level the Kyoto agreement, the Forestry Stewardship Council standards, and the relative prices of logs and beef and logs all affect what happens to the Waimata River. At the national level, the FSC standards and the failure to uphold them, and the ETS are having huge impacts. The ETS should take erosion susceptibility, biodiversity and the potential of native forest for carbon sequestration into account, before taxpayers' money is used to reward companies for covering entire landscapes with pine trees.

With respect to time, sustainability requires an understanding of the long-run dynamics of ecosystems, and this knowledge must be widely shared. In the Tai Rawhiti, for instance, we have heard the forestry industry claim that local rivers have always been muddy, and that the sediment flows in these rivers (which are among the highest in the world) have nothing to do with human activity – a claim that flies in the face of recent research that demonstrate dramatic anthropogenic impacts over time.

We're also coming to appreciate the power of the 'Digital Earth' approach to ecological action. Alliances can be forged at different scales, tackling international agreements, and global companies whose shareholders never see the places that they despoil. Just as the grid reflects the Order of Things, the Internet reflects the Order of Relations, and its freedom must be protected. At the national level, too, this is why organisations like Forest and Bird are so important – they allow us to combine forces to protect our special places, as the Mokihinui River decision demonstrates, for example.

Above all, Longbush has taught us that the illusion that people are outside the ecosystems that they inhabit – the nature / culture split - is causing terrible damage. People are just one of the animals in the environment, and not always the best behaved. We're also part of the spiral of time. At Longbush, for example, we have a stand of Italian poplars by a pond, planted by the previous farmer, and part of a coach road, and pits and terraces from an undefended kainga that we cherish.

Ideally, restoration projects should model ecosystems that include people in balance with other species. As the Ecosanctuary is developed – which will take another 5 years or so - we hope to make it a beautiful place for people to visit, and come to love the rare and endangered plants and animals, and support their right to prosper and survive.

The best outcome of all, though, would be if these birds and plants were able to range as they once did across their native landscapes. Like people, they need networks of places in which to dwell, not just fenced off reservations. As people, we must learn to live in ways that share the land with them, in some kind of equilibrium, just as Maori and Pakeha and other New Zealanders are learning to live together. We might apply some of the lessons that we've learned to the original tangata whenua – the children of Haumia, and Tane, and Tangaroa.

Our futures, and theirs, and that of the land and sea are bound together. On that, we can all agree. As a local leader in the Farm Forestry Association, said recently, echoing many farmers: 'Take care of the land, and the land will take care of you.' Soon afterwards in Tolaga Bay, when local iwi were discussing the state of the Uawa River, I heard a kuia say, 'Kei te mate te awa, kei te mate matou' – 'when the earth is ailing, we are all unwell'.

In order to tip the balance in favour of their survival, and our own, we must all speak out, and act, joining forces to restore the life blood of the land. One way of doing this is through the Te Awaroa project, that rose out of the recent Transit of Venus Forum in Gisborne, restoring our rivers through planting bush buffers on their banks.

This has many benefits, giving integrity to the 100% Pure New Zealand brand, protecting access to global markets, creating wildlife corridors, stabilising river banks to control erosion, reducing sedimentation and pollution, and creating beautiful spaces for kayakers, paddlers, rowers, swimmers and fishers to enjoy. Best of all, we can do this together.

As my kaumatua and mentor, Eruera Stirling, used to chant, echoing the cry of the tui:

<i>Whakarongo! Whakarongo! Whakarongo!</i>	<i>Listen! Listen! Listen!</i>
<i>Ki te tangi a te manu e karanga nei</i>	<i>To the cry of the bird calling</i>
<i>Tui, tui, tuituiaa!</i>	<i>Bind, join, be one!</i>
<i>Tuia i runga, tuia i raro,</i>	<i>Bind above, bind below</i>
<i>Tuia i roto, tuia i waho,</i>	<i>Bind within, bind without</i>
<i>Tuia i te here tangata</i>	<i>Tie the knot of humankind</i>
<i>Ka rongo te po, ka rongo te po</i>	<i>The night hears, the night hears</i>
<i>Tuia i te kawai tangata i heke mai</i>	<i>Bind the lines of people coming down</i>
<i>I Hawaiki nui, I Hawaiki roa,</i>	<i>From great Hawaiki, from long Hawaiki</i>
<i>I Hawaiki pamamao</i>	<i>From Hawaiki far away</i>
<i>I hono ki te wairua, ki te whai ao</i>	<i>Bind to the spirit, to the day light</i>
<i>Ki te Ao Marama!</i>	<i>To the World of Light!</i>