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Afterword

Think Like a Fish: Pacific Philosophies and Climate Change

His Highness Tui Atua Tupua Tamasese Ta'isi Efi, the head of state of Samoa, opened this book by urging his readers to adopt a perspective based on *va tapuia*—“sacred relations between humans, animals, cosmos and the gods.” He suggested we might think about climate change from the vantage-point of other life forms—a dog, perhaps, the ocean, the stars, trees, a bird or a fish; and explore Pacific worlds patterned by existential interlocks between people and other beings.

In these ways of being, balanced exchanges between different life-forms generate health, peace and prosperity, while arrogance and greed breed ill-health, poverty and conflict. While equilibrium is highly prized, it is always fragile. According to Maori ancestral chants, for instance, cosmic order is established in two main ways—by affinity and alliance, when different powers come together to create new forms of life; and by contestation and quarrelling, in which different beings separate (or are separated) from each other.

According to the Te Arawa scribe Te Rangikaheke, for instance, at the beginning of the world there was just one founding ancestor, Rangi-nui the Sky Father and Papatūānuku the Earth Mother, a single being. For many *pō* (era of darkness) their children lived between them, cramped and frustrated. Weary of their confinement, they began to talk about separating their parents so that light could enter the world. Although the wind-ancestor Tāwhiri-matea disagreed with this idea, his older brothers ignored him. After many unsuccessful attempts, Tāne, ancestor of the forests, lay on his back and pushed up with his legs, forcing earth and sky apart.

As Rangi wept for Papa, his tears became rivers and lakes, and she sent up mists to greet him. Tormented by their grief, Tāwhiri-matea flew into a fury and attacked his brothers with whirlwinds and tornadoes, smashing Tāne's trees to splinters, driving Rongo and Haumia's root crops underground and lashing Tangaroa, the sea god into submission. In the midst of this chaos, Tangaroa's children fought with each other. When Ika-tere, the ancestor of fish, taunted his brother Tū-te-wanawana, the ancestor of lizards, saying, “You go inland, and be heaped up after fires in the fern!” Tū-te-wanawana replied, “You go to sea, and be hung up in baskets of cooked food!” (Te Rangikaheke in Curnow 1983: 254). After this quarrel, they went their separate ways.

Only Tū, the ancestor of people, stood tall in the face of Tāwhiri-matea's onslaught. For his bravery, he earned for his descendants the right to harvest his brothers'

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offspring—birds, root crops, forest foods and trees, crayfish, shellfish and fish, although they had to ask the ancestors for permission. In Te Ao Māori, as in Samoan and other ancestral Pacific ways of living, the fundamental kinship between people and other life forms is never forgotten.

According to the Tainui scholar Pei te Hurinui Jones, the double spiral in Maori carving, painting and tattoo embodies this swirling emergence of the cosmos (Jones 1959: 232). Unlike the linear arrow of modernist time, Maori space-time spins in and out from an ancestral source. When the sea ancestor Tangaroa breathes in, for instance, the sea spirals down his throat, forming a great vortex (Te Parata) at the heart of the ocean; the tide goes out and people die. As he breathes out, the tide flows and children are born into the world. When Tāwhiri flies up to the highest heaven to fetch the baskets of knowledge, he ascends on a whirlwind. The spiral of space-time is at once destructive and creative.

To think like a fish, then, is to understand that apocalyptic storms may herald conflict and confusion, but also new forms of life. After millennia of sea living, Pacific Islanders—especially fishers and navigators—are closely attuned to climatic shifts and changes. While “movements on the ocean are often unpredictable and surprising,” (Robertson, this volume) their ancestors had the power to calm or raise particular winds, to smooth the sea or summon up waves to swamp the fleets of their enemies. In New Zealand, for instance, the early missionary Samuel Marsden spoke with a *tohunga* who controlled the winds and waters in the Hokianga harbour, and reported that according to the warrior chief Hongi Hika, the sea god Tangaroa lived in his forehead (Salmond, 2017). When Marsden boarded a ship in the Bay of Islands, intending to take the errant missionary Thomas Kendall back to Port Jackson in defiance of Hongi’s wishes, the ship was wrecked before it left the Bay. It was a fine, calm day, and Marsden could not understand what had happened. He had recently been told, however, about the wreck of another ship in the Hokianga, where the mate attacked some sacred rocks with a hammer, and the local *taniwha* (powerful water being) picked up his ship and smashed it on the rocks as he tried to sail out of the harbour (Salmond, 2017).

In this book, Maria Robertson describes exchanges with an elderly female navigator from Kiribati, Teueroa, and her existential interlock with the ocean. In a deep sense, she and the sea are one. When Teueroa was born, her father took her umbilical cord out to sea and dropped it into deep water, and in her early teens, she was initiated as a navigator when her father sailed out of sight of land, tossed her into the water and sailed away. When he returned to pick her up, he asked her to point out the direction of the land. Later, he taught her how to predict the weather from the winds and stars. According to Teueroa, droughts that are explained by scientists as due to climate change have already been foretold by the stars. As Robertson remarks, given the notion that the world is made of relationships, engaging in known and unknown ways, fixing and unfixing, always struggling and co-operating, the world emerges in these connections. And the notion of organised exchanges of energy allows individuals to engage with systems and correct imbalances that could otherwise be said to be out of their control.

These exchanges of energy may include songs, as well as ritual knowledge and other artistic interventions. As Elfriede Hermann and Wolfgang Kempf report, many Kiribati people address the prospect of catastrophic climate change with a prophetic song that exhorts them to “rise up” and take practical action to avert the loss of their islands. For New Guinea, Marian Strucke-Garbe describes powerful artistic responses. Other examples include “Moana: The Rising of the Sea,” a performance created by Vilsoni Hereniko at the University of Hawai‘i that has featured at many international gatherings focused on climate change (Steiner, 2015).

In her account of Cyclone Pam in the Cook Islands, Cecile Rubow suggests that such storms (“naturalcultural whirls”) may be reflected in “giant rotating, intensifying discursive systems” that gather momentum across large networks, bringing together different knowledges and voices in ways that make different kinds of sense to different people. She suggests that “climate change” is one of these spinning assemblages, sweeping across the islands and spinning together ancestral, Christian and scientific ideas, generating fear and vulnerability, practical responses and creative power.

This sense of being caught in relational vortices and yet having the power to strike new balances also emerges in John Connell’s account of the Carteret Islanders, a population of fewer than 1000 people who inhabit a cluster of six small atolls off Bougainville. While these people have been described by the global press as the first climate refugees—“frontline victims of the excesses of capitalism”—they have suffered food, cash and timber shortages for at least half a century. At the same time, tectonic shifts, seismic events, and local interventions such as dynamiting the reefs and building sea walls amplify their difficulties. Nevertheless, the discourse of climate change serves as a “weapon of the weak,” giving them chances to build new lives in other places.

In this swirl of ideas, Pacific peoples have also been powerfully influenced by Christian narratives. As Jennifer Newell describes for Samoa and Emilie Nolet for Fiji, Biblical stories about God driving Adam and Eve out of the Garden of Eden for their sin of eating forbidden fruit; Noah building the Ark to survive the Great Flood; and the Apocalypse, when the sun scorches the earth, the rivers dry up and there is darkness and pain in the land are echoed in local debates around climate change.

These mythic narratives also underpin metropolitan accounts of climatic change. Ideas such as “the Anthropocene,” “anthropogenic impacts,” “ecosystem services” and “resource management” all reflect Biblical stories in which God gives Adam and Eve “dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth,” (Genesis, 1: 28) putting people in control of the cosmos. An onto-logic in which all other beings are created for human purposes fosters a sense of exceptionalism that helps to drive climate change, biodiversity losses and related phenomena, alongside fears of Armageddon or being driven out of Paradise. It is also very different from ancestral Pacific accounts in which all living phenomena including earth, sky, winds, rivers, birds, fish and people are linked together in kin networks, powered by reciprocal exchanges.

These kin-based philosophies have more in common with other strands in Western thought, for instance those that trace back to vitalist philosophies in the Enlightenment, and ideas about the “tree of life” or the “web of life” elaborated by scientists including Alexander Humboldt or Charles Darwin (Reill, 2005; Normandin and Wolfe, 2013; Lash, 2016). Ideas about complex networks and systems, symbiosis and “holobionts” in the contemporary biological sciences (Gilbert, Sapp and Tauber 2012: 326) all resonate closely with Pacific ideas.

In these kinds of framings, it makes sense to “think like a fish”—to consider the vantage-points of life forms other than human beings on planetary processes. In the context of attempts to sustainably manage the Pacific Ocean, for instance, whether through exclusive economic zones or marine reserves, these perspectives might allow us to see that fish do not register such boundaries, and to come up with devices that do not allow them to be harvested to extinction.

If people and environment, culture and nature are not divided in ancestral ways of being in the Pacific, neither are mind and matter, theory and practice. Engagements with Pacific forms of order are not just thought experiments, but also inform legal frameworks and practical action. In New Zealand, for instance, as part of the Treaty of Waitangi settlement process, both the Urewera, the ancestral territory of Tūhoe people, and the Whanganui River have recently been recognised as legal beings in their own right, with their own entitlements to health and well-being.

These laws have many practical implications, and not just for Maori people. While they place obligations of care on the iwi concerned, they also fundamentally reshape relationships between all people and these ancestral beings. For the Whanganui river, its restoration becomes a right, not an optional extra; and for the Urewera, once a major national park, the iwi has initiated a regime that seeks to manage people, rather than communities of plants and animals. Once issued with tramping, hunting and fishing permits, visitors now enter into “friendship agreements” with the Urewera, and are guided by young Tūhoe who introduce them to new ways of understanding this place that is an ancestor (for more detailed accounts of these experiments, see Salmond, 2017).

Such philosophical experiments can also inform scientific projects. In the Te Awaroa project, for instance, funded by the University of Auckland, teams of scientists and local experts draw on *mātauranga Maori* (ancestral knowledge) along with an array of natural and social sciences to listen to the “voice of the river” in different parts of the country, studying rivers as living systems through time, with their plants, animals and people, to inform healthier futures. In the wider Pacific, too, star navigators are again sailing across the ocean, carrying out scientific research and raising urgent concerns about the state of this great sea with its dying reefs, depleted fish stocks, gyres of rubbish and drowning islands.

In relation to climate change, Maori ancestral perspectives suggest that this is one of an array of symptoms that show interlinked living systems moving away from a state of *ora* (health, well-being and abundance) towards a state of *mate* (ill-health, dysfunction, degradation and failure). Such shifts have many manifestations. Intensive agriculture

that over-tills or over-grazes the land while using many imported inputs (diesel for machinery, chemical sprays and palm kernels as feed, in the case of intensive dairying), for instance, may also degrade aquifers, rivers, estuaries and harbours, contribute to biodiversity losses through mono-cropping and deforestation, and drive climate change through animal methane emissions, deforestation and the use of fossil fuels.

To “think like a fish,” then, is to recognise that aspects of modernist science may be non-adaptive. In order to understand these interconnected processes, the separation of the social from the natural sciences and the fragmentation of the disciplines are profoundly unhelpful. If we are to deal intelligently with climate change, new paradigms that foster intelligent inquiry into an array of intricate relational networks and patterns of exchange among planetary systems at different scales are urgently needed.

As Tui Atua Tupua Tamasese Ta’isi Efi suggests, there is also a need to live differently—to confront human greed and the urge to exploit “natural resources” for short term profit by considering the interests of future generations, and to pursue reciprocal exchanges that seek balance with other life forms, however elusive. The gravity of this challenge is highlighted by Nalau Bingeding’s account of a disjuncture in Papua New Guinea between the government’s powerful rhetoric about climate change in international fora and a lack of practical action at home. On the island of Gau in Fiji, on the other hand, according to Veitayaki and Holland, the inhabitants are tackling climate change on many fronts through the Lomani Gau project, informed by rigorous inquiry and ancestral precedents.

Across the contemporary Pacific, many thinkers are seeking to engage with climate change and related existential challenges by weaving together ancestral ideas with insights from the contemporary sciences, and activating these through innovative artistic, political and legal devices. In the face of apocalyptic visions that engender helplessness and despair, these offer new ways of thinking, a sense of resilience and hope, and a will to take practical action:

As my mentor Eruera Stirling used to chant:

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