Moving and listening in relation to trees and 'A Wardian Case'
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Moving

Tī kōuka (cabbage tree) have a certain reserved patience in comparison to the early joy of fruit trees. At least, this was one observation I made on a recent spring afternoon while walking past gardens adjacent to the Thames River in London.¹ The tī kōuka appeared to shield their modest blooms within hard bead-like buds whereas the impatient cherry and crab apple trees exploded in candy-coloured hues only to shower their petals on the pavement.

Tī kōuka is a type of palm endemic to Aotearoa New Zealand but in London I find it to be just as common as the ornamental blossoming trees that I passed. The prevalence of tī kōuka on my walk was a comforting reminder of Aotearoa but it was also an uncomfortable mnemonic of the plant's movement across oceans to be situated at what was the heart of the British Empire² during the mid to late nineteenth century. I was further reminded, as I walked, that this history and its ramifications in the present is what has also concerned the artists Miranda Bellamy and Amanda Fauteux in making their multichannel video and sound work *A Wardian Case*³ that documents plants on Kawau Island.⁴

The movement of tī kōuka trees to London echoes the journey that people, plants and other life forms have made, from the seventeenth to nineteenth century, as part of European exploration and conquest then later the race of empire expansion and colonial capitalism. A movement which, on an ideological level, was predicated on the understanding that deemed humans, and in particular White

¹ Regarding the shifting global context of this particular time due to the COVID-19 pandemic, I feel it is important to further specify that this walk took place on the 5th April 2021 which is prior to the 'easing' of UK government lockdown restrictions following a string of 'wave two' restrictions since at least November 2020.

² Goulbourne, Ethnicity and Nationalism in Post-Imperial Britain, 27-28.

³ This text is written before the exhibition has opened to the public and my descriptions throughout this text might differ from the experience of the work on display.

⁴ A small island in Aotearoa New Zealand located in the Hauraki Gulf.

Europeans, as superior to other life forms.⁵ This mindset in turn enabled the exponential acceleration of movement across the globe that sought to control, manipulate and extract life as a commodity and resource.⁶ It is from this time of significant loss, destruction and devastating violence that substantial scientific and technological innovations were also made.⁷ Innovations of urban infrastructures, industrial agriculture, global transits systems, communication networks, medicines and medical procedures, and machines of all kinds—which many, if not all, of us are now complicitly dependent on to the extent that they augment our reality and are intimately enmeshed in our existence.⁸

In aid of this accelerated momentum leading to our current moment, was a nineteenth century invention known as the Wardian case or Ward's Case. The Wardian case is a timber and glass box designed to operate as a type of microclimate that protected plants from the corrosive salt-air while in transit across the world. During the seventeenth century, prior to the use of the Wardian case, voyages struggled to keep their specimens alive. This innovation, therefore, was consequential in the transportation of numerous plant species sent to and from the British colonies especially via Kew Gardens in London (during the mid to late nineteenth century), which was the destination of my spring walk. The director at Kew Gardens at this time was the botanist Sir Joseph Dalton Hooker, a

⁵ Haraway, 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late 20th Century', 300-304; See letter: 31 May 1868 discussing Darwinism and human origins in which Hooker writes: 'savages are its foundations' Hooker to Grey, 'Letters (1865-1884)', n.d.

⁶ Blaut, 'Colonialism and the Rise of Capitalism', 260; Pawson and Brooking, *Making a New Land: Environmental Histories of New Zealand*, 1, 7; Dann, 'Losing Ground? Environmental Problems and Prospects at the Beginning of the Twenty-First Century', 276; Ince, *Colonial Capitalism and the Dilemmas of Liberalism*., 4-5; Mabaso, 'Globophobia', 99-100, 102-4; Nederveen Pieterse, *Globalization or Empire?*, 1-2; Turner, 'Settler Dreaming', 120; Vergès, 'Beyond the Colonial Discourse of Lack: A Humble and Difficult Art', 203-12.

⁷ Haraway, 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late 20th Century', 300-304.

⁸ Haraway, 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late 20th Century'.

⁹ Hooker to Grey, 'Letters (1865-1884)', n.d.

¹⁰ See letter: 31 May 1868. Ibid.; Lewis, 'The Wardian Case: A History of Plant Transportation'; Maylack, 'How a Glass Terrarium Changed the World'.

¹¹ Lewis, 'The Wardian Case: A History of Plant Transportation'; Maylack, 'How a Glass Terrarium Changed the World'.

¹² In fact, the Wardian case has been attributed as playing a significant role in Britain being a major global power in the nineteenth century. See: Maylack, 'How a Glass Terrarium Changed the World'.

¹³ Lewis, 'The Wardian Case: A History of Plant Transportation'.

close friend of Charles Darwin¹⁴ and an acquaintance of Nathaniel Bagshaw Ward, the designer of the Wardian case.¹⁵

Hooker has been attributed as the second¹⁶ to use the Wardian case for international transport of plant specimens.¹⁷ Hooker first used the Wardian case on his 1841 return voyage from Antarctica in which he reportedly took plants and trees from the Bay of Islands in Aotearoa and successfully transported them to London.¹⁸ Notwithstanding technical difficulties and failures over the subsequent years,¹⁹ Hooker embraced and persisted with the Wardian case technology by sending cases across the globe to exchange, import and export plants with various botanists, enthusiasts and colonial envoys.²⁰ One notable recipient of Hooker's Wardian cases was Sir George Grey, owner of Kawau Island, and who was a Governor and Premier of New Zealand as well as holding comparable positions in Australia and South Africa over the course of his lifetime.²¹ Grey could further be described as a naturalist, collector, amateur anthropologist, soldier, politician, colonial pioneer and settler.²²

As is recorded in their correspondence,²³ Hooker and Grey exchanged many species via Wardian cases from England to Aotearoa and vice versa, and also from other British colonies .²⁴ It's probable that Grey introduced many of these plants to the

¹⁴ Endersby, 'Sir Joseph Dalton Hooker'.

¹⁵ Lewis, 'The Wardian Case: A History of Plant Transportation'; Maylack, 'How a Glass Terrarium Changed the World'.

 $^{^{16}}$ The first being Ward in 1833. See: Maylack, 'How a Glass Terrarium Changed the World'.

¹⁷ Lewis, 'The Wardian Case: A History of Plant Transportation'.

¹⁸ Ibid

¹⁹ See letters: 19 Dec 1865; 31 May 1868. Hooker to Grey, 'Letters (1865-1884)', n.d.

²⁰ Lewis, 'The Wardian Case: A History of Plant Transportation'.

²¹ Sinclair, 'Grey, George'; Ray, 'Governor: The Story of Sir George Grey - Part 1'; Ray, 'Governor: The Story of Sir George Grey - Part 2'; Yarwood, 'The Governor's Island'.

²² Sinclair, 'Grey, George'; Ray, 'Governor: The Story of Sir George Grey - Part 1'; Ray, 'Governor: The Story of Sir George Grey - Part 2'.

²³ Digitised copies of these letters (approximately 12) are accessible online via the Auckland Council's Manuscripts Online by searching "Joseph Dalton Hooker" under the 'Grey Letters' collection. Visit: http://www.aucklandcity.govt.nz/dbtw-wpd/msonline/index.htm

²⁴ Hooker to Grey, 'Letters (1865-1884)', n.d.

soil of Kawau Island leading to the island's abnormally varied flora. ²⁵ These introduced plants, alongside native species, feature in Bellamy's & Fauteux's video —including footage and sound from a tī kōuka tree which, on my walk, I imagined as a likely distant cousin of those I encounter in London. Among these introduced plants are precariously overgrown pines. Aside from threatening to fall or lose branches at random, thereby endangering those who pass underneath, ²⁶ this gangly forest of pines and the needles they shed contribute pathogens, additional noxious weeds and acidity to the soil preventing the growth of native species. ²⁷ Similarly, in another part of the island, as the footage in *A Wardian Case* attests, a forest of kānuka stands in similar towering dominance. Despite being endemic to Aotearoa, in this out of kilter environment lacking in biodiversity and with the absence of larger trees, the kānuka have become a dominant monoculture²⁸, overgrown beyond their natural role as ground cover supposedly aided wallaby grazing which has in turn reduced understory growth and increased erosion of the topsoil. ²⁹

It must be acknowledged that Grey has had a consequential impact upon Aotearoa's history and its contemporary context.³⁰ By many accounts, his legacy is influenced by an idiosyncratic combination of roles: paternalistic humanitarian, murderous colonist and manipulative politician. ³¹ This character, which shifted in temperament throughout his life, was conceivably driven by his personal ambitions, his family expectations and ideologies within his wider socio-political environment.³² In terms of Kawau's environment, Grey's contribution appears to be the product of a sense of personal entitlement and an unrestrained search for

²⁵ Yarwood, 'The Governor's Island'.

²⁶ So I am told by Miranda Bellamy and Amanda Fauteux.

²⁷ Baker, *The Environmental Effects of Plantation Forestry: The Ngunguru Catchment, Northland, New Zealand: A Discussion Document*; Sullivan, 'Effects of Pinus Radiata Plantations on Environmental Weed Invasion into Adjacent Native Forest Reserves'; Watt et al., 'Assessment of Multiple Climate Change Effects on Plantation Forests in New Zealand'.

²⁸ Norton, Butt, and Bergin, 'Upscaling Restoration of Native Biodiversity: A New Zealand Perspective'.

²⁹ 'The Ecological Problems and Need for the Project'.

³⁰ Sinclair, 'Grey, George'; Ray, 'Governor: The Story of Sir George Grey - Part 1'; ibid.; Yarwood, 'The Governor's Island'.

³¹ Sinclair, 'Grey, George'; Ray, 'Governor: The Story of Sir George Grey - Part 1'; ibid.; Yarwood, 'The Governor's Island'.

³² Sinclair, 'Grey, George'; Ray, 'Governor: The Story of Sir George Grey - Part 1'; ibid.; Yarwood, 'The Governor's Island'.

knowledge and lay experimentation.³³ I do not wish to centralise Grey's importance here over others, especially that of tangata whenua³⁴—whose history on Kawau precedes Grey's by at least a few hundred years.³⁵ In this colonial narrative, Grey is but a node within a larger web of power relations, and yet to overlook his influence would be to minimise the destruction he evidently left in his wake—a destruction which has created a type of cyborg-island as I will discuss later.

The peculiar environment of Kawau Island is not only made of plant life but also entwined with human and animal habitation.³⁶ I am told that among the built structures on the island (which includes a disused copper mine, holiday homes and wharfs),³⁷ Grey's Mansion House is the most imposing and operates as a sort of curiosity cabinet devoted to his exploits. This is broached across the multiple screens of *A Wardian Case* where living Kauri trees on Kawau are brought into conversation with the Kauri panelling and furniture inside Mansion House. Animals on the island, introduced by Grey, included kangaroos, kookaburra, wallabies, monkeys, peacocks, zebra and many others.³⁸ While many of the most exotic animalia, such as the monkeys, were eradicated by Grey,³⁹ others including the wallabies and peacocks, as featured in *A Wardian Case*, remain on the island as a type of politically fraught tourist novelty.

As I walk aside the Thames these images from *A Wardian Case* and what they signify wear away at my conscience. They complicate my dream of home and I feel a desire to rectify the environment of Kawau—to have the caustic pines felled, to

³³ Hooker to Grey, 'Letters (1865-1884)', n.d.; Ray, 'Governor: The Story of Sir George Grey - Part 2'; Yarwood, 'The Governor's Island'.

³⁴ Can be translated as the Indigenous people or people born of the whenua (land). See: https://maoridictionary.co.nz/search?idiom=&phrase=&proverb=&loan=&thistLoanWords=&keywords=tangata+whenua

^{35 &#}x27;History of Kawau Island'.

³⁶ Admittedly I have never visited Kawau Island, but I take it on good account of texts cited here and the descriptions given to me by the artists Miranda Bellamy and Amanda Fauteux.

³⁷ 'History of Kawau Island'.

³⁸ 'Kawau Island Wallabies'; Ray, 'Governor: The Story of Sir George Grey - Part 1'; Ray, 'Governor: The Story of Sir George Grey - Part 2'.

 $^{^{39}}$ Ray, 'Governor: The Story of Sir George Grey - Part 2'.

have the damaging wallabies culled and to re-populate the island with native trees and birds. My longing for a 'pure' pre-European-contact ecosystem that comes so readily to the imagination is perhaps not too distant from Grey's form of twisted humanitarianism,⁴⁰ one that sought to change the world on their terms. Today we may call this desire White saviour syndrome,⁴¹ or what educator and philosopher Paulo Freire describes as 'pseudo-participation' in which those in power attempt to absolve their "guilt though paternalistic treatment of the oppressed" and insisting that "they must be the executors of the transformation."⁴²

This pseudo-participation is a manifestation of implicit White supremacy and perhaps also related to what cultural theorist Stephen Turner terms 'settler dreaming'.⁴³ I understand settler dreaming to be the motivation of Pākehā⁴⁴ to assert their settler identity and 'dream' over Indigenous knowledges, perspectives and self-determination.⁴⁵ I would further extend this mindset to being to some degree bound within a Pākehā culture of environmental conservation which is bound to a form of nationalism and a desire to form a connection to the land.⁴⁶ Anecdotally speaking, there can also be a tendency within the Pākehā psyche of conservation to become desensitised⁴⁷ to the killing of introduced species which, if not done with respect, could be further distance a connection to other life forms.

Weighing up these thoughts, during my walk, caused me to scrutinise my mobility in London and how this movement might be a direct result of inherited privilege

⁴⁰ Haraway, 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late 20th Century', 300; Ray, 'Governor: The Story of Sir George Grey - Part 1'; Ray, 'Governor: The Story of Sir George Grey - Part 2'; Yarwood, 'The Governor's Island'.

⁴¹ Cammarota, 'Blindsided by the Avatar: White Saviors and Allies out of Hollywood and in Education'; Cole, 'The White-Savior Industrial Complex'; Straubhaar, 'The Stark Reality of the "White Saviour" Complex and the Need for Critical Consciousness: A Document Analysis of the Early Journals of a Freirean Educator'.

⁴² Freire, Pedagogy of the Oppressed, 23-24, 34, 39, 43.

⁴³ Turner, 'Settler Dreaming'.

⁴⁴ European New Zealander.

⁴⁵ Turner, 'Settler Dreaming'.

⁴⁶ Brooking and Pawson, 'Introduction', 28-29; Lochhead and Star, 'Children of the Burnt Bush: New Zealanders and the Indigenous Remnant, 1880-1930', 154-55; Turner, 'Settler Dreaming'.

⁴⁷ Roy, 'New Zealand's Possum War'.

and proximities to power.⁴⁸ This self-reflexive assessment of my physical agency mixed with events shaping the present. For, this walk was my one permitted outdoor excursion allowed during the UK government's COVID-19 lockdown restrictions. Movement at that precise moment was considered a privilege and a freedom that was not equally shared. On this point, the geographer Doreen Massey now comes to mind, who once wrote that "the world is specific, and structured by inequalities" and so it "matters who moves and how you move."⁴⁹ Perhaps, given this mounting inequality, it also matters who listens, how you listen and what change this listening might amount to.

Listening

While continuing further west along the Thames towards Kew Gardens I happen to be listening to a podcast in which, coincidently, the biologist and theorist Donna Haraway is recounting a spring walk she had in 1968. 50 She was walking from a lecture in cellular molecular biochemistry and heading towards a Women's Liberation Consciousness raising group. 51 In seeing the trees leafing out she had an epiphany that connected two bodies of knowledge—biology and feminism. 52 According to Haraway she had a profound feeling of

coming into oneness with the burgeoning leaves of the tree that was made potent for me by a profound imagination of how the electron transport systems and oxidation reduction reactions and He+ molecules and all the rest of it, how the molecular biochemistry of the burgeoning leaves was working was part of my coming into a neurotic oneness including—a kind of whole-body lubrication—a kind of profound erotic oneness.⁵³

In the moment of my own walk, the electronically driven soundwaves of Haraway's voice provoked me to pause and attune to the season's gasp for life around me—I try to imagine it, as she had experienced, as an all connected electrochemical and

⁴⁸ And conceivably also that of Bellamy's & Fauteux's movements on Kawau.

⁴⁹ Massey, 'Some Times of Space'.

⁵⁰ Young, 'Donna Haraway on Staying with the Trouble'.

⁵¹ Ibid.

⁵² Ibid.

⁵³ Ibid.

socio-political event unfolding around me. Electrochemical events, as Haraway alludes to, are the process through which chemicals pass though neural networks in plants, animals and humans alike enabling them to think, move, listen and change, not to mention many other markers of life.⁵⁴ Electrochemical signals are also the means through which Bellamy & Fauteux have 'listened' to the trees and other plants they encountered on Kawau Island by translating recorded biodata into sound.⁵⁵

However, as the process of producing *A Wardian Case* attests, the means through which humans might listen,⁵⁶ at least in the cultural construct of our modernity, are likely the product of the same scientific modes of thought which has argued for a division between humans and other life forms. After all, we humans are technological creatures. As opposed to trees, we experience and manipulate our environment and perceive the world via tools, implants, prostheses, buildings, vehicles, medicines, algorithms, robots and many other ingenious contraptions. Via her spring afternoon epiphany, Haraway supposedly accommodated this tension of technological dependency and our inherent oneness with the environment, and the political implications of this oneness, with a new understanding—an understanding which led to her famed 1985 essay *A Cyborg Manifesto [...]*.⁵⁷

The 'cyborg', Haraway outlines, is both a real and imaginary construct which can be a helpful political metaphor in traversing ideological divisions—in particular between the Judaeo-Christian technocratic patriarchal US state and the feminist political and activist movements of Haraway's 1960s past and intersectional debates contemporary to the 1980s when she wrote the text.⁵⁸ Haraway outlines that the cyborg is an entity bound in irony and blasphemy by being the

⁵⁴ Baluška, Mancuso, and Volkmann, *Communication in Plants*, VI-VIII; Volkov, 'Electrophysiology and Phototropism', 351-351.

⁵⁵ More specifically the electrical conductivity data recorded between two points through the movement of chloroplasts within plant cells. This 'biodata' was derived through the use of a first generation home built device 'biodata sonification midi device musical plants modular synth Ableton'. As the name suggests outputs a MIDI (Musical Instrument Digital Interface) signal which Bellamy & Fauteux transferred via USB into audio editing software.

⁵⁶ Kimmerer, *Braiding Sweetgrass*, 10, 48, 49, 53, 305, 311, 333, 341, 349, 354, 369, 374, 386.

⁵⁷ Haraway, 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late 20th Century'.

⁵⁸ Ibid., 291-95.

'illegitimate' progeny of militaristic technological determinism while also being an indeterminant "hybrid of machine and organism, a creature of social reality as well as a creature of fiction." ⁵⁹ By sustaining a betwixt position, the cyborg, she argues, sustains a powerful irony due to the fact that it dispassionately understands the conditions of its abomination but also its in-built subversive power to counter the force that created it. ⁶⁰

It is from this indeterminant cyborg state that I consider Bellamy's & Fauteux's experiment in listening to the trees and plants of Kawau Island. It could be said that the technologies that the artists employ are ideologically and materially bound within the same or similar extractive industries and capitalist imperatives that produced the bereft biodiversity of Kawau. However, this cyborg state need not contradict the artist's efforts to listen nor lack in agency. It could similarly be observed that Kawau is now a type of cyborg-island, just as we humans might be cyborgs, but this does not mean that the island is without value as a contributor to the larger environment. As Haraway explains, there is a subversive potential to be gleaned by embracing such ironies, blasphemies and apparent contradictions of the cyborg as illegitimate offspring. One avenue of potential, I propose, is the attempt Bellamy & Fauteux have made to listen via translating biodata from the plants of Kawau Island into sound.

In *A Wardian Case* the sonically translated biodata morphs and at other times abruptly cuts between sounds resembling theremins, synthesised pipe organs, digital bleeps, vibraphones and even the white noise of a detuned radio.⁶³ In the translation from raw data to sound it could have been tempting to render it into grand orchestral symphonies, and while there maybe inklings of the orchestral in some moments, most are more akin to the sound a cat might make ambulating across piano keys. Other sounds, such as the glitched-out buzzes and drones,

⁵⁹ Ibid., 291.

⁶⁰ Ibid., 291, 295-300.

⁶¹ Kimmerer, *Braiding Sweetgrass*, 10, 48, 49, 53, 305, 311, 333, 341, 349, 354, 369, 374, 386.

⁶² Haraway, 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late 20th Century', 291, 295-300.

⁶³ At the time of writing this text prior to exhibition.

conjure 1950s sci-fi imaginaries. No doubt more nuanced descriptions could be listed here by a writer more accustomed to sounds of these registers, compositions and modalities. To be fixated on the qualities of the sound, however, can risk missing what is being *listened for*. As a form of listing, as opposed to sound making, the soundtrack of *A Wardian Case* is more an effort at recognising and valuing the emanations of another living entity than trying to make an affecting musical score.⁶⁴

Some might claim that this attempt at translating biodata to sound for human ears seeks to anthropomorphise plants.⁶⁵ Being drawn into this debate, however, there is a tendency to be caught in an unhelpful circular logic which I think overlooks the potential in front of us—that there are means, technologies and bodies of knowledge, that can be used to become attuned to the life forms around us and perhaps through an attempt at such listening we can begin to value them on their own terms.

It should be clarified that I am not arguing for being attuned to 'Nature' with a capital 'N' separated and distinct from the human. 66 Rather, what I appeal to here is more in the spirit of what Haraway advocates when she claims "the cyborg would not recognize the Garden of Eden" 67—a political positioning through which subversively resists idyllic conceptions of a 'pure' environment and its difference from the more 'superior' human. 68 As Turner similarly describes, by recognising this artifice of human superiority, via a deep listening, it could be that an aperture is prised open from within the dream state of the Pākehā settler imaginary—an opening that might "give us pause to stop and think" and become cognisant of the

⁶⁴ By this I don't mean that the soundtrack is not affecting or that the artists did not wish to elicit emotions in the audience by their choice of sounds attributed to the plants' compositions. Indeed, as a viewer of the work there are moments that emotionally connected with me. Rather, what I am trying to emphasise here is that the *act of listening* is, for me at least, the core significance and motivation of the work. This point I think differentiates *A Wardian Case* from other artworks that have translated plant, insect, celestial and other data from 'nature' to sound more in line with human expectations of music or tasteful sound.

⁶⁵ Kimmerer, Braiding Sweetgrass, 57.

⁶⁶ Haraway, 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late 20th Century', 293.

⁶⁷ Ibid.

⁶⁸ Haraway, 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late 20th Century'.

"[s]tates of abandonment or dissolution" affecting all life.⁶⁹ In this sense, if there is a subversive potential to the form of listening attempted in *A Wardian Case* maybe it is simply found in the seeking out the kinship⁷⁰ of other life forms and valuing their lives alongside ours.

In concluding my walk, I paused overlooking the river in the direction of Kew Gardens. I imagined ships voyaging past containing Wardian cases incubating tī kōuka and other trees originating from Kawau Island sent by Grey destined for Hooker at Kew. Aside from dwelling with the discomfort of this history and its continuing presence, I am hearted after contemplating the confluence of spring life and the subversive potential for socio-political and ecopolitical change. For me this optimism may not have manifested as the ecstatic oneness that Haraway experienced on her spring walk, but it is a renewed confidence based in the fact that there are electrochemical events sparking in our collective neurons, roots, leaves, nerves and cells—vital signs indicating towards our co-dependant existence.

⁶⁹ Turner, 'Settler Dreaming', 119.

⁷⁰ Haraway, *Staying with the Trouble*.

Bibliography

- Baker, Jenny. The Environmental Effects of Plantation Forestry: The Ngunguru Catchment, Northland, New Zealand: A Discussion Document. Environment and Conservation Organisations of NZ, 2014. http://www.eco.org.nz/uploads/Ngunguru/NGUNGURU%20DOCUMENT%20April%2029,%202014%20FINAL%20web.pdf.
- Baluška, František, Stefano Mancuso, and Dieter Volkmann, eds. *Communication in Plants: Neuronal Aspects of Plant Life*. Berlin Heidelberg: Springer-Verlag, 2006. https://doi.org/10.1007/978-3-540-28516-8.
- Blaut, J. M. 'Colonialism and the Rise of Capitalism'. *Science & Society* 53, no. 3 (1989): 260. Brooking, Tom, and Eric Pawson. 'Introduction'. In *Environmental Histories of New Zealand.*, 1-16. Oxford University Press, 2002.
- Cammarota, Julio. 'Blindsided by the Avatar: White Saviors and Allies out of Hollywood and in Education'. *Review of Education/Pedagogy/Cultural Studies* 33, no. 3 (7 August 2011): 242-59. https://doi.org/10.1080/10714413.2011.585287.
- Cole, Teju. 'The White-Savior Industrial Complex'. *The Atlantic* (blog), 21 March 2012. https://www.theatlantic.com/international/archive/2012/03/the-white-savior-industrial-complex/254843/.
- Dann, Christine. 'Losing Ground? Environmental Problems and Prospects at the Beginning of the Twenty-First Century'. In *Environmental Histories of New Zealand.*, edited by Tom Brooking and Eric Pawson, 275-87. Oxford University Press, 2002.
- Endersby, Jim. 'Sir Joseph Dalton Hooker'. Kew Gardens. Accessed 8 May 2021. https://www.kew.org/read-and-watch/sir-joseph-dalton-hooker.
- Freire, Paulo. *Pedagogy of the Oppressed*. Penguin Classics 2017. Continuum Publishing Company, 1970.
- Goulbourne, H. Ethnicity and Nationalism in Post-Imperial Britain. Cambridge University Press, 1991.
- Haraway, Donna J. 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late 20th Century'. In *The Cybercultures Reader*, edited by David Bell and Barbara M Kennedy, 291-324. New York: Routledge, 2000.
- ——. Staying with the Trouble: Making Kin in the Chthulucene. Duke University Press Books, 2016. Department of Conservation, New Zealand Government. 'History of Kawau Island'. Accessed 8 May 2021. https://www.doc.govt.nz/parks-and-recreation/places-to-go/auckland/places/kawau-island-historic-reserve/historic-kawau-island/.
- Hooker, Sir Joseph Dalton. Letter to Sir George Grey. 'Letters (1865-1884)', n.d. Auckland Council, Manuscripts Online. http://www.aucklandcity.govt.nz/dbtw-wpd/exec/dbtwpub.dll? AC=PREV_BLOCK&XC=/dbtw-wpd/exec/dbtwpub.dll&BU=http%3A%2F%2Fwww.aucklandcity.govt.nz%2Fdbtw-wpd%2Fmsonline%2F&TN=Manuscriptsonline&SN=AUTO27066&SE=1408&RN=5&MR=5&TR=0&TX=1000&ES=0&CS=1&XP=&RF=WebReport&EF=&DF=WebRecord&RL=0&EL=0&DL=0&NP=2&ID=&MF=WPEngMsg.ini&MQ=&TI=0&DT=&ST=0&IR=4402&NR=0&NB=5&SV=0&SS=0&BG=&FG=&QS=&OEX=ISO-8859-1&OEH=ISO-8859-1.
- Ince, Onur Ulas. *Colonial Capitalism and the Dilemmas of Liberalism*. First edition. Oxford University Press, 2018.
- Department of Conservation, New Zealand Government. 'Kawau Island Wallabies'. Accessed 8 May 2021. https://www.doc.govt.nz/nature/pests-and-threats/animal-pests/kawau-island-wallabies/.
- Kimmerer, Robin Wall. Braiding Sweetgrass. First edition. Milkweed Editions, 2013.
- Lewis, Philippa. 'The Wardian Case: A History of Plant Transportation'. Kew Gardens. Accessed 7 May 2021. https://www.kew.org/read-and-watch/the-wardian-case-a-history-of-plant-transportation.
- Lochhead, Lynne, and Paul Star. 'Children of the Burnt Bush: New Zealanders and the Indigenous Remnant, 1880-1930'. In *Making a New Land: Environmental Histories of New Zealand*, edited by Eric Pawson and Tom Brooking, 141-57. New York, UNITED STATES: Otago University Press, 2013. http://ebookcentral.proquest.com/lib/massey/detail.action? docID=4306803.
- Mabaso, Nkule. 'Globophobia'. In *Curating After the Global: Roadmaps for the Present*, edited by Paul O'Neill, Simon Sheikh, Lucy Steeds, and Mick Wilson, Illustrated Edition., 97-113. Feldmeilen, Switzerland: Annandale-on-Hudson, NY: The MIT Press, 2019.
- Massey, Doreen. 'Some Times of Space'. In *Time: Whitechapel Documents of Contemporary Art Series*. London: Whitechapel, 2003.

- Maylack, Jen. 'How a Glass Terrarium Changed the World'. *The Atlantic* (blog), 12 November 2017. https://www.theatlantic.com/technology/archive/2017/11/how-a-glass-terrarium-changed-the-world/545621/.
- Nederveen Pieterse, Jan. Globalization or Empire? Routledge, 2004.
- Norton, David A., Jason Butt, and David O. Bergin. 'Upscaling Restoration of Native Biodiversity: A New Zealand Perspective'. *Ecological Management & Restoration* 19, no. S1 (1 August 2018): 26-35. https://doi.org/10.1111/emr.12316.
- Pawson, Eric, and Tom Brooking. Making a New Land: Environmental Histories of New Zealand. New York, UNITED STATES: Otago University Press, 2013. http://ebookcentral.proquest.com/lib/massey/detail.action?docID=4306803.
- Ray, William. 'Governor: The Story of Sir George Grey Part 1'. Radio New Zealand, 2021. https://www.rnz.co.nz/programmes/black-sheep/story/2018791357/governor-the-story-of-sirgeorge-grey-part-1.
- ---. 'Governor: The Story of Sir George Grey Part 2'. Radio New Zealand, 2021. https://www.rnz.co.nz/programmes/black-sheep/story/2018791375/governor-the-story-of-sirgeorge-grey-part-2.
- Roy, Eleanor Ainge. 'New Zealand's Possum War: "barbaric" Drowning of Babies at School Fair Sparks Outcry'. The Guardian, 5 July 2017. http://www.theguardian.com/world/2017/jul/05/new-zealands-possum-war-barbaric-drowning-of-babies-at-school-fair-sparks-outcry.
- Sinclair, Keith. 'Grey, George'. In *Dictionary of New Zealand Biography, Te Ara the Encyclopedia of New Zealand*. Ministry for Culture and Heritage Te Manatu Taonga. Accessed 8 May 2021. https://teara.govt.nz/en/biographies/1g21/grey-george.

 Straubhaar, Rolf. 'The Stark Reality of the "White Saviour" Complex and the Need for Critical
- Straubhaar, Rolf. 'The Stark Reality of the "White Saviour" Complex and the Need for Critical Consciousness: A Document Analysis of the Early Journals of a Freirean Educator'. *Compare* 45, no. 3 (04 2015): 381-400. https://doi.org/10.1080/03057925.2013.876306.
- Sullivan, J J. 'Effects of Pinus Radiata Plantations on Environmental Weed Invasion into Adjacent Native Forest Reserves'. DOC Research & Development Series, 2006, 25.
- Pohutukawa Trust. 'The Ecological Problems and Need for the Project'. Accessed 8 May 2021. http://www.pohutukawatrust.org.nz/ecoproblems.htm.
- Turner, Stephen. 'Settler Dreaming', 2011. http://memoryconnection.org/wp-content/uploads/2011/12/StephenTurner.pdf.
- Vergès, Françoise. 'Beyond the Colonial Discourse of Lack: A Humble and Difficult Art'. In *Curating After the Global: Roadmaps for the Present*, edited by Paul O'Neill, Simon Sheikh, Lucy Steeds, and Mick Wilson, Illustrated Edition., 201-17. Feldmeilen, Switzerland: Annandale-on-Hudson, NY: The MIT Press, 2019.
- Volkov, Alexander G. 'Electrophysiology and Phototropism'. In *Communication in Plants: Neuronal Aspects of Plant Life*, edited by František Baluška, Stefano Mancuso, and Dieter Volkmann. Berlin Heidelberg: Springer-Verlag, 2006. https://doi.org/10.1007/978-3-540-28516-8.
- Watt, Michael S, Miko U F Kirschbaum, John R Moore, H Grant Pearce, Lindsay S Bulman, Eckehard G Brockerhoff, and Nathanael Melia. 'Assessment of Multiple Climate Change Effects on Plantation Forests in New Zealand'. Forestry: An International Journal of Forest Research 92, no. 1 (1 January 2019): 1-15. https://doi.org/10.1093/forestry/cpy024.
- Yarwood, Vaughan. 'The Governor's Island'. New Zealand Geographic, 1998. https://www.nzgeo.com/stories/the-governors-island/.
- Young, Ayana. 'Donna Haraway on Staying with the Trouble'. For the Wild. Accessed 5 April 2021. https://forthewild.world/listen/donna-haraway-on-staying-with-the-trouble-131.