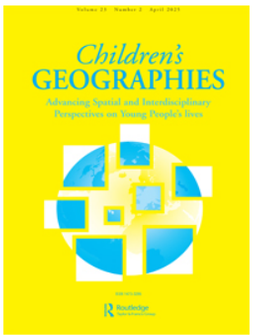

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RESEARCH ARTICLE

Environmental education in Aotearoa New Zealand: reconfiguring possum–child mortal relations

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ABSTRACT

In Aotearoa New Zealand children learn about biodiversity loss and protection through a bicultural environmental education (EE) program. Connected with Predator Free NZ, a nationwide restoration project, the program teaches children about killing possums, rats, and stoats. Children's involvement in possum killing has a long, troubling history in Aotearoa and EE is now working to transform attitudes from 'hating possums' into respecting all animals. This paper analysis the recent shift in rhetoric, with a focus on the discord between animal rights scholars and EE and by addressing the histories of Aotearoa, possums, and EE. With the help of Donna Haraway, Rangimārie Rose Pere, and other indigenous scholars, the troubles obscuring the move into interspecies respect are made visible. Militarized discourse, war games, individualism, Restoration, nature-culture divide, and human exceptionalism, are all emphasized as barriers. This paper also draws attention to a major concern with possum-child worlds and EE research in that children's voice is seriously lacking. It is then argued that children's stories must be present in future EE research, and that the pathway toward respecting possums is one and the same, located in indigenous, interspecies, children's, and ecofeminist stories. Positions that emphasize interconnected ecologies between people, place, and animals.

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Environmental feminism; environmental education; indigenous ecologies; interspecies justice; species endangerment; human–animal relations

Introduction

In the land of the long white cloud, Octovia is excited to begin school. The promise of new friends and learning awaits. Painting, writing, playground, numbers, and something new called science. Octovia eagerly listens to learn about the forests, mountains, and animals around her, but soon anticipation turns to dread as she learns that she was born into a dying ecosystem. Melancholia and panic rise in her throat like bile as her childhood evaporates into climate change and mass extinctions. Octovia and her friends learn that their forebearers destroyed mother earth and all her children, carving her up, taking from her without giving back. These ghosts severed themselves from mother and all their siblings, giving themselves the power to absorb entire species. Now the remaining species are dying, oceans are acidifying, temperatures are rising and soon all hope for humanity will be lost. The fate of the planet falls into little hands. Restore mother earth Octovia, you are the future.

Octovia's plight is a longstanding dystopian storyline. The apocalyptic tale of the exceptional human species confronted by the possibility of their own extinction, as their world becomes an unstable habitat. This story however is not science fiction, it is a narrative being represented to

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children as Western scientific fact. Children are experiencing environmental education (EE) in a time called the *Sixth Mass Extinction*, where the climate change crisis features as an apocalyptic panic mashing global warming, ocean acidification, biodiversity loss, and childhoods together in what this special issue calls 'climatehood' (Ritchie 2021; Kolbert 2014). This paper responds to the trouble of 'climatehood' by addressing one country's response to 'the catastrophic rate of anthropogenic biodiversity loss attributable to urbanisation, industrial agriculture and forestry' and how this has altered childhoods in Aotearoa New Zealand (Taylor 2017, 1448). In a place damaged by colonialism, adults mobilise children to redress past wrongs as future environmental leaders, rendering them response-able to rid Aotearoa of possums and other introduced 'pest' mammals, as part of a nationwide restoration project (DOC 2017a). The Environmental Education for Sustainability (EEFS) programme is bicultural and positions Mātauranga Māori (indigenous onto-epistemologies) alongside Western scientific knowledge, to teach children about biodiversity loss endemic to these islands (DOC 2017a). After centuries of Western-dominated science and 'underlying assumptions of white superiority', this 'two-world' knowledge system is a partial recuperation (Ritchie 2021, 53; Wood and Lewthwaite 2008, 629).

With EEFS children are contributing to the Predator Free New Zealand (PFNZ) project, described as a 'war on pests' by killing possums alongside teachers, scientists, politicians, colonial ghosts, indigenous peoples, corporations, and communities (DOC 2017a, 2018; Morris 2019). This mortal muddle is not child's play. This is child's work, and their work in pest control has not gone unnoticed. Child–possum mortal relations have become tied into animal rights research and activism. The literature addresses problems with militarised discourse, children becoming exterminators, the connection between animal abuse and human violence, nationalism and racism produced through nativist views, discourses surrounding colonialism and environmentalism, children's literature which demonises possums, and possums used as a diversion to distract from settler colonial environmental damage (see: Amey 2007; Bidwell and Thompson 2015; Holm 2015; Milton 2016; Morris 2019; Ram 2019; Souther 2016; Potts, Armstrong, and Brown 2013; Young, Linné, and Potts 2015). As a response to national and international pressure, the anti-possum sentiment of EE has recently shifted to one of respect. Respect for all species, including possums, is now suggested as the only way forward for children to learn to care for and about nature (DOC 2017a, 2018). This paper considers the move to respect by drawing attention to the past and present barriers keeping respect at a rhetorical level, not yet a verb. These troubles are addressed with the help of environmental feminist Donna Haraway (2016) and the relational knowledge systems that were already here long before colonisation, Mātauranga Māori. Positions that emphasise interconnected ecologies between people, place, and animals, with no traces of humanism (Skerrett and Ritchie 2020).

This paper argues that the barriers to interspecies respect are Western tools of individualism, competition relations, Restoration, nature-culture divide, and human exceptionalism. To keep this partial recuperation of indigenous knowledge and respect for all species moving forward, different tools are needed than the exclusionary words and weapons that wrote the apocalyptic story in the first place (Haraway 2016). As Haraway (2016) knows, '[a] common livable world must be composed, bit by bit, or not at all' (40). The 2017 EEFS programme may be bicultural, however, in possum–child worlds the narratives of the biodiversity crisis have been dominated by settler colonials for too long. Holm (2015) argues that in fact 'the possum works to distract from the environmental destruction directly wrought by [European] colonists in Aotearoa' (32). The Western apocalypse story is unsettled here as it sits next to Mātauranga Māori and stories of loss that have already occurred. For introduced mammals facing extermination, for native species already gone, for children positioned as objects and exterminators whose voice is missing from EE, for the land carved up through the colonisation process, and for the indigenous Māori peoples who are this land. Not a future fantasy but a lived past and present (Haraway 2016).

This paper argues that earth has always embodied interconnected ecologies and symbiotic assemblages, no matter how successfully the Western human exceptionalist fantasy has been crafted

(Haraway 2016). Like Taylor (2017) this author knows that humans are but one of the many species 'that make and shape worlds together' (1449). Implying that humans are the sole agents of change, negative or positive, is a highly problematic position which denies the agency of all other species and relationality between. Positioning humans (not all) as masters over nature is a product of the Western fantasy which severs humans and animals, discussed in this paper as the nature-culture divide (Haraway 2008, 2018; Malone, Tesar, and Arndt 2020). In EE, children are crossing borders, learning with a 'two-world' knowledge system in symbiotic assemblages with possums, rats, stoats, trees, dogs, birds, wetas, and a myriad of other critters. These animals have become their companions in EE and that is what is at stake. Companion species in subject-making relationships that are contributing to children's understandings about themselves, others, difference, and the world around them (Haraway 2008). This paper stays with the trouble of children and childhoods in this place, with their *respectful?* work alongside possums, at a time of climatehood, and with a 'two-world' knowledge system (Haraway 2016). After navigating the histories of Aotearoa, EE, possums, the barriers and possibilities to interspecies respect, this paper concludes with a deep concern that children's stories are lacking from EE research. It is suggested that children's stories are urgently needed, for them to share how they are affecting and being affected by possums, and how respect is being activated.

Overlapping histories

> How can remembering the conquest of the western states by Anglo settlers and their plants and animals become part of the solution and not another occasion for the pleasurable and individualizing frisson of guilt? Much collaborative and inventive work is under way on these matters, if only we take touch seriously. (Haraway 2008, 41)

Aotearoa New Zealand's native flora and fauna developed over millions of years unlike anywhere else in the world. This secluded set of islands contained no predatory mammals shaping the ecosystem with mass amounts avifauna (birds) to cover an extensive network of symbiotic relationships across forests, rivers, mountain ranges, and coastlines. A vast array of birds evolved from flightless ground dwellers (kiwi), megafauna (moa), seabirds (kororā), the world's largest eagle (haast), parrots (kea), and many small to medium flight birds (pīwakawaka) (DOC 2017b). This remarkable ecosystem sustained its delicate balance until it was interrupted in 1250–1300 CE, when humans rowed ashore and brought with them the first land mammals these islands had ever seen. The flightless birds that lay still in the forests undergrowth or hid in tree burrows were left exposed. First came kuri (dogs) and kiore (pacific rats) to wipe out approximately 30–40 species of bird, alongside their Māori human companions (the indigenous peoples of Aotearoa) who cleared forests for settlements (Potts, Armstrong, and Brown 2013). During this time, though the exact date is still debated, one of the world's last megafaunas was driven to extinction. At nearly 12 feet tall, the largest species of moa and her cousins had 'evolved to fill the ecological niches occupied elsewhere by four-legged browsers like rhinos and deer' (Kolbert 2014, 181).

The unbalanced network began to settle with these changes, then in the 1800s, European's arrived to lay claim. Māori culture, language, and worldview had previously been undisturbed and were intrinsically bound to the land, mountains, forests, rivers, lakes, oceans, and birds (Pere, Nicholson, and Ao Ako Learning New Zealand, 1997). Relationality between species and place, beings and things were interconnected, with Māori exercising kaitiakitanga, loosely translated as 'guardianship, stewardship, trusteeship' (Skerrett and Ritchie 2020, 10). In short, Māori had 'their own ecological literacies, ecological thinking, and ecological identities, grounded in their own onto-epistemological systems' (12). This was not stewardship in the Western sense, because for Māori there is no nature-culture separation, no master over nature, they are kin with the land and birds (Ritchie 2021). One of the dangers with portraying indigenous concepts in other languages is that translations cannot directly correlate. Kaitiakitanga holds a deep relational meaning for Māori, yet if understood only in English, the term 'stewardship' is dangerously loaded

with the hierarchical position between humans and nature (Taylor 2017). Thus, Māori knowledge systems conflicted with the settler colonial's worldview organised in the oppressive rankings of humanism. Animals and nature were discursively and materially severed from humans, accentuating numerous divisions within those categories. Man came first and descending past women, children, and other races of people, even animals were separated into pets, food, and commodities, with clear boundaries on who (not what) was permitted respect. Thus, what began as trade quickly developed into a violent front.

In 1840, a treaty, te tiriti o Waitangi, was signed between the British Crown and many (not all) Māori chiefs, forcing both to live under a common law (see Orange 1989). The Pākehā (European settlers) came to assimilate the land, flora, fauna, and indigenous peoples into a British colony, applying innovations from the industrial revolution and their capitalist mode of production.[1] This is where the second wave of 34 new mammals was introduced, intensifying devastation to the ecosystem. Forests were burned, 85% of wetlands drained, established lands were taken from Māori, with approximately 60% of the landscape transformed into farms for pastoralism and more still for city hubs (Potts, Armstrong, and Brown 2013; Ram 2019). According to Ritchie, Skerrett, and Connect (2013), 'Papatūānuku (our earth mother) became "it"; an apparatus for Western capitalist expansion' (15). This deeply affected biodiversity loss, bringing the plight of mass extinction events once thought to be of a prehistoric past into an all too troubling present. In 2016, of the 473 recorded species of bird only 38 were considered not threatened, with 59 already confirmed extinct (DOC 2017b). This invokes a sense of dread in the cultural milieu of peoples now called 'kiwi', whose national identity is intertwined with native avian species (Bidwell and Thompson 2015).

Environmental education

As Western scientific knowledge began to recognise theories on extinction, symbiosis, and endemic ecosystems, education continuously shifted to reach its current threshold. In the 1800s as Pākehā dominated the lands, animals, plants, and people, so too did they narrate the county's education system. Early versions of environmental education were taught using British flora and fauna until awareness grew in the settlers and the state, on what Māori had already long understood, this ecosystem was unique and British ecology had little relevance here (Potts, Armstrong, and Brown 2013). Finally, in 1898 school curriculums modified environmental education from a British perspective to Aotearoa native flora and fauna (Ram 2019). Curricula then undertook a long, troubling history from its origin of alienating Māori and punishing/beating children for speaking their own native language, to the current bicultural status it holds in EEFS (see Ritchie, Skerrett, and Connect 2013). In the 1900s, the changes to curricula for environmental education were closely connected to international summits, global environmental issues, and endemic problems. After undergoing numerous changes, the pace of revision quickened from the mid-1970s due to summits on the climate crisis and species extinction rates (Bolstad, Eames, and Cowie 2004). It was only then that in accord with environmental changes the Labour government amended legislation to restore 'cultural preservation and rejuvenation initiatives' (Souther 2016, 10). Into the next decade, 'the attentions of UNESCO and other international drivers of environmental education policy turned during the 1980s and 1990s towards issues of human poverty, economic and social development, and sustainability' (Bolstad, Eames, and Cowie 2004, 29). The way in which humans reproduce themselves through the mode of production 'has ongoing impacts on our environment and society that are unsustainable' and could no longer be ignored by educational policy-makers (DOC 2017a, 5). Finally, in 1998, the first official *Environmental Education for Sustainability* (EEFS) policy launched, addressing sustainability, and biodiversity loss endemic to Aotearoa.

Now in the twenty-first century, environmental education is doing decolonial work to support Māori culture and language through 'te tino rangatiratanga, or Māori self-determination' (Dodson and Miru 2021, 254). The country's environmental goals are also refocusing with a strong

community approach for all citizens, including children. The 2017 EEFS programme supports children and communities to kaitiaki for their local environment while understanding '[t]he relationship between the natural environment and tangata whenua [people of the land] is core to the practice of kaitiakitanga' (DoC 2017a, 2). Dodson and Miru (2021) describe Kaitiakitanga in this context 'as Maori encompassing the traditions and practices of environmental conservation, protection and sustainable management' (255). For Ritchie, Skerrett, and Connect (2013), the practice means to 'give and take only what is needed [alongside] manaakitanga (caring for the land)' (15).

EEFS intersects the Department of Conservation (DOC), Ministry for the Environment, and Ministry of Education, to bring a hands-on learning approach for young people to address 'climate change, water quality, biodiversity protection and waste' (DOC 2017a, 1). The approach to biodiversity protection is the removal 'of the most damaging introduced predators that threaten our nation's natural taonga [treasures], our economy and the primary sector' (19). The 'removal' of these animals is not partial, it is full extermination with PFNZ overarching goal to completely eradicate the brushtail possum, rat, and stoat by 2050 (Morris 2019). PFNZ connects with children/students of all ages, from kindergarten to tertiary education, providing learning support and resources on humane trapping, while establishing a rhetoric of respect for all animals. Kill traps for possums, rats, and stoats have become commonplace in children's educational and recreational architecture. In schools' children build traps, buy traps, bring traps home, and analyse trap data. In shared public places such as forests, parks, and even playgrounds children encounter traps set by local community groups, other schools, and DOC. Traps are everywhere and the experiences of children engaging with trapping are represented by DOC and PFNZ as uncomplicated, demonstrated through success stories and pictures of smiling children next to cleanly killed animals (DOC 2017a, 22). Killing, however, is anything but uncomplicated.

Representing killing experiences through imagery of smiling, care-free children, could lead students into this programme with the expectation that it will be trouble-free (Souther 2016). Imagery associated with hunting and trapping often situates the experience through what Young, Linné, and Potts (2015) describe as the 'trophy photograph' (16). In these images, the hunter features as a hero, a smiling, successful hunter with a dead animal(s) in the hand or trap. This frames the experience as comfortable and uncomplicated, rather than the messy, affective, asymmetrical act of killing. These images position the possum, rat, or stoat as a trophy object rather than a living animal that may have unintentionally suffered or have a living joey in its pouch that must be dealt with. It seems very unlikely that trapping produces so little affects for either the trapper or trapped. In making the trapped animals' trophies it objectifies them, creating an oppressive relationship that leaves little room for respect. That is not to say that these mortal relations will be symmetrical, however, with the camouflage of easy killing removed, the actuality of mixed-affects and co-shaping of response-able beings can be made visible (Haraway 2008).

On the other side of this mortal muddle, child–possum relations have caught the attention of national and international animal rights groups, scholars, and media organisations. Children are caught oscillating between EEFS in their learning environments and with serious provocations connecting pest control to creating outsider discourses, anti-social behaviours, and romanticised childhoods (Bidwell and Thompson 2015; Milton 2016; Potts, Armstrong, and Brown 2013). Ram (2019) suggests 'these gruesome actions promote the message to a wider group of young impressionable future citizens, that as part of biosecurity practices, it is all right to treat animals deemed a biosecurity risk in a violent inhumane manner' (4). Morris (2019) goes so far as to say, 'when children even witness animal abuse carried out by trusted adults such as teachers, this can be a predictor for later abusive behaviour towards humans and non-humans' (102). Potts, Armstrong, and Brown (2013) warn that '[t]o live in Aotearoa New Zealand is to experience a sustained and vigorous campaign against the brushtail possum; it is considered unpatriotic to question, let alone resist, the demonisation of possums here' (202). These arguments lead this author to wonder if children's trapping experiences are *uncomplicated* or *inhumane*, or perhaps something else entirely, and where does respect fit into all of this?

Real stories of children's complicated, affective, sensorial, respectful trapping experiences are scant. Child–possum stories are being portrayed by adults, which as Ritchie (2021) writes excludes children 'from political decision-making, due to a range of attitudes, that can be described as "adultism", that position them as innocent and/or incompetent [and] could be omitting their viewpoints from political and educational decision-making' (54). If children are considered response-able enough to kill possums then they are response-able enough to tell their own stories and contribute to decision-making. After all it is not just possums which draw children's attention to the mortality of animals. Children (not all) eat meat, wear leather, live with dogs that get sick, stand on bees, drive past bird corpses, notice cracked eggs under trees, and watch cats catch mice. They already feel it, see it, smell, and hear it, they are not innocent bystanders. If killing is veiled or romanticised then it marginalises children's citizenship and agency, which can turn animal death into a fantasy that launders world-learning and world-making into the cracks (Haraway 2008). The discursive tie of innocence also situates children beneath adults in the hierarchies of humanism. In a bicultural EE programme, this position does not correspond with Mātauranga Māori. Children were traditionally situated 'alongside adults in an inseparable pattern of relationships between the gods, ancestors, elders, and wider family members' (Skerrett and Ritchie 2020, 5). With a two-world knowledge system, EEFS holds the potentiality for children to be considered social actors who can learn about this unavoidable aspect of their world and share their stories alongside adults and other species (Malone, Tesar, and Arndt 2020).

Possums and their labels

To tell the history of possums in Aotearoa is to locate their voice through the texts recorded by humans, which are mostly Pākehā (Holm 2015). It will always be a partial account as they cannot speak for themselves in this forum and much of the conversation surrounding them has been manufactured to suit different stakeholders. Hence, the following account is a partial history, tracing the labels given to possums which pays attention to how those discursive ties have shaped possum–child relations.

Since their arrival, possums have featured more than any other non-native species in political, economic, social, cultural, technological, and educational conversations. As one of the many mammals introduced during the assimilation projects in the 1800s, possums were removed from Australia and first unsuccessfully introduced in 1837, then again effectively in 1858 (Holm 2015; Milton 2016; Young, Linné, and Potts 2015). In Australia, possums are respected as an integral part of their own ecosystem and hold the status of protected native animals. They are also interconnected with Australia's first peoples, Aboriginal and Torres Strait Islander's and the tradition of possum skin cloaks which has been performed for over 40,000 years (Bamblett 2014). Upon arrival to Aotearoa, their label immediately changed as they became converted from animal into commodity. Possums were introduced to establish a fur trade and offer the peoples of Aotearoa access to the mode of production (Bidwell and Thompson 2015). Possums, unaware of their objectification, lived as animals thriving in a new ecosystem with no predators beyond humans. Fairly early in their journey, possums and children met and became entangled in mortal relations. Children were encouraged to appreciate possums and 'were given the day off [school] to watch and celebrate the release of Australian possums into the forest at Mt Bruce' (Nathan 2007). This first meeting was not one of respect. Children were encouraged to value possums-as-objects, grounding their early relationships in humanism and inculcating children and possums alike into the mode of production and settler colonial assimilation projects. Love the commodity, not the animal.

Slowly the damage these mammals were doing to native forests became apparent and love for the commodity depreciated. At this point, the native bush and avian wildlife had become woven into the settler's sense of identity, thus when the decline of bird species was noticed a cultural shift was set in motion which would later become environmental activism (Potts, Armstrong, and Brown

2013). Conservation groups pressured governments until 1922 when the state finally ceased approval for any further releases, meanwhile possums continued to breed and eat their way through copious amounts of bush. In 1947, poison was legalised to reduce their growing numbers leading to large-scale possum controls in the 1950s, when in 1956 they were declared noxious animals (Elliott and Kemp 2016; Milton 2016). Children were no longer encouraged to celebrate possums and slowly over the coming decades an anti-possum pedagogy was fostered (Potts, Armstrong, and Brown 2013). The extinction of many endemic bird species and environmental damage could no longer be afforded as a necessary sacrifice for the grandeur of colonial progress. In Aotearoa, restoration projects commenced featuring possums as the figurehead of avian habitat loss, despite deforestation for agriculture being responsible for far greater devastation (Holm 2015). Possums were framed as the villain in the restoration story, uniting people against a common enemy and giving rise to the saying 'the only good possum is a dead possum' (Potts, Armstrong, and Brown 2013, 202).

Anti-possum sentiment continued to mechanise into a naturalised truth over the following decades, until it reached a crescendo in the 1980s with the discovery that possums were vectors of bovine tuberculosis (TB) (Young, Linné, and Potts 2015). TB is an infectious cattle disease that can pass between different species, which for Aotearoa could have been economically devastating as the dairy and meat industries provide principal revenue. This revelation propelled possums to the top of the antagonist list resulting in 'a concerted propaganda campaign [against possums] by government agencies' (Potts, Armstrong, and Brown 2013, 203). According to Ram (2019), other animals also carry TB with recent research indicating that wild deer spread TB over larger areas of forest than any other carrier. Nevertheless, media and state campaigns kept public attention focused on possums, shifting their label up a notch to disease carriers that threatened the economy. Communities and schools supported the campaign by lowering numbers through organised hunts. Children became entangled in practices of protecting the very thing that provoked deforestation and bird endangerment in the first place, cattle and economy. Children became exterminators, while possums became diseased-ridden pests made killable in the name of the mode of production (Haraway 2008). Love the economy, never mind the birds.

Possum bodies piled up in the early twenty-first century leading their current label back to its origin. A change in use value transformed possums into commodity objects once more through a productive merino mink fur trade and petfood industry, justified as sustainable products (Amey 2007; Bidwell and Thompson 2015; Milton 2016). Child–possum relations were knotted together with objectification, extermination, humanism, capitalism, colonialism, all speculating disrespect. According to Milton (2016), possums were even featuring across some children's literature comparatively to 'the big bad wolf in traditional European fairytales' and 'cunning, ruthless and unlikeable characters' in others (Potts, Armstrong, and Brown 2013, 213). Despite so many apparatuses influencing children's perceptions of possums, it is a very underdeveloped area of research (Milton 2016). In one of the only examples that includes children's voice, Ram (2019) surveyed and interviewed 171 13-year-olds in Auckland. The year nine students answered questions about nature, invasive species, and biosecurity problems/solutions. Possums were acknowledged as the predominant invasive species by the students, as causing damage to habitats, eating everything, destroying farms, and passing on disease to cattle (Ram 2019). Perhaps the uniqueness of this study occurred because Ram is both an animal scholar and was a high school teacher. Ram's curiosity on possums arose as he noticed 'one of the reasons young people were late to class in the morning was because they were out checking possum traps that were set the night before' (4). Ram's study also highlights the importance of the NZ$130-million-dollar possum fur industry in his community for these young people and their families. Beyond that study little is known about how children relate and respond to possums, native species, and themselves as kaitiakitanga after so many years of anti-possum sentiment. This is where the rhetoric of respect enters the conversation, not yet a verb.

Possum–child mortal relations

> When [hu]mans change the face of the landscape, [they] can never return it to its former state. Māori tradition emphasizes the need to live as closely as possible to nature, to learn about it, to understand it. (Pere and Nicholson 1997, 22)

Restoration or partial recuperation

Restoration ecology burst into the twenty-first century as climate change, global warming and biodiversity loss drew global attention (Haraway 2008). Aotearoa worked to cultivate their reputation in this field bringing species, such as takahe, kiwi, and kākāpō, back from the brink of extinction (Potts, Armstrong, and Brown 2013). The country's restoration project became so effective that the 'New Zealand government .. commercialised the brand '100% Pure New Zealand' to market itself overseas' (Ram 2019, 2). Haraway warns however that restoration can be a dangerous game as it can open a space for settler colonials to insert their progress and science into saving nature, or as Haraway (2016) terms it the 'god trick' (40). Ram (2019) emphasises the problem with ecological restoration is that people working to manipulate the natural environment in this frame can unbind previous societal moral limits and claim all actions are undertaken in the name of a greater good. Similarly, Morris (2019) raises the trouble with 'just cause' in carrying out morally questionable acts in the name of protecting biodiversity. This is Restoration with a capital R, imagining a more innocent time, a romanticised past original of pure, innocent prehuman nature. There are stories however of a different kind of restoration, or according to Haraway (2016) a different kind of 're', reforestation, regeneration, partial recuperation, respect, refilling wetlands, relearning together. 'These are stories in which multispecies players, who are enmeshed in partial and flawed translations across difference, redo ways of living and dying attuned to still possible finite flourishing, still possible recuperation' (10). Restoration leaves little room for respect, whereas partial recuperation is an open threshold; the question of where child–possum relations are situated is incredibly complex. Haraway (2016) suggests 'following a thread in the dark, in a dangerous true tale of adventure, where who lives and who dies and how might become clearer for the cultivating of multispecies justice' (3). This next section follows the dark thread down through the barriers and possibilities of 're'.

War on respect

Before moving into the barriers obscuring respect, it is imperative to pick into the knots of the act itself. For Haraway (2008) and for this author, '[r]espect is respecere – looking back' which is about bringing kin and kind together with regard, response-ability, and reciprocal gazes as companions (164). Companion species and their shared asymmetrical, awkward respect are not appropriate for humanism, or even post-humanism, as they are not by or for one kind. They are not human; they are multispecies string figurations in layers of subject and object-making compost (Haraway 2016). Positioned as messmates at a table, kin and kind co-shape, co-affect, co-esteem, different or the same but always paying attention, while the category itself is a performance that is unfixed and remains permanently undecided. For possums and children temporality matters as they come together to pay attention and esteem one another, both as response-able beings. Where they were and where they are now is still at play. One as hunter, one hunted, as companions their awkward encounters are messy to navigate but this is the story of worlding. Species meet in the interplay of living and dying to look at one another and understand 'that meeting the look of the other is a condition of having face oneself' (Haraway, 2009, 88). *Respecere* goes both ways.

In Aotearoa, restoration efforts are led by PFNZ, which brings together 'conservation groups, the national farming lobby, several philanthropic trusts, four different universities, and private sector representatives, including information technology and management companies' (Holm 2015, 7).

As an apparatus of PFNZ, environmental education is now aspiring to '[t]each respect of all animals — we encourage schools and their students to be respectful of all animals, including the introduced predators you are removing' (PFNZ 2022). However, the suggestion of respect is positioned alongside a contrasting discourse that has been naturalised for far longer. A discourse of war features across policy and media transforming the Restoration actors and pedagogical apparatuses into enemies, heroes, victims, and weapons. With possums, humans, and birds framed through militarised narratives, their practices become abstracted from reality. Children perform acts upon possums from an imaginary human exceptionalist position, as heroes in the sky, rather than as companions practising mortal acts in the mud. To bring child–possum relations back down to the ground first the practices carried out in the name of war must be made visible.

War games

Potts, Armstrong, and Brown (2013) warn that militarised terminology has saturated possum–human relations with DOC spokespeople and prominent nature documentaries featuring the rhetoric. Language such as defend against attack, poison is a necessary weapon, aggressive trespasser, foreign invader, and so on suggests that people should act without empathy or mercy toward possums. Holm (2015) analyses the rhetoric through a postcolonial and environmental lens, using 'political theorist Carl Schmitt's notion of the enemy/foe distinction' (3). In Aotearoa, conservation discourse focuses primarily on killing animals rather than preserving all nonhuman life. Possums manifest as anti-animals, foes that can be hated, must be hated to justify complete eradication. Holm (2015) emphasises that 'although frequently characterised in the metaphorical language of war and military conflict, human-possum engagements should not be mistaken for an actual war: possums, after all, do not shoot back' (11). Morris (2019) claims that schools have enlisted children in this war, with regular fundraising events involving possum killing and corpse degradation sponsored by Kiwi Bank. These events became popular in Aotearoa in the early twenty-first century and concealed the militarised regime behind titles provoking innocence, such as games, sports, hunting, team building, and competition which usually involve monetary and material prizes (Young, Linné, and Potts 2015).

Under the guise of innocence, some schools and community groups organised possum throwing competitions as annual fundraising events. Children competed by hurling the dead bodies of possums as far as they could throw in distance contests. Another game was best-dressed carcass competitions, where children aged 6–14 years old decorated and dressed-up possum corpses hoping to win the prize for the most creative and eye-catching outfit (Potts, Armstrong, and Brown 2013; Ram 2019; Souther 2016; Young, Linné, and Potts 2015). Possums were partially skinned, others had googly eyes placed over their own, some were manipulated onto bikes, with others adorned in wedding dresses. Other disrespectful games include 'a government-sponsored game called 'Possum Stomp'' and a roadkill game called 'possum or cat' (Holm 2015, 7). DOC (2002) designed a role-play game called 'Possum Picnic' where year 9–13 students pretend to be trees, possums, or hunters who shoot the possums with sponge balls to save the trees.[2] Disguised as children's games these practices cannot pass for response-ability in any way. If children were looking back at possums, what would they see in the googly eyes glued on top of rigour mortis eyelids. What did the possums experience at their end? These are acts of war, not of respect, however, these are not acts of EEFS. The pedagogy of pest control is centred on humane trapping, if only the thread can be untied from those antiquated war games.

Hunting

Games must be cut out of restoration practices, but not all hunting acts are so straight forward. Hunting/trapping is where the thread between the 'god trick' and companion species blurs (Haraway 2016). Hunting itself does not symbolise disrespect, the practice can be linked to longstanding

traditions intrinsically connecting animal species and peoples. Killing between species is part of symbiotic relationships if only they are paying attention to one another. Skerrett and Ritchie (2020) discuss the importance of the controlled harvest of Rapu Tītī (Mutton-Birding) as

> a time to gather, rekindle whakapapa (genealogical links), practice tikanga (specific Rakiura Māori ways of doing things), remember those who have passed on, share stories, forge new relationships, renew old relationships, and participate in, and adapt, a tradition that has been fine-tuned over a thousand years. (17)

Similarly, Bamblett (2014) shares the 40,000-year-old tradition of possum hunting for skin cloaks linking possums to the writer's 'heritage as a Koorie person' (134). In both examples, animals were hunted with communities where children have agency and through 'bioculturally' sustainable practices their children learned respect for the species and the species continued to flourish (Skerrett and Ritchie 2020). Each looked back, paying attention to response-able subjects.

The difference between those relational practices and the school possum hunts is the connection to competition relations (Haraway 2008). At annual school hunts, children kill possums for their fur in efforts to raise money for their school, as well as winning prizes for the junior hunter category (Amey 2007). In making the practice of hunting a competition with economic gain, it alienates the child from the act of killing, the animal, and respect. Competition relations are bound in individualism, which as Haraway (2016) alludes 'take[s] up all the air in the atmosphere' (49). Individualism leaves no space for relationality as it pushes the world and other beings outward from its narcissistic centre, the individual human. When a child is hunting a possum compelled by competition relations, they look at the animal and see a mirror of themselves winning, of playing a game, rather than being entangled in a mortal act. Children should know the animal that they are killing and look back upon themselves with an understanding of their actions. Killing should always be part of the delicate network of ecology and relationality between beings. Otherwise, the damage done to the whole system could be as unforeseen as it was when possums were first introduced. That is not to say killing in nature is the problem. It is not the act of hunting possums that implies disrespect, but in making them killable objects and making nature their victim (Haraway 2008). This is not play and these are not actual objects, no matter how discursively they have been tied into it. An object does not bleed, or scream, or rot. The discourses of war and Western individualism collide in utter disagreement with respect. If respect is truly the name of the game, then perhaps the rules of battle need to change.

An imaginary nature-culture divide

In the narrative of war, the troubles with possums as foe and humans as hero have been emphasised, but what of the periphery actors in possum–child worlds. With the militarised frame, birds and nature are positioned as victims, evoking the dangerous kind of stewardship, the English kind (Taylor 2017). This is Restoration in the grandest sense of the 'R', where good versus evil and ugly versus beautiful, normative arguments reside (Holm 2015). In this discourse the possum is framed as unnatural, opposite to all that is right and proper, thus possums existing here must be completely undone 'to return a sense of purity and correctness' (Holm 2015, 10). On the other side of the unnatural dichotomy is nature and native species represented as a fictional past pure 'green Eden' (17). This narrative constructs a romanticised version of nature epitomising a settler colonial fantasy. Nature is portrayed as the vulnerable victim and native species within that frame as special, thus opening a discussive space for the human saviour to swoop in and rescue that which is powerless (Taylor 2017; Young, Linné, and Potts 2015). This pertains to human exceptionalism which cuts the human out of nature, creating an imaginary nature-culture divide and allowing humans to dominate other species and the environment (Taylor 2017). If respect means looking at nature and seeing oneself then it cannot not be a godlike hero looking back, rather it should be a sibling inter-related and interconnected.

The prehuman relationship between species on these islands was symbiotic in all its' messy, awkward life and death. Birds killed one another and the environment affected all through volcanic

eruptions, floods, extreme temperatures, and so on. This was neither romantic nor pure, this is nature that humans are a part. What it did lack, however, was the repeated colossal destruction from the way humans reproduce themselves. In this way, the only attempt to return nature back unto itself would be to remove the most invasive predator of all, humans, and with them the capitalist mode of production responsible for progressing forest into farm, and animal into commodity object. In the pure nature narrative, the removal of possums becomes a paradox, as their level of damage does not even touch the side of human's earthy wounds. Let 'us' instead disrupt that narrative and inherit this damaged colonial place while remembering that nature is a network of humans, possums, trees, dogs, birds, cows enmeshed together in farms, cities, forests, rivers, and mountains. This is the ecosystem that requires partial recuperation with response-ability between all actors – active participants (Haraway 2016).

Respect was always already here; it just depends on who you ask

Haraway (2018) knows that thinking-with multispecies justice in this time called the sixth mass extinction requires more than the inherited Western violence of human exceptionalism. Thinking-with requires 'indigenous practices and accounts [that] tangle in powerful, risky decolonial patterns with Western worlding practices' (102). The domination and victimisation of nature discussed in the previous section is a violence against the ecosystem and a Māori worldview. Pere and Nicholson (1997) elaborate that 'some of the first Europeans who came to Aotearoa scoffed at the Maori and their 'Gods'. What they did not fully appreciate was the fact that everything in the universe is regarded as having the same divine right' (1997, 12). It seems that possums and all animals *are* already respected, it just depends on who you ask, especially in a damaged colonial place. Holm (2015) reiterates this by illustrating that anti-possum rhetoric is predominantly a pākehā perspective, 'as is the case in many areas of life in Aotearoa-New Zealand, and postcolonial societies more broadly, Māori voices are largely absent and informally excluded from mainstream ecological discussion' (21). Māori voices have been omitted, despite the fact they are more than connected to this land, they are the land, with Māori language, culture and worldview developing synchronised with this place (Potts, Armstrong, and Brown 2013). Birds are positioned as tuakana (siblings) of humans through their connection to the 'primal parents Rangi-nui (Sky father) and Papatūānuku (Earth mother)' (101). Birds command respect 'due to whakapapa, or because of the mana they embodied' and are not considered inferior to humans even if they are killed for food, clothing, or other sources (121). Pere and Nicholson (1997) describe mana as 'divine right, influence, prestige, mana as a concept is beyond translation from the Maori language' (1997, 14). Though mana cannot be fully translated into English the importance for respect is its equalising disposition between beings and things, with every blade of grass, fish, river, spider culture, tribe, and child encompassing the same divine right. Everything is connected and response-able, meaning that if something is unbalanced or disconnected in the interdependent network then the whole system could be damaged (Skerrett and Ritchie 2020).

This ecological identity is now being partially recuperated, piece by piece, project by project. In 2017, 'the ancestral status of the Whanganui River' was restored, giving the river the first-ever status of personhood in the world (Skerrett and Ritchie 2020, 23). Wood and Lewthwaite (2008) are working into the task that children and teachers alike encounter with two-worlds of knowledge in science education. Both children and teachers will have to learn to cross borders between concepts and worldviews that may not sit harmoniously together, but it is possible if one holds that 'one worldview is not more correct than the other; they are just different, and both are valued' (17). Dodson and Miru (2021) navigate the partnership of Māori and Western knowledge systems in environmental education through the Ngā Waihotanga Iho project – estuary monitoring toolkit. A collaboration was formed between the Ōruawharo and Ōtamatea marae kaitiaki, and two local high schools with critical biculturalism addressing tokenism and 'issues of structural power relations and inequalities' (257). The project found that most students learned something new about the

environment and Māori culture, enjoyed the experience, and would participate again. Like this author, Ritchie (2021) noticed the lack of children's/student's voice from EE research, especially 'Indigenous youth climate Activism' (59). Her study 'highlights [the] narratives of young Māori and Pacific Islands climate activists from Aotearoa New Zealand' (59). These projects and many others, alongside EEFS are recuperating the ecology of Aotearoa, piece by piece.

The importance of Māori ecologies in EEFS goes beyond offering children a two-world knowledge system to understand relationality. According to Haraway (2016), '[i]ndigenous peoples around the earth have a particular angle on the discourses of coming extinctions and exterminations' (86). After all they have already known earthy and cultural devastation, not a future imaginary, but a lived past and present. Extinction and endangerment discourses emanating from Western positions create future-focused panic and remain in the shadows of humanism and bounded individualism. The Octovia story that opened this paper is a story told to children disseminating a Western worldview, creating melancholia for animals lost and impending doom for humanity. The story of a dying earth obverts eyes and ears upwards, looking to the sky in case it falls. These are not the stories of indigenous peoples or of other species. Down on the ground there was already annihilation, for Māori children who were beaten in schools if they spoke their own language, for all Aotearoa children when they were transformed into exterminators, for birds whose forests were destroyed, for Papatūānuku who was carved up, and for possums as sentient beings reduced to objects (Ritchie, Skerrett, and Connect 2013; Potts, Armstrong, and Brown 2013). This is the lived past and present interwoven into child–possum respectful, ordinary, messy (not godlike) asymmetrical relations.

On the ground, Haraway (2016) asks '[w]hat happens when human exceptionalism and bounded individualism, those old saws of Western philosophy and political economics, become unthinkable in the best sciences, whether natural or social?' (30). For possums and children that is the provocation that could transform respect into a verb. Respect between two response-able interconnected species in the same ecosystem, both with the same divine right, entangled together in mortal relations. Respect and relationality can be found in indigenous, interspecies, children, and ecofeminist stories (Haraway 2019). Let these stories rethink respectful practices, with possums and children paying attention to one another, considering who is looking back when they look upon the other. The only way this author could imagine the realisation of interspecies respect, is research collaborating with children and possums for them to share their real, ordinary life and death stories. Touch is now required (Haraway 2008).

Concluding provocation

With the help of Haraway (2016), Pere and Nicholson (1997), and others, the troubles of moving respect from rhetoric into a verb have been made visible. To conclude this paper draws once more from Haraway's (2008) companion species framework to ask the questions that could begin the next chapter: What happens if nature is not considered a victim, or possums the enemy, or any animal as an object? What happens if we consider possums, birds, dogs, children, and rivers as interconnected? What if animals work in the restoration project was just that, work undertaken by unfree partners, who are both different and the same to humans and to one another, just as humans and their knowledge systems are? What if those differences and similarities co-shape the restoration project and were respected in all the awkwardness of multiple worlds where killing is always already taking place?

Notes

1. For a detailed account of the term Pākehā, see Fitzpatrick (2017).
2. For a detailed inventory of children's involvement in games, hunts, and culls, see Souther (2016).

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