

# Children's Bodies Sensing Ecologically

a study of pre-language children's ecological encounters

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Always was always will be Aboriginal lands.

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## Table of Contents

<b>Bodies Sensing Ecologically</b>	4
Background	4
Research aims and outcomes	6
Theoretical and Methodological Framing	8
Diffractive theorising	8
Aboriginal Research framework	8
Methodological focus	9
Postqualitative research with children	10
Research Design	11
<b>Conceptual Sensorial Encounters</b>	15
Kalinda and the Walang by Sarah Jane Moore	17
Country and the encounter	17
Background	19
When the Walang strike together	21
By the river	23
Gidyira - entangled kin tracings by Karen Malone	25
animal but not only	26
fleeting recognition	29
Child-bird bodies entangled worldings	32
Dinang/feet by Kumara Ward	36
<b>Further Possibilities</b>	39
<b>References</b>	40

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# Bodies Sensing Ecologically

## Background

Sensing ecologically is a conceptual tool that we are using in order to imagine how children can engage/communicate with the more-than-human-world prior to language acquisition. That is, how they come to find ways to be with nonhuman animals; plants; the weather; water; and materials and how they respond and communicate with those entities through a range of different senses. To do this research on children there is a need to be attentive to the very subtle encounters and sensitivities of children in space and places with their bodies. Learning to be affected, is how Massumi (2015) explains attending more closely to understandings of nonhumans garnered from the practice and experience of co-relationality. Snaza et. al (2014) suggest, we need to attune to it, Tim Ingold (2010) speaks of attending to it. 'Both attuning and attending allow us to understand how something not-self is similar to yourself and the not-self is part of your self' (Rautio, 2017, p 97). Being-to is what Jean Luc Nancy (1997) calls Beings-in-common, coexistence with a range of others and Marisol de la Cadena (2015) drawing on her work with Indigenous peoples in the Andes speaks of all beings as 'more than one – less than many'. Children's experiences of very close relations with other animals are often explained dismissively as anthropomorphism, the attribution or projection of human characteristics onto individuals of another species. Anthropomorphism is often dismissed as being anthropocentric. "Anthropomorphism" relies on the construct of species – rather than the relation between two beings and therefore it is this focus on species rather than share animalness. Kay Milton (2005 cited Rautio 2017) addresses this flaw when she writes about how non-human persons are

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perceived by human ones. She points out that what anthropomorphism logically means attributing characteristics belonging only to humans to nonhumans. But this is not how we form relations, rather we look for characteristics that we share, recognise, value. We (humans) don't understand other persons (human or non-human) through our specific human-ness, the construct of a species. Rather we understand others based on personal experience of them, we perceive certain characteristics in them that are shared. 'Being with the world' is how Rautio (2017) describes forming a different view of ourselves as human in relation to nonhumans: "...it is about realizing that the relation is always already there, and as much influenced by behavior and existence of other co-existing species as it is by our actions". This form of ecomorphism as opposed to anthropomorphism – attributes the qualities of having a shared life with others - whether they be human or nonhuman. Ecomorphism sees humans as interdependent with—all ecological interactions on earth and 'ourself' as determined by—while existing within—a world that lies beyond the illusory border of our bodies. As one outcome this project therefore seeks to explore whether ecomorphism is a possible means for describing children's sensorial nonhuman encounters in formal early childhood centres; outdoor programs such as forest/bush/beach kinders and playgroups or being outdoors with their families.

This research also comes at a time where evidence is revealing that children's and babies health and well-being is substantially improved through being in and encountering natural environments and yet studies of very young children has not been very common. A focus on children expressing their experiences once they are using language and engaging in more robust and rigorous nature play and even 'knowledge-based' activities has tended to be the dominant focus of nature play research. The specific outcomes of this research, that is to

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understand more deeply how children make meaning and communicate with the nonhuman world through their sensorial bodies, will support an opportunity to consider how pedagogical practices could acknowledge and enhance pre-language in centres and in nature play activities in outdoor kinder, playgroups and home locations.

## **Research aims and outcomes**

The aim of this specific seeding grant project was to identify and map young children's (who are pre-language) experiences and encounters of natural environments through free exploration and play. Drawing on a model of posthumanist ecological communities where human and nature are 'beings in common', bodies being sensed ecologically. The project will explore if taking up 'human culture', particularly languaging can interfere with a child's embodied sensitivity, that is the naming of objects and experiences reiterates and imposes the humanist pedagogical project. The children in this project will therefore be pre-language and the research will follow the children's expression of sensing and being in the natural environment as they develop their language. The specific outcome of the research program that this project is providing foundation thinking around will support early years educators to consider pedagogical practices that enhance and support under two year olds ecological nature play/exploration.

The outcomes of the ongoing research program included:

- Evidence on how children between the ages of 1 and 3 years old could go about their everyday activities while encountering natural outdoor environments in public locations

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- A series of small snapshots video stories that were then analysed by the three researchers in order to see if there are any similarities or differences in a child's ecological conceptual play according to the relations with the spaces;
  - Possibilities for further research that could support pedagogical practices to improve children's ecological/scientific literacy and play for educators and parents.

Due to the limitations in time the project was conducted with just three children all 2 years old and all research data collection was conducted in formal family/community public places. An extension of the project that was not identified in design of the project was the inclusion of an Aboriginal child within the research. The inclusion of the Aboriginal child has expanded the scope of the research to include the strength and power of a research approach that acknowledges, respects, celebrates and listens to her ways of Knowing, Doing and Being (Martin, 2003).

In the words of the Qandamooka early childhood education Karen Martin -Booran

*My belief as an Aboriginal researcher is that I actively use the strength of my Aboriginal heritage.*

Indeed, this research seeks to actively use the strength of the Aboriginal heritage of Kalinda, the Aboriginal participant. The section written by Moore maps an Aboriginal child's strength in knowing, doing and being through sticks, stones, trees, water and kin and this research element has strong impact on the research design and orientation. Mirraboopu's Aboriginal research framework provides a strong theoretical and methodological frame for the way in which the case

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study of the Aboriginal child has been structured and conceptualised. It is the land that drives her learning (Simpson & Moore 2008). Moore explains this in more detail in her section entitled Kalinda and the Walang.

## **Theoretical and Methodological Framing**

### **Diffractional theorising**

The theoretical framing of this research is supported through diffractional theorising drawing on a relational ontology. As a 're-turning' (Barad 2007) like composting we are diffracting data drawing on an emerging 'posthumanism and vital materialist turn' that supports a shift in focus, from culture as outside of nature, to a re-orienting of relations where the human and more-than-human world are recognised as existing in an ecologically 'messy entanglement'. The research employs the potential of posthumanist and includes Aboriginal child centred ways of Knowing, Being and Doing (Martin, 2003) through encounter. The theorizing is seeking to critique classic humanism, an approach that emphasizes only the value and agency of humans to the detriment of the agentic potential of the more-than-human world. Through the import of de-centering the human we are enticed to question the centrality of the human and to reconsider the way humans (in this case very young children) could encounter, the more-than-human world through their sensorial knowing rather than an intellectual or language based humanist knowing.

### **Aboriginal Research framework**

The research presented in the Walang section by Sarah Jane Moore uses an Aboriginal research framework (Martin, 2003; 2007; 2008a) and adopts arts-informed and narrative



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approaches. The research is based on a case-study approach and embraces story telling as a method (Martin, 2008a). The research is grounded in an Aboriginal worldview and inhabits the space where animal, land and people link. Land is an essential learning tool for Aboriginal peoples, who learn through land, plants, animals, stories, song, ceremony, dreams, visions and the spirit world (Rose, 1996).

The work maps the sensorial ecological narrative of an Aboriginal child and seeks to understand the child's journey of thinking through stones, water and her encounters on and with Country.

In developing research that focusses on the Aboriginal child and maps her interests, experiences and knowledges (Rigney, 1997) the research is culturally safe and centred within Aboriginal pre-language encounters.

### **Methodological focus**

The methodological focus is congruent with our shared theoretical musings and storying where we focus on providing an intra-active space for human/child/nonhuman/other encounters. Barad (2007) speaks of this type of intra-action as an enactment, a matter of possibilities for reconfiguring entanglements, worldly reconfigurings. To rethink agency as central to this exploration of into a relational ontology, it possesses possibilities for not localising agency in the human subject; agency is not being possessed by humans or nonhumans but distributed across an assemblage of humans and non-humans through alternative ways of naming and knowing that are humanist in their emergence. Aboriginal naming enters this space through the presence of an Aboriginal child who brings her owns knowing, naming and interconnected relationalities through her marra, her dinang and her gundyarri or spirit.

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## Postqualitative research with children

Postqualitative place-based research inquiry uses a variety of methods and can include qualitative research activities that can be designed around participatory research or ethnographic styles of cases studies and narrative (Malone 2006; Tuck & McKenzie 2014). Post-positivists believe that human knowledge is based not on unchallengeable truths existing outside of people but rather upon human experience and is influenced by the bias and subjectivity of the participants and the researcher engaging in the world. Posthumanism has been a significant catalyst for an emerging postqualitative research paradigm. There are a number of many little pieces and possibilities of methods and approaches that fit within the postqualitative paradigm – they are generally qualitative approaches but instead of being known they emerge through the process of doing the research. . For postqualitative researcher, unlike positivists or qualitative researchers, the social world is not just 'out there' waiting to be interpreted, but 'in here' or 'in us' - it is our interpretation of our everyday experiences and encounters of being in the world. Postqualitative researchers argue that, rather than simply perceiving our particular social and material circumstances, each person continually makes sense of them within a cultural framework of socially constructed and shared meanings, and that our interpretations of the world influence our behavior in it. Postqualitative research supports the researcher to question why knowledge should be the point of departure in inquiry, decentres knowledge and embraces the inseparability of ethics, ontology and knowledge. Place-based research using post-positivists methodologies support the view humans are continually creating and re-creating their world as a dynamic meaning system, that is, one which changes over time and is located in 'place'. Walking methodologies figure centrally to this view of place based

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post-qualitative work adopted in this project. We take from Aldred (2014) who writes: “there are several ways to inhabit movement. To move through a landscape is to dwell in the movement, occurring when relates to and reflects on the material world as it is experienced and moved through” (p. 31). Walking on Country for the Aboriginal child, too brings Aboriginal perspectives into engagement and encounters with the social world. In this way post positivist readings of Country acknowledge the presence, the lived space and dynamism of walking with and in and of the land.

## Research Design

The research design is organised around a combination of a visual arts and walking/mobile methodology. The young children were videoed using an Iphone in small 2-3 minute snapshots as they went about their everyday nature play /walking explorations while outside in a public nature play/ or community location (as identified by their family and friends). The original project as identified in the ethics application had the choice of two locations: 1. Child Care centres or 2. Natural play spaces within participants homes or public playspaces. But due to limited time option one did not eventuate. During the data collection activity was no/or little communication with the children. The recording was done by the researcher from a short distance so as not to interfere with the child’s own flow and to allow them to be ‘in the present’ to be attuned to and notice the nonhuman worldings of which they are drawn to through their own curiosity. Researchers were within a close enough distance to ensure children were not at any risk.











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## Conceptual Sensorial Encounters

In our shared work we are focusing on child encounters through sensorial knowing on landscapes building on a relational ontology that emphasises conceptual rather than thematic analysis. In this report we are playing with these methodological musings and by focusing on just three concepts *walang* /stones; *gidyira*/kin; *dinang*/feet we are illustrating how these concepts allow us to notice attentively to children's sensorial encounters. The 'concept' attunes us to think with objects, an object as concept is more than naming (as with scientific concept development) is about being with, becoming, knowing and thinking with and through. Deleuze and Guattari, (1994, p.5) write: "philosophy is not a simple art of forming, inventing or fabricating concepts, because concepts are not necessarily forms, discoveries, or products. More rigorously, philosophy is the discipline that involves creating concepts...that are always new...Concepts are not waiting for us ready-made, like heavenly bodies. There is no heaven for concepts".

Posthumanism is not so much concerned with the question 'what does a concept mean?', but 'how does it work?' as lived experience. In similar ways Aboriginal readings of Country include the land as an element with its own identity. The *walang*, the *kin* and the *gidyira* act as thinking tools where the Aboriginal child lives through her heritage and culture to ask 'how does it work for me?' These perspectives are flowing, interconnected and relational. Malone, Moore and Ward have worked deeply together to ask each other 'What are the things we do through being with concepts in our data and not reducing data to some small fragments of knowing or knowledge, truths or facts?'

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They have asked 'how can the Aboriginal child celebrate her ancestral story through these encounters? They have asked 'how can Kalinda live on Country and express her identity and yarra (or speak) through her marra and her dinang? There are many concepts that began to emerge for us during our research and our exploration of the data with and through each others encounters of being with data differently. The three key concepts we have used in this report as means of illustrating data include: Walang/stones; Gidyira/kin; Dinang/feet. Each of the researchers followed one line of data and explored a concept.





## Kalinda and the Walang By Sarah Jane Moore

*Country is a place that gives and receives life. Not just imagined or represented, it is lived in and lived with.* Deborah Bird Rose.

### Country and the encounter

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*The land beneath us is alive.*

Some concepts of Country have been passed down from generations to generations into traditional ways and some have been disrupted or changed and transformed by colonisation and contemporary living and urbanisation and yet the Walang remain.

In traditional and contemporary Aboriginal communities, each community has a different and distinct association with the land that they were born onto and into and so Country and encounter is intertwined with Aboriginal identity.

The Walang section of the research focuses on an Aboriginal child's encounters with Country. The research uses the English word Country in a specific way. For the purposes of this writing, Country delineates the links between water, air, culture, land, nature and kin. Special places and places such as caves are included in the term country alongside natural resources such as minerals and waters, trees, plants, animals, foods, medicines, minerals, stories, knowledges, songs and art too. Encounters with country are diverse and different for Aboriginal and Torres Strait Islander peoples and this research section does not aim to homogenise nor generalise but rather create a focussed and specific case study where an Aboriginal child is filmed encountering Country.

Because Aboriginal peoples have special custodial commitments to Country, Aboriginal peoples have responsibilities to care for Country and nourish and sustain the trees, walang and knowledges. Caring for country nourishes bonds with other Aboriginal peoples and helps to pass on cultural knowledge and story and pride. Country can focus on a particular area and

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Walang or stones centre this section and as such embrace and live in to and respond to and with Aboriginal conceptions of Country.

The lived experience of encounter with nature from the perspective of an Aboriginal child is an important perspective to map and it is through the lens of the Walang and their filming through the mobile phone as a device to capture spontaneous encounter that these encounters are made visible.

It is the land that drives Kalinda's learning (Simpson & Moore, 2008) and the walang that brings her body into deep knowing.

## **Background**

As a researcher with a background as an early years educator and primary school teacher as I collect the data I resist the pull to name, prompt and suggest. I quickly realise that pre project I had been shaping nature based learning encounters through leading, suggesting, scaffolding, teaching and prompting. I had been shaping her experiences on Country instead of enabling Kalinda to encounter authentically and lead the learning, lead the thinking.

Despite having a background of over a decade of mentoring by Aboriginal Elders in Aboriginal ways of thinking and being and being coached in ways to be attentive to Country, my learning through my University years creates a tension. I am uncomfortable in my knowing and think on what it is to un know.

In 2007 and 2008 Oomera Edwards mindfully taught me to 'listen to country' and I reflected on it in a creative piece of writing with a colleague. I am reminded at this time of my writing, my

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reflections and the learning that I had received. I share it here for it provides the theoretical underpinnings of the ways in which Kalinda's data has been collected, analysed and shared.

*Oomera asks us to cup our ears and listen. She asks us what we hear. 'Listen to country' she whispers. She speaks of country in an active sense. She tells us that country can be sick and needs to be nurtured. She teaches us that an Indigenous notion of country is a lived in and resonant space. Oomera suggests that the 'land beneath us is alive'. She alerts us that this country is a space that is criss-crossed and tracked by animals, humans and ancestral beings. She describes Indigenous country as multi dimensional and speaks about how land can vibrate and sing below the buildings and roads and bridges that are built upon it. The group learns to imagine the land beneath. We are told that the land is named and has stories that place it and songs about it, and is looked after by groups of people who belong to it. She explains that the songs are there for people who know how to hear them. She tells us that the land can speak. (Simpson and Moore, 2008 p 8).*

After beginning to work closely on the theoretical orientations of the project with Malone in October 2018 I decide to begin my data collection in an International location. Over ten days of filming in and around Ophiri Bay in November 2018, Kalinda gained confidence in leading her own play and shaping her thinking through encounters with sand, with rocks with water and with kin. After the first three days of filming, Kalinda no longer looks at the camera, seeks instruction nor seeks engagement with the camera. It did not take Kalinda long to get used to this new way of playing (two or three nature based encounter sessions) and I noticed that in the

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second week of this style of encounter she was gaining more and more confidence to play for longer times without seeking my approval or attention.

The more I let her encounter and lead, the more she wants to play in this way. The land now has entity. It is related to her body. It is an extension of her and it is to be listened to and played on and with.

She now expects to play in this way. Through encounter. Through the stones. In the water. Through her feet. She expects to use her hands, her feet, the sticks, the rocks, the water and the trees. She takes her shoes off on arrival to play and is visibly intent on leading her own encounters. She is absorbed. Focussed. Intent. Intent on land. Intent on walang. Intent on Country.

### **When the Walang strike together**

Kalinda is 2 and a half and sits barefoot on a beach in Aoteoroa New Zealand. She looks out to Ophiri Bay. The Walang surround her. Small, black and noisy. The sea water pick up the stones and throw them back and from time to time she looks out and observes this. It is windy. She crouches and strikes them together. She strikes and grinds. She rolls the walang in her hands and finds a rust coloured stone and begins to chip and grind it on another black stone.

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Kalinda has observed the grinding of ochre in Aboriginal community contexts. She encounters the Walang by striking them together and mimics the grinding of ochre. She repeats this rhythmically in her play and it is an act that she comes back to. This, when seen in the context of an Aboriginal way of Seeing, Being and Thinking (Martin, 2006) may symbolise her bringing her sense of Aboriginal encounter to being through the Walang. Perhaps she is thinking through the Walang. Perhaps she is hearing the stories of the stones. Perhaps the Walang from Ophiri Bay are connected to the walanag by the river in trowunna. Perhaps through encounter, Kalinda connects them. Perhaps she thinks through the tracings. Perhaps she recognises them as tools for thinking. Tools for being. Tools for knowing. Perhaps as she throws them into the water she is ready to receive them at another time and in another place. Perhaps the walanag carry story.

Perhaps.





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## By the river

In the Southern Regional of trowunna there is a mountain named kunanyi. The mountain is a sacred place for local Aboriginal peoples and a special place of learning and lore. Behind the mountain on a country road not far from nipaluna there is a river and we visit the river in the summer-time. We have visited this place three times now and on each occasion it is all about the stones.

Kalinda takes her clothes off and begins to move them. The stones. She throws them, arranges them and feels them with her hands, her feet. She traps water with her stones as those before have trapped fish. She throws the stones into the river and changes the flow. Time after time she places the rocks in her hands and rolls them in her fingers. She repeats the rolling, rhythmically and stretches out her feet on the rocks. She hops from rock to rock using small steps and this action seems to map the large stones in a pathway. She repeats the same journey from river to river bank on the same stones as if it were the only path. It is her preferred path. It is the path that she returns to like memory.

She places her head in the water from a squatting position and bathes her head in the water. She washes her hands in the river, rubbing her hands over the stones and then in the water. Exploring the water and the stones with her hands and her feet and her head she also takes a stick and pokes it into the water. She throws the stick. She repeats this many times. Sticks and stones.

Her marra (hands), her dinang (feet) are engaged in this learning through stones. The stones have a memory. They have a path. Do her dinang know this path? Do her marra know how to



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move these stones to trap water, to bring the guya? For centuries these stones have been moved by water, by marra; by children and mothers and clans who have sat and squatted on this river bed and yarned, and fished and cooked and eaten.

She throws the stones and then the sand. She washes her hands. Stones. Water. Sand. her gaze is fixed, her body relaxed. She spends three hours by the river that day. She drinks the water, she eats apricots and berries from the larger stones. She chips the stones and they make sounds that carry across the valley. Up and up the sounds trace other sounds and connect to kin and gidyira and spirit and past. The large stones of the river bank are smooth and worn. Do they carry memory? Can they carry story? She eats, drinks, plays and on and with the stones. They clatter together and jostle in the spirit world connecting her to her ancestral belonging. We always leave them; the stones. She will return. She will return to them. To sift and wash and think and listen to Country. To encounter self. Culture. Time.

On the way back home, on the windy sealed road to nipaluna we pass a waterfall.

The mist has come and we drive through clouds.

Kalinda reaches her hands out to the mist.

Reaches out.

Reaches out.

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## Gidyira, entangled kin tracings by Karen Malone

Sensorial ecological encounters where child-worlding bodies attune me to the ongoing. The relationality of an everyday multiple knowing as a present and past bodily sensing. A moment of recognition of ecological kin tracings. Worldings of imaginaries. By attending to Haraway's (2016) notion of relational natures of difference, I use a diffractive lens to be responsive to patterns that map not where differences appear but rather to map where the effects of differences appear. Barad (2007) states that while diffraction apparatuses help us: "... measure the effects of difference, even more profoundly they highlight, exhibit and make evident the entangled structure of the changing and contingent ontology of the world, including the ontology of knowing. In fact diffraction not only brings the reality of entanglements to light, it is itself an entangled phenomenon" (Barad, 2007, p. 73)

### animal but not only







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rollings over

rollings over

encounterings

mimicry

**free**

grasses greening

stretching

scratching

rollings over

**bodies**

shadowing

deepenings

grasses greening

grasses greening

**not only**

entwined joys

tangled knowing

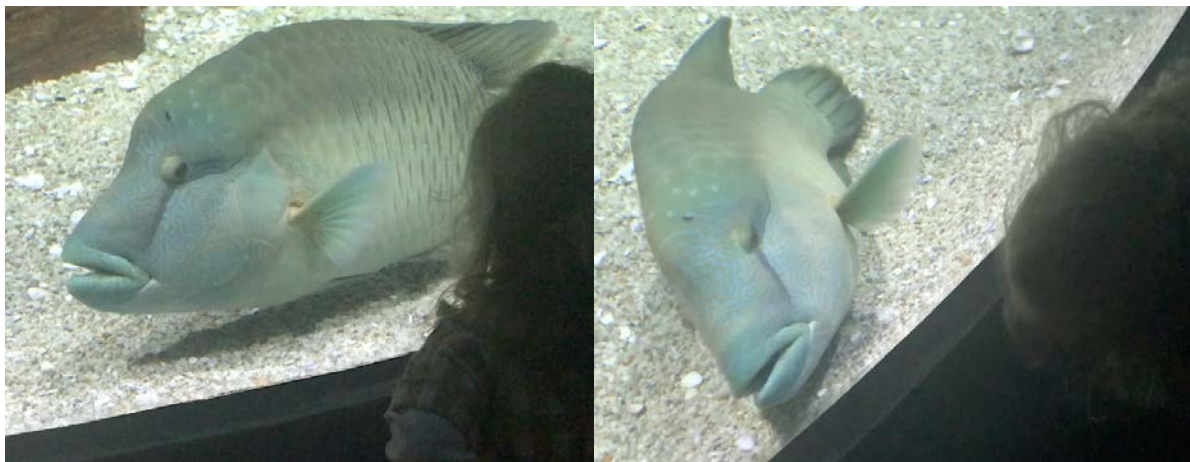
rollings over

rollings over

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Noticing attunes us to worlds otherwise left as unrecognised through connecting beyond bodies into deep knowing, recognition; there is a sensing of bodies, ecologically it forces us into a new kind of relational ontology, self as 'human but not only' (Marisol de La Cadena 2015) – a human child who thinks with and through kin and a more than human entity that thinks through human, there is the recognition of kin (Chakrabarty 2009). Child-dog encounters in this series of photographs taken from a 3 minute video on my Iphone attune us to the joy of being animal. The child engaging in dog body mimicry experiences the joy of rollings over through her body with the dog, scratching, being body with grass in the sunny field of an urban park. She looks over to see 'are we still worlding this moment together', then continues on. The dog looks to her and notices 'we are being together in our grassy rollings over' and barks, and begins rolling over some more.

### fleeting recognition







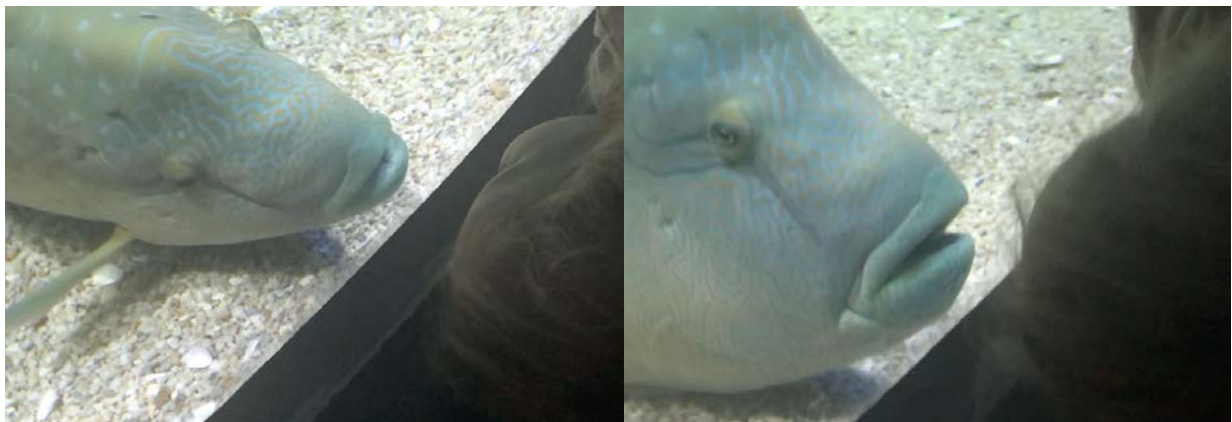
recognition can be fleeting

a moment where eyes meet eyes

entranced by the knowing

not wanting to look away

ancient time held in the longing





The child-fish sensorial being-in-encounter was a momentary, fleeting encounter, ancient recognition of human-animal worlds. A temporal pause in the loud busy city aquarium where child bodies are being herded and rushed by adults and child bodies fly past fishy bodies with little notice or knowing.

The eyes of the fish catch her; a fish gaze intensely waiting; seeking her attention. Eyes fixed on hers. She watches the slow fishy body as it moves through the watery glass, as it moves to her, her body lowers closer and closer till only the thin glass separates them.

Mesmerized, entranced both eyes are fixed; child-fish recognition; past tracings of ghostly beings passing through the clear glass watery spaces, separated bodies feeling all but heart beats. The fishy body moves ever so gently in the currents of the water but the eyes never leave the gaze. As sensorial beings they communicate through their watchful worlding.

After a long, long holding of the two bodies in this temporality of nothingness through liveliness the child stands up in order to pass her lips on the glass to show her love and affection to the moment acknowledging the emotions of the encounter. The fishy eyes follow the moving body.

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She steps away turns to see the fishy eyes still seeking, she waves and moves on. Fishy eyes, fish body still paused watch the body fade from view.

Companion species” writes Donna Haraway in her book *Staying with the Trouble* are “relentlessly becoming-with. The category companion species helps me refuse human exceptionalism and invoke versions of posthumanism. In human-animal worlds, companion species are ordinary beings-in-encounter in the house, lab, field, zoo, park, truck, office, prison, ranch, arena, village, human hospital, forest, slaughterhouse, estuary, vet clinic, lake, stadium, barn, wildlife preserve, farm, ocean canyon, city streets, factory, and more”.

### Child-bird bodies entangled worldings

*Can I come with you?*

*Will you wait for me?*

Follow us, follow us, come this way.

We will wait for you.

We are walking being with water

We are hopping up smooth surface, higher

Can you climb up?

You are coming

We will wait

Walk along with us

Follow us, follow us, come this way









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A quarter of a billion years ago the earth went through a period called ‘the great dying’. An extinction event where ninety-six percent of the species of plants and animals on the planet were lost, it nearly ended all life on the planet. Humans and all nonhuman species currently living on the planet are descendants from that surviving four percent of life. These “Ghosts point to our forgetting, showing us how living landscapes are imbued with earlier tracks and traces” (Gans, Tsing, Swanson, & Bubandt, 2017, p. G6).

Not by elevating all things or matter to the status of exceptional human or de-elevating human to the status of object or things but by exploring the biopolitical, bioethical, and ontological in order to pay attention to the subtleties of an ecological community that takes into account new relational materialist ontologies. Ontologies where “vital” and “lively” materialism is relational and emergent, it is an enduring structure of assemblages that is the product of their internal inertia. Child-dog-bird-fish are tied together by a genealogy, a history in their bodies entangled with kin in this urban landscape. It is within this ancient thinking that the influence of Marisol de La Candena’s Andean philosophies of ‘more than one – less than many’ is helpful. That is we are implicated in our past, present and future existence on the planet through our connection with worlding companions and “despite the human predilection to reiterate human exceptionalism, including within many epic and heroic narrations of the Anthropocene, the fact is that our human lives are tied together in this ‘but not only’ spaces with our kin as worldly others” (Malone 2018, p. ). With Gidyira (kin) I search for entangled tracings of past, present and future worldings with children who through their sensorial openings find spaces to be with the world beyond the humanist limits.

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## Dinang, feet by Kumara Ward

Sally has just turned 2 years old and is visiting a local reserve at Narrabeen Lagoon – north of Forestville with her extended family. There is an inlet off the ocean with barbeque facilities, tables, toilets, some perimeter hedge/shrub plantings and large areas of mown grass that is not too rough underfoot - areas tamed by and for human interaction with the space. There are sandy beach areas on the water's edge in some places with trees overhanging that have dropped leaves, twigs and seed pods into the water, and onto the sand and foreshore grasses. There is a family gathering/barbeque in progress with several adults, with all of whom Sally is relatively comfortable.

There are two other active children, her older brother and his 10 year old male cousin. The boys spend most of their time playing together with Sally occasionally joining them in chasing games. Most of the time Sally is happy to run on the expanse of lawn, sometimes in response to others playing but at others, simply because she can. She appears to be exploring the parameters of the space with her body and her feet by running across the space in all directions: a kind of wayfaring (Ingold 2007) that traces the history of human interaction with the clearing of the space and the creation of the leisure area. There are trees surrounding the space on three sides and a parking area with a barrier on the fourth side. Sally seems to be intra-acting or merging specific body boundaries (Barad, 2007) on the edges of the grass clearing through movement, the touch of her feet on the ground, her visual landscape which changes as she gets closer to the tree-lined parameters of the space, and the feel of her body moving through the air with hair



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pushing back in the breeze as she moves. This being within the landscape is an immersive and dynamic process where ecological sensing is actioned with each movement of feet and body, deepening as they move the air, creating further sensations, more movement of both air, leaves, grass and bodies. It is an experience of being with the world (Rautio, 2017).

While at the sandy beach area, Sally seems most affected by the sand underfoot with her toes curling into it. She also seems to be turning into the wind as part of her orienting herself to the space. This being with the sand and the wind as it blows her hair behind her, seen through a relational materialist lens (Hultman and Lenz Taguchi, 2010), highlights the mutual engagement and agency of all bodies, child body, feet, toes, sand, wind and even the shadows as they merge and separate with the movement. As Sally is wearing only a nappy, the wind is being felt on most of her body and seems to have some bearing on the direction she takes as she walks around, changing orientation and looking into the distance.



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A few days later, we are at Narrambeen reserve but at a different inlet. We are with the children's family only. Sally is reluctant to follow her mother into the water and stands on the sand looking out across the watery distance for a moment and then back down at her feet. It is as if she is saying 'no, that's too far into the unknown - that water flows out through the inlet and then out to sea where it merges with the waves that 'wash around the world' (Ward, 2016). For now, this lagoon, that links her to water in distant places and human habitation by the sea where so many are now challenged by rising sea water due to climate change, is too much to contemplate. Instead, she digs her toes into the sand repeatedly, exploring the qualities of the wet sand and in particular the colours as the sand turns grey and black as she penetrates through the shallow layers. These small toes in the black and grey sand tell a story of the environmental merging of the boundaries of matter (Barad, 2007) where the plant and mineral constituents of the endangered ecological communities such as the Blackbutt -Turpentine Forest and the remnant Swamp Mahogany Forest break down and merge with the other geological and water-borne sediments. These sediments include deposits from pollution in the five creeks running into the lagoon, sunscreens and repellants of the humans in the water and bait and fuel emissions as a result of the fishing that occurs in the lagoon. This micro environment and the colours in the sand, having become what it is by way of many agents and enhanced by the mouth of the lagoon being intermittently open and closed to the ocean, tells a story of deep and messy entanglements (Taylor, 2017) and provides the opportunity to consider the place using 'posthuman interpellation' (van der Tuni, 2014, p.233) of it. This perspective allows for the extended temporality and intra-action between human and nature and a reading

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of the environment that echos Sally's reluctance to go beyond the sand but to go to the water's edge and back again to the sand to add her story and *affective state* to the story of the lagoon.



Sally turns around and heads back towards the foreshore climbing over the tree roots that denote the boundary between the sand and water and the grassy edge, carefully and methodically, investigating them as she goes, looking carefully at the best places to put her feet to get purchase.

## Further Possibilities

This seeding grant provided an opportunity to explore a theoretical and methodological framework and a research design with a process for recording young children's sensorial knowing that could be the launching point for possibilities for further research. Outcomes of further research would allow us to consider ways to support pedagogical practices to improve

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children's ecological/scientific literacy and play when children are in educational environments with educators and/or when engaging in natural play encounters with parents.

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