

Sensing Ecologically through Kin and Stones

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Submitted February 22, 2019; accepted September 12, 2019

ABSTRACT

This paper draws on a research study that builds on a long and rich history of research in environmental education focusing on the value of learning through everyday experiences with the more than human. This study specially focused on very young children's experiences of ecologies and explored the unique opportunities sensorially rich bodily interactions with nonhuman entities provided. Drawing on postqualitative inquiry, using visual arts, narrative and walking methodologies, Karen and Sarah Jane are attentive in this work to the very subtle encounters and sensitivities of how child bodies move with and through places. By employing a number of nontraditional formats, the two researchers share sensorial ecological encounters as a form of child-worlding; bodies attune to the ongoing and the everyday presented as images, stories and prose. As an approach to diffractive analysis, they adopt a relational ontology as a means for thinking with the concepts of kin and stones. Sensing ecologically in this way becomes both a conceptual analytical tool and a pedagogical practice, allowing new imaginaries for children becoming and knowing the more-than-human-world prior to forming formal abstract 'language'. It seeks to disrupt the teaching and naming of objects as superior. They draw on the notion of ecomorphism to support a view of humans as interdependent with all ecological beings, objects and weathering of the earth. Ecomorphism also attributes qualities of a shared life through sensorial knowing with others and objects; whether they be human or nonhuman. Throughout the paper Karen and Sarah Jane have considered deeply how young children come to be with/encounter nonhuman animals, plants, weather, water and materials, and how do they respond and communicate with those entities through and with their animal bodies.

Keywords: sensorial knowing, young children, toddlers, postqualitative, walking methodologies, Country, ecomorphism

The emergence of the sensing ecologically nature-based research project came from discussions by the researchers about how parents, carers, Elders and early years educators could consider pedagogical practices that supported noticing and attuning to a young child's sensorial ecological play through everyday encounters. What makes this research study distinctive is its emphasis on very young children. The research data was generated as mobile telephone captured images and moving videos that focused on two 2-year old female humans. The data mapped their encounters with nonhuman entities and environments whilst they were freely exploring and playing in complex environments. The two children

in this project were pre-verbal language, and the research followed the children's expression of sensing and being in the natural environment. The research explored the notion that in the process of acquiring 'humanness', particularly discursive languages, adult humans can often disregard child's embodied sensitivities and sensorial forms of communication. Sensorial communication is a dominant form of communication for human babies and toddlers (Hackett & Rautio, 2019) and for many nonhuman mammals. We propose that a desire to focus on supporting the 'naming of objects and experiences' reiterates and imposes the humanist pedagogical project. Our research is evidence based and suggests that other ways are possible.

The research presented in this paper employed a nontraditional format with images, creative writing and poetry being central ways to share the everyday encounters of children. Through this format, Karen, Sarah Jane, Wren, Budya and Country are presented as beings in common who have co-created perspectives on sensing ecologically. Through mapping two children engaged with nonhuman worlds and using multimodal forms of meaning making we created sensorial openings. This structure enabled stories and narratives using place based postqualitative approaches to emerge. The research also enabled the mapping of an Aboriginal child on and through Country. This mapping provided Indigenous sensorial knowing as a central means for valuing the inclusion of nature-based play for Aboriginal children in early learning environments. The stories, narratives and creative writing presented within this article iterated that our collective imaginations are fired by a deep need that can only be satiated by being curious; by exploring, singing, dancing, creating and gathering together to tell our stories (Moore, 2019).

At the time that the research was conducted, the two children were aged between 1-3 years old. One child was Aboriginal, and she was given the pseudonym Budya which is Wiradjuri for ant. The other non-Aboriginal child was given the pseudonym Wren, the name for a common songbird in the area in which she has been filmed and photographed in processes of encountering. The research drew on a model of posthumanist ecological communities where human and nonhuman were beings in common, and bodies sensed ecologically. It embraced an approach where Country, or the entity that is land, was regarded as an equal research partner. The Aboriginal child, land and story was mapped and tracked as a being in common with an identity, a past, a present and a future to be listened to, mapped, theorised and imagined.

Walking-with and through environments provided opportunities for the children to encounter the materiality of spaces, to be with objects, intra-act and co-create sensorial, nature based knowings. Walking-with and through the children's sensorial body means that we know as we go (Ingold, 2000). Living in and being with the world according to Ingold (2013) means we encounter "a lifetime of intimate gestural and sensory engagement" (p. 29). This thinking supported both children to be storied in ways of sensing nonhuman entities and in particular the Aboriginal child to be with the aliveness of Country

The land beneath us is alive

The Gudhang (ocean) is our friend

The Madhan (tree) is our partner

The Walang is our tool for thinking

The Gidyira (kin) is our teacher

The land is our Gunhi (mother)

The land beneath us is alive (Moore, 2019)

Bodies Sensing Ecologically

“The body is a profusion of sensory experience. It is absorbed in the movement of the world and mingles with it through all its senses” (Le Breton, 2017, p. 1).

Children’s bodies are contested domains. Whether its biological determinism or social constructivism many approaches to researching children’s bodies take on a certain mode of analysis that focuses on the external ways children’s bodies either act, are acted on or acted with other humans. Within the new materialist approaches, researchers, including feminists working in diverse disciplines and across themes, have demonstrated that bodies matter not only in the way proposed by Judith Butler (1993) with social and cultural norms regulating “the materialization and signification of those material effects” (p. 2) on natural bodies in a much “deeper,” interactive, and integral sense. Anne Fausto-Sterling (2000), molecular biologist, is a pioneer in showing convincingly that categories of difference inscribe themselves beyond the surface of bodies by going literally beneath the skin: “[E]vents outside the body become incorporated into our very flesh” (p. 238). The body of the posthuman children that we explored in this paper and in our research focused on the ideas from Jean-Luc Nancy who speaks of *being singular plural*; this is supported by the notion of co-ontological beings. From a Baradian, agential realist perspective, we move from co-ontological tracings to co-relational ontologies. A posthuman co-relational ontological perspective determines there is no human body (child body) or nonhuman being that is not, at the same time, an embodied “being-with.” All bodies are living-on and in co-existence with self and other. All organic and inorganic creatures are woven together into an instrumental economy in which “we” live in and through the use of one another’s bodies, being reciprocal means and ends to each other.

Sensing ecologically is the conceptual tool used in our research that helped us to imagine how children’s bodies engage and communicate with the more-than-human-world prior to language acquisition. That is, how bodies find ways to be with animals, plants, water, and materials. Indeed, through this research we have mapped how two children respond to and communicate with a diverse range of entities through many senses. Snaza et. al (2014) suggested bodies as sensorial objects can attune to our relationality with others; Ingold (2010) speaks of attending to it. Jean Luc Nancy (1997) identifies beings-in-common as the means for acknowledging our coexistence in the world with a range of others, and Marisol de la Cadena (2015) drawing on her work with Indigenous peoples in the Andes proposes we are all in the world as ‘more than one – less than many’. Kay Milton (2005 as cited in Rautio, 2017) writes about how nonhumans species are perceived by human ones. She points out that while anthropomorphism means attributing human characteristics to nonhumans entities this is not how we form relations. In our study, it is through sensorial bodies, bodies sensing and recognising other bodies that sense making is activated. Ecomorphism and not anthropomorphism may be a better means for naming the modes that we have proposed in this paper. Ecomorphism supports a view of humans as interdependent with all ecological beings, objects and weathering of the earth. Ecomorphism is congruent with Aboriginal ways of encountering and taps into old stories and old ways of seeing spirits, animals and spirits as co-existing (Edwards, 2008, 2007, 2004). This form of ecomorphism as opposed to anthropomorphism – attributes the qualities of having a shared life through sensorial knowing with others and objects - whether they be human or nonhuman.

Worlding Methodologies

Working together we identified and mapped the experiences and encounters of two young children. Rather than taking a comparativist approach, the research honoured their individuality, their stories and their perspectives. The study builds on a long history of research in environmental education that has

focused on children's experiences of natural environments and the unique opportunities that sensory rich interactions with the environment can provide (Abram, 1996; Beery & Jorgensen, 2018; Carson & Pratt, 1965; Chawla, 1994, 2002; Cobb 1993; Lekies & Beery 2013; Nabhan & Trimble 1994; Rautio, 2013; Sobel, 2002, 2008; Wells & Lekies, 2006). Because one of the children was Aboriginal, the research acknowledged, respected, celebrated, listened to and mapped her ways of Knowing, Doing and Being (Martin, 2003).

The methodological focus was congruent with shared theoretical musings and storying where we felt compelled to focus on providing an intra-active space for human and child, nonhuman and other encounters to be with and think through each other. Barad (2007) speaks of this type of intra-action as an enactment, a matter of possibilities for reconfiguring entanglements, worldly reconfigurings. Worlding is the means through which a destabilising of humanist structuring of nature/culture, body/mind divides can be unpacked and interrogated. By attending to Haraway's (2016) notion of relational natures of difference, we 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" (p. 73).

There is a need to rethink agency as central to this exploration of children when emerging from a relational ontology, as it possesses possibilities for not localising agency in the human subject; a space where 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. Aboriginal naming enters this space through the presence of an Aboriginal child who brings her own knowing, naming and interconnected relationalities through her marra, her dinang, and her gundyarri or spirit.

The postqualitative place-based research inquiry we are using draws loosely from research creation (Springgay & Truman, 2016), postmodern emergence (Somerville, 2007), walking-with child bodies (Malone, 2018), and place stories and narratives (Tuck & McKenzie, 2014). Somerville's (2007) notion of emergence incorporates elements of wonder, becoming, generating, and embodied relationships; she writes, "a reciprocal relationship with objects and landscapes, weather, rocks and trees, sand, mud and water, animals and plants, an ontology founded in the bodies of things. In this ontology, bodies of things are dynamic, existing in relation to each other, and it is in the dynamic of this relationship that subjectivities are formed and transformed" (p. 235). Fleshy, leaky bodies that come into being in a place through an unfolding, creating methodology.

Postqualitative posthuman researchers support that knowledge is based not on unchallengeable truths existing outside of humans and nonhumans, but knowing and being is relational building on an ontological-epistemological view that is deeply entwined. We cannot know the world without being in the world, we cannot be in the world without knowing it. There are a number of methods and approaches that fit within the post-qualitative/posthuman paradigm we adopt; the focus of these methods is to acknowledge the world is not just 'out there' waiting to be interpreted, but is in here or in us. Data emerges in this study as a collection of everyday episodes, experiences and encounters captured on video.

This process of knowing and becoming intimate and attuned to a lively world including weathering worlds is what we call worlding. Children are worlding. Our methods of research are acquainted with the process of capturing that worlding. Place-based research using postqualitative methodologies support the view

that 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 the view of place based postqualitative 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).

Attuning to Children's Bodies

De-centring the human through a process of iterative intra-activity allowed us to disrupt human exceptionalism and exemptionalism by proposing a posthumanist refiguration. By not viewing 'human' and the more than human as simply objects being directed and responding to the interaction of the human, but instead understanding entities in the more-than-human world as subjects in their own right who exercise agency with and through encountering humans (Barad, 2007). In this case the very young children are not familiar with humanizing binaries or separations between human/nonhuman, bodies/mind, and therefore without romanticising the experiences, the research acknowledges and brings attention to those openings when the human body communicates with other nonhuman bodies.

To embark on this research with children there was a need to be attentive to the very subtle encounters and sensitivities of children in space and places with their bodies. Massumi (2015) explained that attending more closely to understandings of nonhumans garnered from the practice and experience of co-relationality allows us to be open to learning to be affected.

Karen and Sarah Jane collected data through filming hundreds of minutes of Wren and Budya involved in free or unscaffolded play in a variety of environments mostly outside of human made spaces, but not always. The short video captures were filmed on mobile phones as Wren and Budya went about their everyday activities. The video stories were then interpreted using slow analysis tools, watching the videos as stories, as a whole segment and as singular frames we interrogated them with the intention of listening to land, Country, encounter and body. The analysis attuned to the children's bodies as they were being shaped by and in turn were shaping entities. Stories are transformative; they heal, connect, and embody personal and community knowledges. Sharing stories nourishes us. It brings us together and connects the oceans within (Moore, 2016).

The footage collected of Wren captured hundreds of interactions with a Mirri, or dog, and the research claimed the body as the space in between knowing and being, sensing and sense-making. Children's experiences of very close relations with other animal bodies have often been explained dismissively as anthropomorphism, the attribution or projection of human characteristics onto individuals of another species. This research framed a shared sensual knowing between two beings that shared their animalness. It emerged from an act of sense making where belonging to a predetermined 'species' has no fortitude to how that animal will be known or ethically treated. "Posthumanism doesn't presume the separateness of any one thing. It relates, embeds and disrupts the alleged spatial, ontological, and epistemological distinction that humans create to set themselves apart" (Barad, 2007, p. 136).

Budya and her play and encounters and bodily understandings of Country set the place for the data and were storied accordingly. Budya's spontaneous encounters with Walang and Country, stones and water, sand and trees have been captured in hundreds of video episodes. As a researcher with an early year's education background, Sarah Jane captured these stories, like Karen had with Wren, while resisting the temptation to name, prompt and suggest activities and responses from Budya. Attuning to Budya's

sensorial knowing, rather than naming for knowing, Sarah Jane quickly realised that previous to the sensorial knowing research project she had been trying to shape, mould and change Budya's nature based learning encounters through instructing, leading, suggesting, scaffolding, teaching and prompting. Like many teachers before her, she recognized the practice of naming, intentional teaching, and leading activities for children's ecological knowing can act as a barrier to sensorial knowing that relies on slow, uninterrupted, body focused encounters.

Composting as Meaning Making

Haraway (2016) muses "we are humus, not Homo, not Anthropos; we are compost, not posthuman (p. 55). 'Composting' as a methodological tool for analysis has found its way into many studies in the affective turn. Composting methodologies entice us to dig deep into the data heap, to turn things over, and to return to our heap over and over. The focus is on complexity rather than reductionism. So rather than see the data as singular entities, we are looking across them and through them to find instances that express our conceptual thinking: seeking "a space in which *non*-human forces are equally at play and work as constitutive factors in children's learning and becomings" (Hultman & Lenz Taguchi, 2010, p. 527). From these ways of making meaning, the vignettes we have gathered together in this paper have emerged. The approach in our study meant sifting the data in cyclic and iterative ways. Coming together and apart like the waves of the Gadhang (ocean), our discussions with the data often reflected patterns in natural environments, the texture of rocks on a landscapes, the ephemeral clouds in a blue sky. Through the sharing of images, poetry and data, the research relations and composting approaches for mapping the children's sensorial encounters were composed. We met regularly to view, to re-visit, to reflect on, to discuss, to encounter and re-encounter the images and footage of the children playing and to compare perspectives. The emerging concepts of which only two, Gidyira (kin) and Walang (stones), emerge through a form of diffractive theorising drawing on a relational ontology. As a re-turning (Barad 2007) like composting, diffracted data drawing on an emerging posthumanism and vital materialist turn supports a shift in focus, from culture as outside of nature to a re-orienting of relations between the human and more-than-human world. We take images of the children that embody the children's relationship with Gidyira (kin) and Walang (stones) and make tangible the children's thinking. Employing the potential of posthumanist and Aboriginal child centred ways of Knowing, Being and Doing (Martin, 2003) through encounter, the theorizing of this approach critiqued classic humanism. By de-centring the human we were enticed to question the centrality of the human, therefore making possible an alternative mode of thinking, seeing and imagining.

Walking on Country

Walking on Country for the Aboriginal child, too brings Aboriginal perspectives into engagement and encounters with the social world. In this way postqualitative or posthuman readings of Country acknowledge the presence, the lived space and dynamism of walking with, in and on the land. Through the data, Budya is worlding. She is worlding through and with Country and her worlding was captured through video in time and space for analysis and discussion, configuring and re-configuring, naming and knowing. Indeed, this research actively attuned to the strength, capacity and importance of Budya's Aboriginal heritage and her heritage of sensorial based encounter and its value. The encounters were analysed with the theory of knowing where land provided an essential thinking and learning tool for her to understand and language her world. Budya's worlding with walang were moments for deep reflective nonhuman encounter. Mirraboopa's Aboriginal research framework provided a strong theoretical and methodological frame for the way in which the case study of the Aboriginal child has been structured and conceptualized, and it was the land that drove her learning (Simpson & Moore, 2008).

Sarah Jane was mentored on the entity of Country by Elder Oomera Edwards during structured learning encounters on Darninjung Country in 2007 and 2008. During Oomera Edwards' teaching on Country sessions, Sarah Jane was told that Aboriginal peoples had special custodial commitments to Country and taught that some individuals had responsibilities to care for, nourish and sustain the stories and knowledges (Edwards, 2008, 2008, 2004) of place. Deborah Bird Rose (1996) presented Country as life giving and not just imagined, but a part of the lived experience. Budya's case study acknowledged this theory and defined Country as human and nonhuman; as air, land, water, nature and animals and demonstrated a space that de-centred the human. Encounters with Country are diverse and different for Aboriginal and Torres Strait Islander peoples, and Karen and Sarah Jane's sensing ecologically through nature based encounters created a focused and specific case study where an Aboriginal child, Budya, was filmed without interference, instruction or verbal cues encountering Country. Special places and spaces such as the river bed that Budya was filmed on were important spaces for encounter, enactment and entangling.

Some concepts of Country have been passed down from generations to generations in traditional ways, and some have been disrupted or changed and transformed by colonisation, contemporary living and urbanization: by moving, shifting and encountering concrete, buildings, parks, fences and playgrounds and yet the walang or the stones remain as an essential thinking, sensing and encountering tool for Aboriginal children. In traditional and contemporary Aboriginal communities, each community may have different and distinct association with the lands that they were born onto and into and so Country and encounters are intertwined with Aboriginal identities (Edwards, 2008, 2007, 2004).

Gidyira, My Entangled Kin Tracings - by Karen

Sensorial ecological encounters. Where child-worlding bodies attune me to the ongoing. The relationality of an everyday multiple knowing. A present and past body sensing as entangled matter. There is a moment, a pause, a silence, recognition of ecological kin tracings, like tendrils of a floating sea jelly, rising and falling in the waves, they pulsate in the everyday. Worldings of imaginaries. 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). Recognition, knowing, sensing, learning to be-with in new worlds in new forms with my ancient and present Gidyira (kin).

"Companion species" writes Donna Haraway (2016) 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" (p. 13).

animal but not only



rollings over
rollings over
encounterings
mimicry
free

grasses
greening
stretching
scratching
bodies

shadowing
deepening
recognition
grasses greening
grasses greening
not only

entwined
joys
tangled
knowing
rollings over
rollings over
kin

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', she 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.

Child-fish 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

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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. 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.

Child-duck bodies



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 on to this smooth surface, higher
Can you climb up?
We will wait
Walk along with us
Follow us, follow us, come this way

The child-ducks entanglement exists within the coolness of the water spraying from the fountain into the air, breathing in and breathing out. We are all in the shadow of a large tree whose branches sweep across

the dirt. As the observer, I watched her outstretched hand in her desire to be with/in relation. She speaks to them, but no words are used. They walk pausing to check she is coming. They hop up on to the ledge of the fountain. Just a couple of steps behind she follows then. She crawls cautiously up on to the ledge of the fountain with them. I worry can I reach out and catch her if she falls. The ducks are looking back seeing that her body is now on the ledge with them. They start to walk on again, in unison ahead of her, she follows, eye keenly watching. Knowing how to be close, to be in relation. They move across the circular patterning of the fountain ledge; child-duck in rhythmic imitation. I quietly accompany her standing just behind to help her if she needs support. But she only looks my way briefly she is sensing I am there. She walks slowly and cautiously, emulating the traces of the ducks on the concrete ledge, those who are so experienced at navigating these watery edges.

We do this theoretical work 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” (Taylor & Pacini-Ketchabaw, 2015, p. 512), in this ‘but not only’ spaces with our kin as worldly others.

With Gidyira (kin) I search for entangled tracings of past, present and future worldings with child bodies who through their sensorial openings find spaces to be with the world beyond the humanist limits imposed by anthropocentric positions that humans are exceptional bodies outside of other beings.

Budya and the Ways in which She Sensed Ecologically as an Aboriginal Child – by Sarah Jane

In 2007 and 2008 Oomera Edwards mindfully taught Sarah Jane ‘listen to Country’. She reflected on this process in a creative piece of writing with Alyson Simpson, a colleague from the University of Sydney in 2008. When recording Budya’s data, Sarah Jane was reminded of Oomera’s words about deep listening.

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 & Moore, 2008, p. 8)

This research explored the ways in which Budya sensed ecologically, listened deeply and nurtured Country through play. It acknowledged her Ways of Knowing, Doing and Being (Martin, 2003) through nature. In the words of the Qandamooka early childhood education specialist Karen Martin-Booran Mirrabooopa

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

The research used Budya's heritage as a strength and actively sourced her ways of thinking and knowing through encounter. The lived experience of encounter with nature from the perspective of an Aboriginal child was an important perspective to map and it is through the lens of the Walang that the nature based seeing unfolded. Country can focus on a particular area and the non-human entity that are Walang or stones centred this section and as such embraced and lived into and respond to and with Aboriginal conceptions of interrelated, entwined and interactive Country. It is the land that drives Budya's learning (Simpson & Moore, 2008) and the Walang that brings her body into deep knowing.

The Deep Knowing

*Beyond the mountains of plastic,
Where children play with coloured bricks on synthetic grass
Lie the Walang.
The grasses.
The seeds.*

*Beyond the fences and the inside voices
Where shoes are tightly laced
The walang
World.*

*Beyond the human limits.
Beyond contemporary concrete and critical thinking
Walang lie in waiting
They call.
They long
To connect
With bare feet
soft hands
And tells her stories*

That she needs to know (Moore, 2019).

Budya and Her Ecological Sensing through Stones

Budya's data collection and analysis used an Aboriginal research framework (Martin, 2003; 2007; 2008a) and adopted arts-informed and narrative approaches. As discussed, the research was based on a case-study approach and embraced story telling as a method (Martin, 2008a). The research was grounded in an Aboriginal worldview and inhabited the space where animal, land and peoples link. Budya's dinang (Wiradjuri feet) are an integral part of the research as she explored, mapped and tracked her learning on Country through her feet. The work mapped the sensorial ecological narratives of an Aboriginal child and storied her languaging and worlding. Through hundreds of minutes of video Budya gave evidence of her

thinking through stones and water. She encountered Country and through this demonstrated its languaging through pre-language engagement.

The research focused on an Aboriginal child and mapped her interests, experiences and knowledges (Rigney, 1997). It was enacted through video footage taken over a six-month period. The stories, footage and images collected mindfully centred on Budya and her identity as an Aboriginal child.

Stories from the Data

After beginning to work closely on the theoretical orientations of the project in October 2018, I decided to begin my data collection with Budya in an International location or off Country. In November 2018, I filmed Budya intensely for ten days in and around Ophiri Bay in Aotearoa, New Zealand. I created hundreds of videos and collected hundreds of minutes on a mobile phone. Whilst collecting the data I resisted the urge to name and structure her encounter. Despite being coached in ways to be attentive to Country and feeling comfortable with the methodology Karen and I had formulated, I found that in the first few days of filming I wrestled with my educator's urge to control Budya's play. Despite having a background of mentoring by Aboriginal Elders in Aboriginal ways of thinking and being, in the first few hours of filming I noticed that I consistently tried to theme or shape her encounters. As this process unfolded, I became uncomfortable in my knowing and reflected the unknowing necessary to capture Budya and film her encounters with nature and her sensing of ecologies as they occurred. I watched them over and over. I became entangled in them. As the days progressed, I learned to film Budya from a distance, without interrupting her. I learned to stay silent. After the first three days of filming, Budya no longer looked at me nor the phone during her encounters with nature. She sought no instruction nor sought engagement. She was absorbed. Focused. Intent.

As the days unfolded, I observed that the Walang provided the focus for her play. She rubbed them, piled them and buried them in sand. She smoothed them with her thumbs. She placed them in water. She washed them. She held them close to her heart and sat on them. She sat with stones, and the more stones she encountered, the more relaxed her body and stance became. She tuned in to thinking through stones. Throughout the ten days of learning through stones and beach side play Budya gained confidence in leading her own play with stones and attuned to them. Again and again she smiled when she picked up the stones. Over and over she caressed them with her fingers and thumbs. Repeatedly, she held the stones close to her body and rolled them in her hands. Day in day out she rolled them over her legs, her arms. She sang to them. She picked them up with her hands and her feet. She threw them into the water. She tossed and skipped and collected in piles beside her. She selected some and discarded others.

Sensing an Ecological Story

Budya is 2 and a half years old and sits barefoot on a beach in Aotearoa, New Zealand. With this Aboriginal child at my side I search for the ancient calling of Country that is ever present in her sinews, her blood. I observe her untangle the stones and free her thinking to play and know in ways beyond plastic. She looks out to Ophiri Bay. The Walang surround her. Small, black and noisy. The sea waters 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. Budya 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 Walang by the river in trowunna. Perhaps through encounter, Budya 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 Walang carry story.



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 nivaluna 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, for Budya, it is all about the stones. She takes off her clothes begins to move them with her feet. The stones. She throws them, arranges them and feels them with her hands too. She rubs them over her legs and reaches her head down into the water to feel them through her forehead, her skull. She traps water with her stones as those before her 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. Once more 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. I ask myself; Do the stones have a memory? I ponder if they have a remembered path? I reflect on the encounter and question; do her dinang know this path? I wonder; do her marra know how to move these stones to trap water or to bring the guya through a tracing or a shimmer? 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. I watch as other families come and go here. They bring dogs and picnics; cameras and bird charts. It is a place of sharing and a site of belonging.

Budya 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 using the large stones as plates. 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; present, 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.

Budya reaches her hands out to the mist.
Reaches out.
Reaches out.

Concluding Ideas: Thinking with Bodies and Sensing Ecologically

Thinking with bodies and sensing ecologically involved two children, two researchers and a plethora of ways of knowing, doing and being. The approaches enmeshed and entangled within this article emerged from a time where many have argued that children's and babies' health and well-being is substantially improved through being in and encountering with nonhuman others and with natural environments (Malone & Waite, 2016). Studies of very young children, however, have not been very common and evidence-based practice difficult to imagine. This paper presents an imaginative and story-based approach to capturing very young children's bodies in the motion of sensing ecologically. It came at a time when Aboriginal communities were leading discussions about the health of their children, their well-being and the importance of fostering children's connection to culture, Country and kin.

For the authors, it seemed common sense to take a child outdoors to allow them to encounter the world. It seemed common sense to allow them to explore through their bodies ways of intra-acting with other worldly objects. It seemed common sense for an Aboriginal child to be encouraged to play and use her body in and with nature and to ensure that opportunity to experience Country was an essential part of her early learning. These opportunities have often been storied as simple encounters where a child was merely responding or reacting to environmental elements rather than engaging in a relational worlding with objects and entities. Rather than being sensitive to the potential of these encounters, parents and

educators have often dominated the space by naming objects. Researchers have often interjected and overlaid the data with human centred desires to produce and support language acquisition strategies that have been driven by information and scaffolded learning. We have suggested here that naming objects has no more primacy over knowing and being with other worldly beings. We take from Hultman and Lenz Taguchi (2010) when they explore their own diffractive meaning making with young child's bodies, "We engage our whole bodyminds to try to read the flows and passages where life continuously emerges in an immanent flow of potentialities and becomings, rather than trying to uncover the constitutive phenomena for our 'being-in-the-world'" (p. 237).

Child bodies longing to communicate with the nonhuman world through sensorial knowing, flowing potential we attend to when composting the video captures. Child bodies become an "open-ended swirl of extensions and supplementations" (Hultman & Lenz Taguchi, 2010, p 531) emerging through stones, dogs, water, sand and the sky. Sitting deeply with the unknowing, the listening and the acknowledgement of Earthly assemblages. It suggested that when an Aboriginal child was regarded as a leader of her own knowing and the architect of her own play, then rich and complex interrelated encounters were made possible. It evidenced a non-Aboriginal child's deep and connected relationship with kin and focused on interrelated, sensorial knowing and relational becomings demonstrated by being-with and beings-in-common. Our research stories map possibilities of authentic ways to be in relation and be worlding with children, Country and kin.

Acknowledgements

Karen and Sarah Jane acknowledge the Aboriginal lands and Countries that they learn on and pass through and show gratitude to the traditional custodians who have guided this research. Sarah Jane's writing acknowledges the Connecting to Country teachings of Oomera Edwards, Elder and educator and the language teaching of Auntie Iris Reid as vital teachings in the storying of this research.

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