Posthuman literacies: young children moving in time, place and more-than-human worlds.

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Introduction

I hop into car with mum dad and baby in car seat in the back. Baby, 19 months, looks at me askance then looks away as if to say 'I don't know you, you don't belong in this constellation of mum, dad and me'. Then turns back towards me, lifts up shoe and opens and closes velcro strip. Rip close rip close it sounds, pointing to me. I lift my shoe up, point towards him and undo zipper, then do it up again, undo, do up, zip zip it sounds, zip zip he sounds. He points to my shoe reaching for it so I stretch leg across back seat give him shoed foot with zip undone. He takes shoe off foot, tries to work out how to put back on, shoe on shoe off, zip zip zip. Game over we arrive at destination, eat dinner, depart restaurant and back in car again, two hours later, his shoe lifts up again towards me rip close rip close, and I respond zip zip, reaches out, pass leg and shoe across to him, shoe off shoe on zip zip zip he says (Margaret, Journal notes, June 2016).

This communication that took place in the restricted space of the back seat of a car was initiated by an 19 month old child. Restrained within a baby car seat the child used everything at his disposal, shoe, foot, leg, fingers, sounds, gestures and movement to conduct a prolonged communicative exchange without words. It evoked many similar examples that we (*Abi and Margaret*) have been sharing in our exchange across hemispheres about literacy, language, the nonverbal and posthuman over the past three years.

We first met at the local history museum in Sheffield where Abi did her fieldwork for a paper that Margaret had read, in which the idea of movement as world-forming communicative practice leapt out for her (Hackett, 2014). Abi had mapped young children's movements in regular visits to the museum forming a pattern of their communicative practice. Margaret's previous work on children's place literacies (Somerville, 2013, 2015) had led her to an exploration of new materialist methodologies with young children, with the aim of understanding the relationship between language and the world. The conversations we had in the museum generated new directions for both of us. Our response to this call for papers on posthumanism and early childhood literacy led us back to our starting point of thinking about 'movement as world-forming communicative practice'. In this paper, we build on this to theorise the implications for a posthuman approach to literacy, proposing movement as communicative practice that

always occurs as a more complex entanglement of relations within more-than-human worlds. Through our analysis, an understanding of sound emerged as a more-than-human practice that encompasses children's linguistic and non-linguistic utterances, and which occurs through, with, alongside movement.

Posthuman approaches in early childhood educational research

Posthuman approaches have been developed within two main traditions of scholarship in early years learning: multispecies ethnographies and new materialism, both of which aim to decentre the human in their concern for planetary wellbeing. New materialism, the most relevant to posthuman approaches to literacy, draws on the philosophical theorising of Gilles Deleuze and philosopher of physics, Karen Barad (eg Lenz-Taguchi, 2010; Hultman & Lenz-Taguchi, 2010; Duhn, 2012a, 2012b; Rossholt, 2012; Rautio, 2013a, 2013b, 2014). While posthuman scholarship is growing in early childhood education, there is little evidence of its application to literacy, as the call for papers for this timely special edition notes.

Literacy, bodies and materiality

While it could be argued that the field of literacy studies is increasingly being conceptualised as embodied, those bodies are most often human bodies (Enriquez et al., 2015; Fincham, 2015; Rowsell, 2014; Samuelson and Wohlwend, 2015; Thiel, 2015), despite their focus on interactions with the material world (Hvit, 2015; Kuby et al., 2015; Pahl, 2014). We see posthuman literacies as extending this interest in the body, to better theorise interconnections between people and the more-than-human world, leading to a decentring of the human within understandings of literacy. Additionally, materialist perspectives of literacy studies build on a current growing interest in 'how we engage with text on a sensual level' (Rowsell, 2014) within literacy practices, to foreground non-representational aspects of language and communication. Doing so requires taking seriously MacLure's (2013) call for flat ontologies that can critically interrogate the way in which representationality within research has 'rendered material realities inaccessible behind the linguistic or discourse systems that purportedly construct or "represent" them' (p.659). According to a flat ontology, humans are decentred, as everything exists on the same plane, in constant motion. Movement and sound both exist beyond human parameters of perception. From this perspective, rocks are in motion (Springgay and Truman, 2016) and many things make sound beyond the range of the human ear. Focus on movement and sound within a flat ontology can offer an expanded field of inquiry into early childhood literacy, decentring the human within literacy practices.

Drawing on our observations of young children's being in and communicating in the world in UK and Australia, we explore the possibilities of posthumanism to reimagine early childhood literacy as movement and sound, which we describe as world-forming practices. By this, we do not mean to assign authorship of the world to human children, but to understand sound and movement as more-than-human practices through which the world forms itself, and young children's sounding and movement happening in relation to this. We conclude the paper by discussing the implications of rethinking early childhood literacy from a posthuman perspective, from a starting point of movement and sound as de-anthropocised world-forming practices, as well as the possibilities for conceptualising literacy in ways that resist anthropocentric or logocentric framings.

Movement, sound and literacy practices in the more-than-human world

Our observations of young children and place were shaped by the significance of physical movement in young children's communication. In the examples we discuss in this paper, children marched and jiggled around the museum, and climbed in and out of the river, scooping up mud and spinning in circles. Sheets-Johnstone (1999) offers

movement as a path forward for researchers seeking to foreground material realities whilst resisting jumping to representation and interpretation (MacLure, 2013).

> Movement is not behaviour; experience is not physiological activity,
> and a brain is not a body. What emerges and evolves – ontogenetically
> and phylogenetically – is not behaviour but movement, movement that
> is neatly partitioned and classified as behaviour by observers, but that
> is in its own right the basic phenomena to be profitably studied.
> (Sheets-Johnstone 1999: 274)

Rather than leaping to interpret our observations of young children's behaviour, to hasten to introduce a representational system to stand in for embodied materialities, as MacLure (2013) would put it, we propose staying for a while with the notion of movement within our data to see what emerges. Through this process, what emerged was an understanding of sound in relation to movement.

Scholars of sound studies point out that sound is resonance, created by vibrations (Gallagher, 2016; Gershon, 2013), and these vibrations have "the potential to affect and be affected by another aspect of everything." (Gershon, 2013). Understanding sound as resonance highlights that sound can exist above and beyond human perception. Indeed,

what one 'hears' is socio-culturally constructed (Gershon, 2013). These conceptualisations of sound are useful to us firstly because words, vocalisations, environmental noises are all considered equally. Human vocalisations can only be understood in relation to the sounds of the more-than-human world. Feld (2012) calls for "an emplaced, all species approach to vocalisation", drawing on his study of Basavi singing and crying in relation to the sounds of the rainforest in Papua New Guinea.

Secondly, at a molecular level, sound is vibrational movement (Gershon, 2013). Moore and Yamamoto (2011) describe the interconnections between movement and other sensory categories, for example the role of the visual system in understanding what is moving and not moving, and the role of touch in movement perception (for example, within joint sockets). In particular "'the oneness and unity between speech and body motion in normal behaviour is truly awesome' (ibid: p.17). Scholars of various disciplines have interrogated the relationship between body movement and sound, for example from the point of view of kinesics (Kendon, 1972), dance studies (Moore and Yamamoto, 2011), and music (Jensenius, 2007), sound and moving bodies seem to work in synchrony. Movement is frequently required to make and perceive sound, at different scales and in different ways.

Engaging with our data in collaboration with each other, an understanding of sound and movement as inter-connected, more-than-human world forming practices, within which children's literacies occur, emerged. In the next part of the paper, we present some examples from this data. The first is drawn from a study in which a group of children in the UK explored a museum, using gestures, movement and sound as place making practices. In the second, two young children in Australia chose sites for their own research, producing a range of literacies from vocalisations to ongoing stories and installations.

Banging drums and marching children

During a year long ethnographic study of young children visiting museums, Abi accompanied a group of two year old children and their parents as a participant observer, as they explored a local museum through a series of repeated monthly visits. Analysis of the ethnographic data took as its starting point the places and practices into which the children themselves seemed to direct most energy, meaning and focus, leading to an identification of a range of child led 'traditions' which the children seemed to repeat in the same locations of the museum over subsequent visits (Hackett, 2016). One of these 'traditions' was marching whilst banging a drum, a practice which was

repeated by the children on a number of visits to a small exhibition about life in the Arctic.

In her original analysis of the children drumming in the museum, Abi stressed the sense of synchronicity between the movements and actions of the two children, noting the glances, eye contact, pauses to wait for each other before beginning to drum and march. However on reflection, Abi now realises that, like Hultman and Taguchi (2010), her attention had been artificially drawn to the human subjects of this ensemble. Focussing on just one of these incidents of two of the children, Bryan and Izzy, drumming in the museum, we revisited the fieldnotes and original video data, making a conscious effort to decentre the children and consider afresh the role of objects and spaces in what emerged.

> *Drums and drumsticks lie on the blue carpeted floor in one*
> *corner of the Arctic gallery. A few minutes later, a drum is*
> *clasped in each of Izzy and Bryan's hands. The drums bang*
> *loudly. Children, drums and banging noises move around the*
> *Arctic gallery, as the children's legs march in a circle three*
> *times, drumsticks banging drums. Two paths of footsteps closely*
> *follow each other, first Bryan's then Izzy's following. After*

making three circles of footsteps around the gallery, marching

children and banging drums leave the Arctic gallery, heading

for some benches in the corridor.

Designed for larger humans, the bench seats reach the

children's waists; the height of the benches shape how the

children can sit or stand up from them into a bodily activity

involving clambering, pulling and dropping. Climbing up onto

the long wooden benches, Bryan, with drumstick and drum,

occupies one end of the bench, whilst Izzy, drumstick and drum

is at the other.

In Bryan's hand, drumstick meets drum and then bench, making

different kinds of noises on each surface. Bryan's gaze is

directed at Izzy. When Bryan stands and circles the bench, Izzy's

gaze turns towards marching Bryan, drum, and waving

drumstick, moving in relation to the bench. Moving closer to

Izzy, Bryan clambers back onto the wooden bench, and the

children, drums and drumsticks sit and drum so closely together

that the waving drumsticks barely have room to move between

the skin of the drums. Children, drums, benches and drumsticks appear in synchronicity, each moving rhythmically and in response to each other.

Bryan climbs down from the bench; running feet make an arc shape, the drums bangs loudly, Bryan's voice shouts and shoes make a scuffing noise on the laminate, all in rhythm with each other. The path of Bryan's run stops abruptly at the wooden bench end. He stares intensely at the post, as intense as his gaze was to Izzy; the post, wider than the child and almost exactly the same height, seems to stare back. Bryan laughs.

Drumsticks bang the wooden bench hard, then drum and Bryan move away from their encounter with the bench post. With open space between child-drum-drumstick and bench, Bryan stands with legs apart. Shoes bounce, leaving the floor repeatedly, drumstick whacks drum aggressively, Bryan shouts as loud as he can "de bah we go go go bo bo bo jah….". The sounds are barely transcribe-able, and inseparable from the drum's own soundings.

Revisiting this episode from a posthuman perspective, we are struck by the central role of the more-than-human world, including skin drums, wooden sticks and the layout of the different spaces in the museum, in the production of sounds of banging, marching and scuffing shoes, and movements of marching and drumming. Barad's (2007) description of being in the world stresses the co-dependency between humans and the more-than-human world, and understandings of vibrational movement of humans and non-humans are central to this. 'The skin is not the border of our bodies but a territory or region of interference, a "diffraction" of communicative "waves" between matters' (Lenz Taguchi, 2010: 48).

The loud, rhythmic nature of the drumming and the synergy created between sound and body movement come together to create strong affective responses. Shoes scuff on flooring and move in an arc around the corridor space, accompanied by sounds of the banging drum, and non-linguistic chants emerging from Bryan's vocal chords, all happening in rhythm with each other. Whilst the drum is clearly implicated in the drumming-child (Hultman and Lenz Taguchi, 2010), the architecture of the museum also plays an important role. For example, the smallness of the Arctic gallery compared to the wide open spaces of the museum corridors created both discursive and material affects. The location of the walls and ceilings (close together and sloping inwards in the

gallery and loftily far apart in the corridor) and floors (carpeted in the gallery and laminated in the corridor) produced sounds from banging and marching differently, as the rhythmic vibrations created by feet and drums bounced off the different surfaces. In addition, the drums were designated for use in the Arctic exhibition gallery, and as the children and drums moved into the corridor, Abi reflects in her fieldnotes on a sense of transgression, wondering whether relocating the drums to the corridor broke any unwritten rules of the museum.

Drawing on Barad's work, Gallagher (2016) highlights the vibrational properties of sound as a way to 'decentre the human, positioning it as just one kind of body amongst many through which sound propagates' (p.43). Thus, sounds produced by and between children and place have affective properties, which may 'push through into the realm of significance to be heard as anything from slight hints of something, evoked memories, associations or senses of space, through to more formal meaning and representations, as in spoken language' (*ibid*: 44). MacLure (2013) points out that the use of words to represent bodily experience can obscure the experiences themselves. In our transcriptions and analysis of the empirical examples for this paper, we both frequently struggled with the inadequacy of words, and the way in which words demanded to be arranged in logical and linear sequences of sentences, creating therefore partial, unsatisfactory accounts of the children's intra action in place. The marching and

banging intra actions between children, drums, place in this example occurred without discernible words, yet with an excess of meaning, as intense movements and soundings from both children and more-than-human world created new versions of place.

Mud girls

Margaret invited Lulu and Charmaine, two girls aged 3 and 4 years, to take part in an experiment prompted by the analysis of two photographs of young children's play using the concept of intra-action (Hultman & Lenz-Taguchi, 2010). In this analysis the researchers compared a typical human-centred approach with a new materialist analysis of a girl playing with sand.

> …the sand and the girl are doing something to each other
> simultaneously. They transform as an effect of the intra-actions
> that emerge in between them. Thus, all bodies in the event are to
> be understood as causes in relation to each other (Deleuze 1990,
> 4). In another way of understanding this, the sand offers certain
> possibilities in its relations with the girl. In the intra-action
> between the girl and the sand, new problems to be solved
> emerge as an effect of their mutual engagement. (Hultman &
> Lenz-Taguchi, 2010: 530).

Margaret became interested in designing a research project based on the concepts of entanglement and intra-action (Barad, 2003, 2007). According to Barad, 'To be entangled is not simply to be intertwined with another as in the joining of two separate entities, but to lack an independent self-contained existence' (Barad, 2007: x). Carefully plotting this concept from its origins in quantum physics, Barad offers a new way of understanding how the individual subject emerges only through the mutual entanglements of different bodies of matter, each with their own force or agency. In 'agential realism' 'the primary ontological unit is not independent objects with independently determinate boundaries and properties but rather phenomena that signify the ontological inseparability of agentially intra-acting components' (Barad, 2007: 23). There is no prior existence for the individual subject, subjects emerge only through their intra-relating; time and space, like matter and meaning, come into existence iteratively reconfigured through each intra-action.

Lulu and Charmaine collaborated with Margaret in the experiment to explore these ideas over a 12-month period from September 2012 to September 2013. The places they chose included the backyard, the nearby river and places in between. Their spontaneous activities were recorded in still photos, small videos and fieldnotes. The main finding to materialise from this experiment was that not only bodies and matter, but new forms of

literacy could be observed from the perspective of intra-action. In carefully transcribing the sounds from one short (2.45 min) video, for example, it became apparent that Charmaine was singing, talking, humming, making sounds, telling stories throughout the video. In the shift from transcribing meaningful words to focussing on sounds, it became apparent that the sounds of the place and the sounds of the child's voice were echoing each other. River gurgles over stones, birds twitter, chirrup and trill loudly or softly as Charmaine vocalises her way through this event, all the while totally immersed in the place and the play. 'Discursive practices and material phenomenon do not stand in a relationship of externality to each other; rather the material and the discursive are mutually implicated in the dynamics of intra-activity' (Barad, 2007: 152).

Three years later, Lulu and Charmaine, now 7 and 6, took part again, this time to focus on the relationship between movement and language within the posthuman concept of intra-action. The intention was to record the next stage of the monster cave stories that had developed during the walk to the river in the previous 12 month experiment. Previously, each time we passed a mass of tangled bushes growing over a noisy drain deep inside the dark of the bushes, the girls would tell another episode in the sequence of monster stories. Other stories too, emerged during and because of walking. This time, however, they walked past the monster cave without comment and headed straight to the river, which immediately elicited their play in the deposits of mud left by recent

flooding. The mud play began in this seamless transition from the walk to the river and continued for a long period of time with two short sequences recorded on video.

Many methodological questions arose in this small revised experiment. How to document being-with children in this emergent play without disrupting the flow? How to record and analyse the complexity of multiple sounds, gestures and movements in mud-water-children intra-actions? These questions, and the implications for a posthuman approach to early literacy through movement, are addressed in the following analysis of the two small segments of video recording. Each begins with a brief description of the still image before the video is set in motion in order to heighten awareness of movement. Researcher comments are inserted in square brackets and children's vocalisations in italics.

Mud girls videos

Video 1: 45 seconds

Still video image

Silty brown river water

white plastic bag afloat

one girl very edge of river in mud

another

leaning over sandstone block

placing upright stick in mud cake

dog shake held in suspension

until video starts

and all becomes motion

River sounds of splashing and bubbling

Dog leaps into water/sounds of splashing

Lulu in mud at very edge of water leaning over rolling hands along mud [I need to

roll and unroll my fingers to feel movement/gesture, being-with] gathers up

handfuls of mud fingers opening and closing lifting, dropping lifting dropping

handfuls of mud, looks up briefly from leaning absorption-in-mud-action '*we*

need more dirt to make more mud in our mud kitchen' as she stands shaping mud

with both hands and carries mud ball to surface of sandstone block, places mud

onto her mud cake

At the same time Charmaine is patting and shaping her mud cake on sandstone

block positioning stick upright in mud cake, stands from leaning position to face

iphone camera with cheeky smile '*we just needs some privacy*' [I have intruded on their river mud game]

As Lulu moves to place mud she continues '*And we need more water to make it mud*' while Charmaine, as she stands to face the iphone and speak, swivels around in single movement towards river, enters river, leans over towards water, gathers water in cupped hands, stands and flings water, then flicks water towards mud with feet

Lulu continues '*To make the bits that are dry. This bit is very dry*' as she stands, twirls body around three times pirouetting on one foot at edge of water in mud [edge place interface what is river/not river water/not water, is mud] '*Not muddy enough*'. Leans down to mud at edge of water swishes hands in large circle movements with extended fingers making patterns in mud: '*Need to get mud and mix it with not-muddy*'. Charmaine meanwhile facing river, leans over into shallow river water, legs astride, pushing/lifting/throwing water with her hands back and forth through her legs towards mud '*There. There's some good water*'. Dog drops stick into middle of girls' mud game, Charmaine stands, picks up stick throws into river '*Lulu and me, get it*', dog turns and swims towards stick in river. Charmaine swivels body to face river in single movement from stick throwing and video ends with Charmaine caught in motion, fingers of one hand outstretched in gesture towards river, caught mid sound/movement.

The complexities of the 45 second video seem endless and despite over an hour spent trying to add movements to transcribed words on the first day, it was still not right when revisited the following day to move between video and analysis. Even though the transcribing was done in layers, words first, then adding movement, writing one version, then checking it against the video and writing another, it was still impossible to accurately represent the simultaneous combination of words and actions, water and mud, in the girls' play. It sits at the very edge of unrepresentable (MacLure, 2013) activity.

Literacy, especially print literacy and writing, but also orality, assumes a logical linear sequence of meaningful narrative but when movement is added this linear sequence is disrupted. The chronological ordering of time is not possible as water, mud, movement and vocalisation sound simultaneously. Words fail as much of this occurs at the limits of language where vocalisations are not words, or are so entangled with water, play and voice that they are not distinguishable. Words merge with each other and with sounds of the place (Feld, 2012), and words/terms are difficult to find for sounds and actions. Movement, gesture, words and sound are all equally crucial and equally arise in synchronicity with mud and water.

In spatial terms it is not the river itself which is the main event, but the liminal space at the very edge of the water. Here large amounts of brown mud have been deposited by flood waters and water and mud themselves interact at this edge place. It is this edge space that attracts, and is the sole place of this play. Temporality and spatiality are changed in this edge place where matter and meaning are produced simultaneously with water and mud (Barad, 2007). Mud and water ask questions of the girls; their gestures and movements in response to those questions can be understood as world forming communicative practice where words, story, imagination, movement and gesture are inseparable from the simultaneous actions of mud and water.

Video 2: 1.02 mins

Still slide

Muddy edge of river

sandstone block covered in mud

with handprint

block slightly obscured by child body

squatting

feet braced hands down flat in mud

Charmaine to side of frame

half visible

with handful of mud.

As video arrow is pressed, immediate sound of river swishing seems louder than

before.

Lulu lifts up hands with two handfuls of watery mud smiling '*mickles*?', leans

down and pushes forward into mud with both hands, hands and body lunge

forward pushing mud in direction of water's edge. Charmaine also swings into

action squeezing mud tightly with both hands making loud squeezing sounds

'*mmmmrrrng, mmrrng'* turns and walks into water, leans over swishes hands

clean in water, turns listening to Lulu.

Lulu vigorously picking up mud with two hands and flings towards water '*and

then some humans, um, was trying to get the mud away… get the mud to go away,

see was throwing the mud away'* leans forward again picks up more large

handfuls of mud throws with both hands sideways towards river. '*They were

throwing all the chunky bits away'*. Sounds of mud splash as it lands into water.

Charmaine walks towards block, leans over to mud, replies to Lulu, '*But then it

landed splash'* leans over picks up handful of mud drizzles mud slowly through

fingers then taps foot onto spot where mud dropped as Lulu stands and throws

more mud into water … '*and then I accidentally dropped one on one of the mud monsters swimming'*. Lulu picking up and throwing more mud into river, hands and lower arms covered in mud: *Well that wasn't good, it rolled over when it hit it. That's a lot of mud though'*. Splash again.

Charmaine climbs onto sandstone on all fours, feet and hands flat on mud on its surface, climbs down and picking up mud plops it onto mud surface of sandstone, '*What about we call rocks, mud [files?]*?' Lulu turns back from river mud in both hands, '*No, I'm just [indecipherable]'*.

Charmaine '*and then, and then you know [indecipherable]…'*. Lulu leans over hands in water, back towards river, legs astride at the very edge of mud and water, scooping up handfuls of mud and flinging them into river. As Charmaine speaks, Lulu stands up with mud still in both hands, '*O…M…G…*'[*not clear*]. The video ends with both girls standing with hands full of mud extended in front of them facing each other.

The movements and sounds in this video segment takes place in a very restricted space between sandstone block, mud and river's edge and yet in this restricted space movement and sounds seems to intensify. Gestures, movements and words are closely intertwined, making it difficult to separate any element out to produce an account of what is happening in a linear way. There are more sounds/words that are indecipherable

and this very end of their play seems to have become more about physical, sensory and embodied movement than story, and yet the mud monsters make their appearance recalling the connection of a particular monster cave episode. On this previous occasion Lulu and Charmaine had enticed Margaret into the monster cave with Lulu's nervous assurance that the monsters had gone to the river to bath their babies. She described the procedure of bathing as the parent monsters holding their babies underwater and the babies had to blow bubbles. We soon heard the monsters return from their bathing session and had to quickly depart. This time, at the muddy river's edge, the monsters reappear as mud monsters. Lulu distinguishes herself as 'human' but in many senses the girls are as much becoming-with mud and water as human, so integrated are their actions, vocalisations, imaginations and words with mud and water near the end of their play. This collapsing of space and time, past and present, gesture, movement, water and mud highlights attention to the different ways that language and story emerge and disappear simultaneously when we consider movement as world-forming communicative practice.

Situating children's literacies within movement and sound as world-forming practices

Whilst in the first two examples we provided in this paper, of the child in the car and drumming in the museum, sounds did not evolve into recognisable words, the examples of the children playing in the mud by the river did incorporate commentaries, stories, sentences. These can only be understood, however as emergent with the world, in the sense that water and mud drive the action. Human makings with mud are continually redirected by the questions posed by mud and water at their interface. What is water and what is mud, how is water and how is mud, as the girls become water/river swishing water from the river to make dry mud wet and gathering up mud to form shapes, making wet mud dry. Human words and stories give way to sensory entanglement with mud and water. Movement and sound are the ways in which the mud and water pose these questions, and the children's answers, through gestures, full body movements, vocalisations, songs, words, are deeply entangled with these wider more-than-human movements, some of which result in sounds and words at the level of human perception.

Rather than seeing two children as coordinating their actions amidst drums and floors and drumsticks, or amidst mud and water at the river's edge, these episodes can be read as the more-than-human world (mud, drums, floors, water etc) coordinating the actions of the children. It is the rhythm of the flowing river, the speed and texture with which the mud falls from hands, and the force with which drumstick bounces off stretched skin drum surface, that drives movement and action, that generates sounds and words. The

children appear coordinated with each other because they are equally in tune with and entangled with the movement and vibrations of the more-than-human world. Thinking about the sensory experience of movement, and the sounds that may emerge through these movements, helps us to connect with the notion of ongoing becoming between the child and the more-than-human world, and to resist coming too quickly to 'common sense' representations or interpretations of what young children's literacy practices are or mean. In an emergent ongoing process of being, doing and knowing (Lenz Taguchi, 2010), surfaces come together through movement of water, mud, bodies, movement, sounds, words and stories.

Vibration, the coming together of surfaces through movement, is a notion that connects the examples we have given in a car, in a museum, and at the riverbank, of how objects, senses, affects and sounds produce multimodal communicative practices. In the example in the car, parts of the shoe, body parts and the vibrational sounds these make, are mimicked by the child. The space of the car is re-made within these gestures and sounds and time is collapsed when the actions are repeated hours later. In the museum, child's bodies, drumsticks and drums come together to produce vibrations and re-inhabit spaces. This re-inhabitation of space can be read as a world forming process. Each of the different places of our observations offer different experiences of sound, movement and literacy. The ways that children occupy space 'shifts, turn by turn, as small

movements take place on a moment by moment basis' (Pahl, 2002: 148). Different

places enable different repertoires of literacy practice to emerge (see Pahl, 2014).

Rethinking early childhood literacy from a posthuman perspective

With the strong emphasis placed on young children's vocabulary within their literacy

practices, frequently referred to as evidence of children's 'proper development', or

communicative competency (e.g. Hart and Risely, 2003), thinking about the

interconnection between sound and movement is particularly helpful for rethinking

early childhood literacy from a posthuman perspective. In the field of literacy

scholarship, definitions of literacy are expanding to better account for the role of bodies,

objects and places (Kress, 1996; Kuby et al, 2015; Pahl, 2002) in literacy processes that

are increasingly understood as emergent, entangled and embodied (Burnett et al, 2014;

Enriquez et al, 2015; Leander and Boldt, 2012). We have proposed posthumanism as

having the potential to extend this work through a decentring of the human in

conceptualisations of early childhood literacy, and through a theorisation of the non-

representational aspects of literacy practices. We find a focus on sound as vibrational

movement of bodies (both human and non-human), combined with a consideration of

the interconnection between sound and movement, a fruitful way for thinking about

young children's vocalisations, gestures and movements, seeking a non-anthropocentric conceptualisation of early literacy practices.

What are the implications of 'going beyond the human / non-human divide' (Lenz Taguchi, 2010: 15) for language and literacy, which have historically been positioned as key attributes granting humans a special status apart from the rest of the non-human world? In her critique of dominant models of communication, Finnegan (2002) points out that a common assumption across inter-disciplinary theories of communication is that messages are first constructed in the brain, then communicated through the body. In an opposite proposition, Sheets-Johnstone (1981) proposes thinking in movement, arguing that thought can originate in the body, not just the brain. Thinking in movement stands as critique to the frequent conflation of thinking, language and rationality, and the association of these three things with what it means to be human. The proposition that thinking can originate in the body opens up new possibilities for understanding young children's emergent language and literacy practices as being generated directly and spontaneously through the multiple bodies coming into being in the world (rather than children's being in the world providing inspiration for thoughts that may then lead to literacy practices). The implications of posthuman readings of emergent literacy practices are that young children's literacies are seen not only as embodied sensory experiences, but embedded in and inseparable from their entanglement with the world.

The consequent disruption of the linear sequence of time suggests that a rethinking of time, in relation to practices of orality, reading and writing, is required at many different scales, including developmentalism, causation, and linearity. Kuby et al's (2015) study similarly found that 'the recursive operations of time that the students drew on demonstrated complex movements across time and space as well as illustrating that multimodal literacy desiring is not a simple linear process confined to the classroom' (Kuby, 2015: 6). This might mean that throughout children's lives their language and literacy development is enhanced by non linear approaches characterised by creative practice rather than the overemphasis on linearity and chronology that pervades educational discourse today. For us, posthuman readings of early childhood literacy offer the possibility to shift the narrative, to reconceptualise emergent literacy in ways that reconcile with young children's being in the world.

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