Weather bodies: experimenting with dance improvisation in environmental education in the early years

Jo Pollitt\textsuperscript{a}, Mindy Blaise\textsuperscript{b} and Tonya Rooney\textsuperscript{c}

\textsuperscript{a}School of Education, Edith Cowan University, Mt Lawley, Western Australia, Australia; \textsuperscript{b}School of Education, Centre for People, Place & Planet, Edith Cowan University, Mt Lawley, Western Australia, Australia; \textsuperscript{c}School of Education, Australian Catholic University, Watson, Australian Capital Territory, Australia

\textbf{ABSTRACT}

This paper reports on insights gained from incorporating dance improvisation into a broader early years environmental education ethnographic research project. Findings are reported from a two-day workshop where a dancer was invited to work with young children to attune to the weather through their bodies. In these workshops, the practice of dance improvisation was used as a deliberate interference to disrupt the disconnected and disembodied ways in which weather is often taught to young children. The paper argues that when children attune with weather through the embodied and relational practice of dance improvisation, this challenges the common practice of learning about weather as a separate phenomenon happening outside the classroom. Dance, as an intervention, helps to de-stabilise binary human-nature relations and reveals how children might come to understand their (human) selves as also weather bodies. New ways to understand humans’ entanglements with current weather events are also articulated, offering educators and researchers strategies for considering how the practice of dance improvisation might be integrated into early years education as an innovative approach to environmental learning.

\section*{Introduction}

Environmental education continues to evolve as a transdisciplinary field of inquiry, and the influence of arts-based pedagogies has gained momentum as a key contributor to creative thinking and solutions to contemporary environmental challenges. In the context of the urgency of the climate crisis, and the limitations of Anthropocentric climate education, this paper proposes the arts-based practice of dance improvisation as a way to deepen young children’s relations with the environment and open new possibilities for the future of environmental education. We report on insights from our own research, where we introduce the practice of dance improvisation to a group of children as a strategy to de-stabilise the binary of human-environment relations and to expand the ways that educators and researchers might gain insight into children’s relations with other (non-human) bodies. We propose that cultivating dancerly attention to the (human) body through improvisation offers a practice for attuning to other bodies and to also understand human bodies as “weather bodies” (Neimanis and Walker 2014, p. 560). Further, we...
draw attention to the multiple weather bodies that are in perpetual co-composition. As articulated elsewhere, all bodies including human, earth, water, animal and plant bodies, are weather bodies (Blaise, Rooney & Pollitt 2019, Rooney, Blaise & Royds 2020). The arts-based practice of dance improvisation allows expression of human-nature relations through bodies and offers another perspective from which to challenge and redress the limitations of the human-nature divide. Through the dance intervention in our project, described further below, weather is positioned as also inside the body through quotidian movements such as breathing, and in this way interferes with traditional learning narratives of weather as a phenomenon that is outside and separate to bodies.

This paper has three sections. First, a theoretical context is presented that brings together conceptual insights on dance, bodies, relationality and human-environment relations. Second, we describe how dance improvisation was introduced as a methodological interference into a longer-term research project. Third, we share two events from a dance improvisation workshop with young children (collaborative clouding and material skies) to illustrate the potential of bringing an arts-based interference to environmental education. We conclude with a discussion about child-weather relations to highlight the entanglement of children, weather, bodies and movement as a creative and responsive way forward in environmental learning and education.

**Theoretical context: entangled bodies and embodied learning in environmental education**

The overall approach to environmental learning with young children in our project has some similarities with the forms of education found in nature-based learning (i.e. forest schools, bush kinders, nature play) that reintegrate nature and childhood by recognizing the important part that nature plays in children's worlds and by positioning nature as a site for learning that children are already a part of (Macquarrie, Nugent, and Warden 2015). Our work extends, and departs slightly from, these nature-based learning approaches. Following the work of Affrica Taylor (2013) and Pauliina Rautio (2012), the term ‘nature’ is avoided in contexts where this might appear to refer to a world that is somehow separate from human existence. Taylor’s work is especially useful as she provides an extensive analysis of the ways in which children are often presented as having a special affinity with the natural world and that spending time ‘in nature’ will automatically foster this connection Taylor (2013, 2017). Taylor suggests however that such a positioning is both idealistic and problematic as it reinforces children’s place as in nature, while at the same time assuming nature exists ‘out there’ in contrast to the “unnaturalness” of children’s contemporary urban life’ (2017, p. 1453). The more nature is presented as ‘pure’ or ‘ideal’, and a place where children should ‘go to’, the more nature and culture are reinforced as separate domains rather than acknowledging the messy natureculture entanglements in children’s lives (Taylor 2013, 2017). In our research, we use the practice of dance improvisation as an opportunity to work with children at the blurred and messy boundaries between child-weather, body-environment and nature-culture, to reveal how weather can be understood as part of human bodies.

Attuning to bodies offers insight into human-nature relations, including entanglements with weather and climate. Human-environment relations are evident in the way First Nations people in Australia include bodies as Country, and Country as kin. Ellen van Neervan (2015), a Mununjali Yugambeh writer explains, “With interconnected relationships to land, identity is island, river, mangroves, forest and desert; identity is magpie geese, emu and spinifex”. This lived experience of environment disrupts Western hierarchical divides which enable humans to ‘other’ connections with environment and weather rather than align themselves as part of a continually recomposing system. In our project, the body is understood as always in flux, always moving, and continually mingling with wider ecological systems through the exchanges of air, water and matter that keep the body alive. This builds on previous research that advocates “learning with weather” (Rooney 2018b, p.8, and Rooney & Blaise
and harnesses the practices and relational logics that are unique to dance improvisation for understanding weather “through the sensory apparatuses of our bodies” (Neimanis, 2017 p. 54).

**Dance improvisation: an embodied and relational practice**

Dance improvisation attends to cultivating receptive and kinaesthetic states of the body as always in relation. Dance scholar Susan Leigh Foster (2003), writes that improvisation “presses us to extend into, expand beyond, extricate ourselves from that which was known. It encourages us or even forces us to be ‘taken by surprise’” (p. 4). This expansion of the ‘known’ toward embodied experimentation cultivates receptivity and a “broad palette of sensation and perception” (p. xv), thus offering a method of attunement to more-than-human worlds, including to the atmospheric affects of weather. This practice of attuning is useful in situating human bodies as part of an ongoing relational entanglement with weather rather than as separate bodily entities. Dance improvisation consists of honing receptivity and expanding perception in response to change. Relationality is central to this practice, as dance improvisation invites and draws human bodies into an open, responsive and receptive relations, such that all bodies (human and non-human) and knowledges are entangled with and part of the wider environment.

In dance improvisation the dancer is alert to noticing the nuanced compositional shifts in attention, tone, timing, weight, imagination and space. Anna Hickey-Moody and Tara Page (2015) refer to this as an expertise in receptivity and requires “perception of, and engagement with, matters, states of affairs, materialities....” (p.186). Erin Manning’s scholarship illuminates how “Movement is not of a body. It cuts across, co-composing with different velocities of movement-moving. It bodies.” (2013, p.14). This idea connects the instability of the human body with the instability of environmental bodies through the perpetual co-composition of improvisation. Bodies are always in flux.

**Embodiment and bodily knowledge in education**

Embodiment practices can interrupt Cartesian epistemologies of body/mind binaries and dualisms. In education scholarship, the use of ‘embodiment’ is commonly understood as a given - I have a body, therefore I am embodied - with research focussing on the pedestrian gestures, physical pathways and actions teachers and students take in classrooms (Dixon and Senior, Dixon and Senior 2011; Klein et al. 2019). Embodiment in this project is considered as a nonrepresentational multi-sensory practice that is less interested in the movements of the individual and more in the relational movements between bodies. Chris Shilling’s 2016 review on the rise of the body and embodiment scholarship broadly points to it as a project of interrupting Cartesian binaries, and dancers and dance improvisation scholars contribute to much this conversation through practices that focus on physical and energetic attunement. Improvisation practitioner and researcher Ann Cooper Albright explains, embodiment is a corporeal dynamic and as such research in this field “requires patience with the partiality of physical knowing, as well as a curiosity about how theoretical paradigms will shift in the midst of that bodily experience” (2013, p. 12). She goes on to suggest that a serious engagement with ambiguity and not-knowing is necessary in working with embodied practice.

As a pedagogical practice for the early years, dance improvisation is not about teaching children dance ‘steps’ or ‘moves’, but rather aims to use dance as a way of attuning to the world through bodies. While dancers spend years on the ‘mastery’ of technique, a less examined skill is the highly attuned practice of nuanced relationality dancers have with their body, and with other human and non-human bodies. This is best understood through proponents of dance improvisation (see Monson, 2017; Sheets-Johnstone, Sheets-Johnstone 1981; Albright...
where presence and attention are practiced through a responsiveness that is always in relation with other human and more-than-human bodies.

**Feminist weather-bodies**

Cultivating a dancerly engagement of the whole body invites relations with other bodies and also speaks to feminist theories that understand the (human) body not as somehow separate from the mind, but as radically open to the world and its surroundings. This view of the body as enmeshed with the world implies that bodies “…can be composed, recomposed and decomposed by other bodies” (Gatens 1996, p. 110). This process of composition is keenly practiced in dance through the body (dancing) in, and with, time and space. Building further on this feminist understanding of bodies, Elizabeth Grosz (1994) proposes that bodies produce knowledge. From this perspective, the body is more than an object to be studied or something in which nature and culture are written onto, rather it is an inextricable part of - one could say embodiment of perhaps - theorising with natureculture.

Recent feminist new materialist scholarship in the environmental humanities expands further on theories that emphasise the material interconnections and relations between corporeal human bodies with the more-than-human world (Alaimo and Hekman 2008; Neimanis 2017). In particular, Stacy Alaimo and Hekman (2008) puts forward the idea of transcorporeality as the “time-space where human corporeality, in all its material fleshiness, is inseparable from ‘nature’ or ‘environment’” (p. 238). Transcorporeality focuses on the ecological flows and movements across porous bodies and sites (Neimanis 2017). Feminist new materialism understands matter (and in this case human and more-than-human weather bodies) not as separate bits of nature that sit passively outside from the world waiting to be discovered, made significant, or controlled, rather they are agentic and inextricably part of the dynamics of the world we are all already a part of.

In our project, the practice of dance improvisation helps to propel these feminist ideas of embodiment and trans-corporeality in making tangible how atmospheres and elements are moving through and with children’s bodies as sensing, feeling weather bodies. Weather does not cease to exist when human bodies are inside. Rather, weathering is happening all the time and crosses all kinds of boundaries (Ingold 2010); weather is inside the classroom as well as outside. Employing dance improvisation with young children in this project supports this notion that we cannot separate child bodies and weather bodies, and demonstrates how we are natureculture weather bodies in perpetual relation.

**Experimenting with weather through dance improvisation: a methodological interference**

Since 2018, Mindy Blaise and Tonya Rooney have led a small team conducting an ongoing multisensory, walking ethnography with children and educators to document their weather relations and better understand the significance of child-weather relations for developing new approaches to environmental learning (see Blaise, Rooney, and Pollitt 2019; Rooney 2019; Rooney, Blaise, and Royds 2020). This weather walking inquiry took place on Ngunnawal Country, Canberra, Australia (Rooney 2018a; 2019) in collaboration with children and educators from a preschool that is situated in parklands and within walking distance to a lake. The project involved conducting regular walks with teachers and children on one morning each week during 2018–2019 except during school holidays. A range of ethnographic methods, such as participant observations, field notes, audio and video recordings, and photographic documentation were used. The research focus was to document the children’s unfolding relations and entanglements with more-than-human worlds, and more specifically with weather and weather worlds (Ingold 2010, Rooney 2018a). This was not done through explicit discussions and teaching about weather, but rather through noticing children’s
entanglements with weather (Blaise and Rooney 2020). As an extension of this project, and prompted by the insights that other new materialist scholars have elicited by introducing an arts-based element into their research with young children (e.g. Kind 2018), the practice of dance improvisation was implemented as a creative interference to the walking methods used to this point.

**Experimenting with weather through dance improvisation**

As a deliberate methodological interference, improvised dance was introduced as a creative medium through which to observe the new ways in which children experience and improvise with the entangled relationship between weather and bodies. The research reported in this paper is drawn from a dance improvisation workshop conducted by Jo Pollitt, over two days with a group of preschool children. Drawing on her dance practice and disciplinary knowledge, Jo designed and facilitated several improvised activities with 30 children (ages 3 – 5) and their 5 educators. The workshop activities were conducted with the children in two smaller groups (that is, around 15 students in each). This work was made possible and builds upon the child-weather relations practiced by the experience of the walking ethnography project of Mindy and Tonya. Jo led children in a series of experiential activities both inside and outside of the classroom, including many different ways of engaging with the entanglement of bodies, movement and weather.

The techniques in the workshop were drawn from improvisation scores of Jo’s Response Project (2002) as well as methods developed during a project called Conversations with Rain (Blue and Pollitt 2019a, Blue et al 2019b), to attune and amplify sensorial imagination with children. Improvised dance was introduced to the group of young children through two weather improvisations, **collaborative clouding** and **material skies**; both of which are described in the weather stories presented below. The improvisations were designed to highlight human entanglement with climate and the specific weather events of our own time and place. In these improvisations, the children’s weather relations are deliberately foregrounded to counter the tendency to position weather as simply a background context to everyday activities (Ingold 2010; Rooney 2018a; Vannini et al. 2011). By engaging the children with, and within weather through dance, we aimed to draw attention to weather as inhabiting and inside bodies, rather than simply something that is encountered outside the children’s classroom. The embodied and relational practice of dance improvisation provided an opportunity for researchers and educators to pay attention to the intra-actions of child-weather bodies as they moved along with dancer-led scores and experiments, witnessing a more entangled set of knowledges and relations as a mode of learning with weather.

Through the two weather-making stories below we illustrate the impact of the methodological interference of dance improvisation on the ways that the children came to experience their bodies as ‘weather bodies’ and the insights that this provided for educators and researchers into the creative potential of art-based pedagogy for environmental learning. In the first improvisation, the children are invited to attend to the movement of air in and out of their own moving bodies to experience breathing with weather (see **Collaborative clouding**). In the second, the children engage in a series of material encounters as a piece of crumpled tissue paper is introduced into the weather-making experience that gradually unfolds between human and water bodies, paper and weather (see **Material skies**).

**Improvising with weather and bodies: stories from our research**

**Collaborative clouding**

Crouching together in a tight circle, on the carpeted floor of the preschool room, children’s weather bodies are in whispered conversation with Jo as she asks, ‘What is the weather inside
your tummy?’ The children close their eyes with hands resting on their tummies picturing what kinds of weather states, skies and events are most vivid inside them. Various children respond, ‘Stormy!’ ‘Blue skies with birds tweeting’ ‘Snowing’ ‘Sunny!’ Jo then asks, ‘What is the weather inside your head?’ ‘Windy,’ ‘Trees,’ ‘Cloudy’ and ‘I have a fork in my head,’ come the replies.

After attuning the children to thinking with weather in the body, Jo then asks them to breathe in. ‘Breath in the sky. Swallow it in your tummy’. There is silent concentration from the children as they notice how air is moving through their bodies.

Jo suggests, ‘Now, breath in through your fingertips. And out through your fingertips.’ After a pause she asks, ‘Is that strange?’ ‘Nooo!’ children chorus with laughter. Following Jo’s lead, children then breathe through their elbows, ears, and knees.

Reaching her hands out and cupping them together, Jo invites the children to follow her lead. ‘Now scoop’ she says. ‘What are you holding?’ ‘Are you holding air?’ As the children scoop, they call out, ‘It’s ice cream’ ‘Rainbow’ ‘Air’ ‘More ice cream’ ‘Clouds’. This is followed by the children scooping all this weathery matter over their heads, into their mouths; swallowing and wallowing in small weather worlds plucked from the air around them.

With the children, Jo wonders out loud, ‘Where do you think weathers live?’ A first response is called out, ‘Outside of the classroom!’ This quickly inspires excited responses of, ‘No, inside the classroom! And inside us!’

Next everyone expels a big breath out on the slow count of, ‘One…….two…….three!’ Jo and the group think with all of the invisible bits of bodies, feelings, and thoughts that are swirling together with the air.

Together they wonder, ‘What does weather breathe?’ ‘Us!’ they respond as they notice the blur of multiple weather bodies breathing together.

Through this improvised dance with weather and children, Jo makes visible the collapse of child and weather boundaries through expanding the imaginative capacity of breathing. For example, when children are breathing in, they are, ‘swallowing’ the weather. As they breathe out, they imagine different weathers expelled from multiple bodies all overlapping in the shared air. The improvised collaboration between human and non-human bodies is where the weather-making occurs. For instance, small and visible ‘clouds’ of condensation appear when weather and breath collaborate (Rooney 2018a) and the disappearance of those clouds sees a simultaneous disappearance of breath. In other words, breath is inseparable from weather (Alaimo 2010; Ingold 2010).

Every time a child breathes in and out, they are breathing weather. Weather bodies are breathing bodies. Child and weather breathing together is an improvised composition of collaborative clouding. Although children are each breathing separately, they are also breathing together. Weather swirls in visible and invisible pathways and breathing becomes a collaboration of repeated and perpetual weathering. Kinaesthetic connection creates intimacy through sensing. Bodies are always in movement, always in flux. As Philip Vannini and colleagues (2011) describe, “[w]eather envelops us, unfolds us, and it is by moving through it that we come to its most immediate—carnal and mindful—recognition” (p.368).

Paying attention to child-weather collaborations through this improvisation enables nuanced weather stories to emerge that shift the focus beyond the usual emphasis on temperature, colour, and seasons (Rooney, Blaise, and Royds 2020). Cultivating bodily awareness of weather makes visible how weather stories abound within and arise from child-bodies. Weather sensations, are not child-driven but generated in collaboration with weather bodies.
By placing hands on diaphragms and tummies as children breathe with air, they are sensing and speculating what weather worlds feel and look like inside their bodies. This attuning generates space for other weather bodies, and possibilities for embodied weather improvisations arise.

**Material skies**

Jo introduces a large sheet of crumpled tissue paper to the children. She rustles the paper softly. ‘What does this sound like?’ she asks. ‘Rain’ comes the unanimous response. Rustling the paper more wildly, Jo conjures up a noisy storm. Then quietly, she invites children into dancing with paper and rain. Tissue paper is passed around the circle with hushed intrigue from child to child as they try passing the paper without making a sound. ‘This is a little bit tricky’ says one. In the concentrated quiet, the liveliness of the tissue paper captures children’s attention and directs their movements. Deliberately changing the pace in the room, Jo then gives the paper to a single child who acts as a conductor, creating a symphony of gentle and vigorous rustling sounds that other children respond to with corresponding movements.

Finally, while distributing a piece of paper to each child, Jo suggests they make their own storms. Wild rustling, stomping, scrunching and laughter with paper ensues. It is now time to venture outside, but before doing so, Jo invites the children to take their piece of weather with them. She says, ‘Wrap it up tight and tuck it in your tummy or in your pocket. Make it disappear, but take it with you.’ While making their way to the lake children’s weather-making occurs.

Hands and fingers dig, bury, and hide these tiny tissue-paper weather parcels. Children then find, uncover and retrieve the weather-treasures, carefully carrying them to the nearby lake.

Bending down, tissue-paper weather parcels are dunked in the lake, soaking up water and all kinds of microscopic particles. Holding the soaked tissue-paper in their hands children bring it up to a large black monument, pushing and squeezing it hard into the shiny granite plaque. They watch as water flows and trickles down the plaque to the ground. While pressing lake-soaked tissue against granite and watching tiny streams of water trickling down a boy excitedly shouts, ‘Yes! Hey, look, this cloud is making rain!’ Later, the boy tells us, ‘I was getting some dirt off (the plaque) with my weather parcel, then painting. Painting clouds.’

One of the boys moves the waterlogged tissue paper in circles, going round and round, over and over. Soon micro rivulets of lake water begin to trickle down from the cloud. The trickling, squiggling, and racing of this ‘rain’ intrigues him for a while. Continuing to move the soaked tissue paper parcel around and around in figure eight circles, a film of dusty grime on the plaque comes into play. Layers of dust adorning tissue, granite, and water. Cloud formations appear with each pressing circle of the tissue that smudges the plaque. Provoked by the fast moving emerging clouds, a second boy joins this weather-making. Clouding movements speed up, as an urgency overtakes the boys’ movements. Furiously they begin covering the plaque with clouds, arms flailing with increased force and accumulated speed, until the clouds are hidden under smudged sky. The weather making motions propel the boys into further play, spinning and whirling with and as bodies of sky.

In this second improvisation, weather bodies converge as the boys circling actions make clouds. Just as clouds in the sky precipitate, the tissue paper clouds release their lake water as rain, while boys move the clouds in circles. ‘Real’ rain and clouds and the imaginary are blurred. Meaning making happens through improvised weather movements and the children position themselves
as weather makers with water, paper, lake and sky. Active relations and improvising with weather can also be understood as a mode of listening with the body. In this, we see something of the ‘pedagogy of listening’ from the work of Gunilla Dahlberg and Peter Moss (2005), who describe listening as highly interactive, allowing for surprise and curiosity and ultimately as “radical dialogue” (Dahlberg and Moss 2005, p.102). Expanding these concepts beyond the social dimensions of children’s lives to encompass the connections between children and more-than-human worlds, we can understand weather improvisations as simultaneously quotidian and as listening to and with weather.

Paper bodies, lake bodies, microbial bodies, dirt bodies, and child bodies come together, meeting, mingling, and making weather through experimenting, improvising, and all kinds of doing, listening and responding. What is important here is to notice that the children are not learning about the processes of the water cycle, but that they become entangled with weather and other bodies as their own bodies squeeze and press the soaking tissue paper into the hard granite surface or they make fast and forceful arm movements. They become active weather making bodies, full with air, wind, dirt, and water.

Through telling stories from our research of two dance improvisations, collaborative clouding and material skies, we illustrate that the practice of dance improvisation can be harnessed in early childhood environmental education a way of learning and coming to know the world through bodies and movement. The entangled and blurred relations that children experience with other weather bodies, challenges the binary of nature-culture and the notion of weather knowledge as always specific, direct and able to be articulated through language alone. Clare Croft, author of ‘Queer Dance’ (2017) affirms dances’ “poetic porosity and generative failure to convey direct meaning” (p. 10). It is by engaging with this ‘poetic porosity’ of dance and activating the relational receptivity of dance improvisation, that we create space for experimenting with weather. Dance improvisation draws attention to bodies and embodiment as natureculture entanglements (Alaimo 2010, 2016; Grosz 1994; Pollitt 2002, 2019), and through this, children have the opportunity to explore the potential in their own bodies as weather bodies in ways that do not perpetuate the notion of human-nature divide.

Jo Pollitt’s improvised dance methods (2019) introduced ways of experimenting with weather and bodies. The open-ended, dancer-led activities, drew children to notice how their own bodies are ‘weather bodies’; a practice that aligns with the premise of body worlding (Manning 2009) where these types of meaning-making encounters are understood as a collaboration. Similarly to how Phillip Vannini and colleagues (2011) understand weathering as mutually shaping, body worlding suggests that through movement, “[w]e move not to populate space, not to extend or to embody it, but to create it” (Manning 2009, p. 13). In other words, worlding is a generative knowledge making practice. When children are making weather, weather worlds are created and children collaborate in making those worlds.

Dancing with weather also involves paying attention to how weather, bodies, and materiality emerge through children’s play with weather. Rautio and Winston (2015) consider play through ‘child-matter intra-action’ where the emergent experience of both child and matter are simultaneously agentic. Like Rautio and Winston’s proposal of play as intraaction (after Barad 2007), children’s weather improvisations foregrounds relations amongst all where ways “of knowing and being are acquired and challenged” (p. 16). Dance improvisation provides, as a methodological interference into a longer term research project, also illustrates the types of practical activities that educators and researchers who work with children might use to experiment with learning that emerges through the relationality between child, weather and body. Instead of teaching children about weather, and how rain, wind, and heat impact the world, creative practices such as dance improvisation provide an opening to paying attention to weather as a collaboration with children.
Conclusion

Introducing the practice of dance improvisation into an early years classroom can open up new ways of knowing and understanding weather systems and bodies. In these times of extreme weather events, humans are changing weather systems and weather systems are changing humans. This has implications for environmental education in the early years. One of the ways in which environmental education in the early years can attend to these changes is by shifting the focus on teaching children about the weather and weather systems in abstract ways, toward engaging all kinds of bodies to collaborate, move, and imagine weather. Dance improvisation offers interruptions to human-centred learning about weather. Even through simple and everyday movements, such as breathing in and breathing out, children can experience the dissolution of the notion of weather and bodies as bounded entities. Carrying weather from indoors to outdoors troubles any idea that weather might only be something to consider when outside the classroom. Collective breathing and weather wandering with young children helps draw attention to the ongoing natureculture entanglements of weather and bodies. Through dance improvisation, these collaborations have the potential to generate a more nuanced, integrated and kinaesthetic understanding of weather systems. Paying attention to collaborations that arise through improvised childweather relations with other weather bodies, helps to make possible a gentle shift towards grappling with larger concerns of a rapidly changing climate. This is because the separation between humans and weather dissolves to something more entangled, as a multitude of weather bodies come together to play and shape children's everyday weather relations.

In our project, children are positioned as creative agents with the weather as they improvise and make weather with other weather bodies. In experimenting with dance through improvisation, we deliberately emphasise the way children respond to relationality rather that achieve any mastery of steps. With the classroom, often a contained indoor space, dance improvisation acts a pedagogical portal for teachers and researchers to notice how young children are already connected with weather. Rather than a disconnected, disembodied learning ‘about’ the weather via indoor diagram charts, our dance intervention generated and made visible the embodied and unfixed relationality between children and weather. This in offers a valuable way forward in a context where responding to the challenges of Anthropogenic climate change demands a critical rethinking of human relations with the world and our (human) entanglements with weather and weather systems.

Acknowledgements

We would like to acknowledge that this project was made possible by a Partnership Development Grant by the Social Sciences and Humanities Research Grant, Canada, and the Edith Cowan University Vice Chancellor’s Professorial Research Fellowship.

Notes on contributors

Jo Pollitt is an interdisciplinary artist and Postdoctoral Research Fellow at Edith Cowan University. Her work is grounded in a twenty-year practice of working with improvisation as methodology across multiple performed, choreographic and publishing platforms. She is co-founder of the creative arts publication BIG Kids Magazine and lectures in Dance Improvisation at the Western Australian Academy of Performing Arts. Jo’s practice-led scholarship investigates poetic pedagogies of more-than-human education through feminist, anti-colonial, embodied and interdisciplinary methods.

Mindy Blaise is a Vice Chancellor’s Professorial Research Fellow at Edith Cowan University, Perth, Western Australia and Co-Director of the Centre for People, Place & Planet. Her background in the early years, interest in feminist and ‘post’ theories, and her identity as a white settler woman influences how she approaches research.
Her transdisciplinary and postdevelopmental research with the more-than-human uses emergent, affect-focused and creative methods to rework a humanist ontology. She is interested in how the more-than-human and feminist speculative research practices activate new meanings about childhood that sit outside the narrow confines of developmentalism.

Tonya Rooney is a senior lecturer in early childhood and environmental education at the Australian Catholic University. Tonya’s research focuses on children’s relations with space, time and more-thanhuman worlds in contemporary society. Her current projects include explorations of digital childhoods and the implications of Anthropogenic climate change for children’s lives and futures.

ORCID

Jo Pollitt http://orcid.org/0000-0002-2821-7768
Mindy Blaise http://orcid.org/0000-0003-2476-9407
Tonya Rooney http://orcid.org/0000-0003-1722-6009

References

Dahlberg, Gunilla, and Peter Moss. 2005. Ethics and Politics in Early Childhood Education. USA and Canada: RoutledgeFalmer


