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Connections and disjunctures: Hum(an)imal becomings in early childhood

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A thesis submitted for the degree of Doctor of Philosophy at Monash University Faculty of Education in 2019

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Abstract

This inquiry grapples with the relations of animal species, people and environments. Human and other animal species engage with each other in a multitude of complex ways and these earthly entanglements have always been present, motivated by both necessity and choice. As we become ensconced in the geological epoch known as the 'anthropocene', increased human population, global economies and advanced technologies speed up capitalist production and consumption. Animal species, including children dwell in these systems and education perpetuates these cultural-political-humanist structures as normal and just. This inquiry seeks to question how knowing children and animals helps us to inherit and respond to the complex and messy legacies of the anthropocene with possibilities for (re)imagining the institutional structures of early childhood education and childhood. These questions intensify as environmental forces escalate for all Earth dwellers, demanding new ways of thinking, new ways of knowing and new becomings.

Theoretically this thesis roams through the complex terrain where children and animals dwell. Theoretical borders are tested that traverse humanist, ecofeminist, critical posthumanist realms playing with old and new ontologies, looking for pedagogical resistance, anarchy and places without violence.

This theorising also deploys postqualitative methodologies with methods that assemble as data events, narratives and concepts that gravitate towards paths of discovery that engage new ways of opening to the inquiry. Specifically, 'post' methodologies and theories are engaged to pay ontoepistemological attention to the teaching and learnings of children's relations with animal species in their homes and education setting. The participants of this research consisted of three generations from four families, and the teachers in the early childhood education setting that they attend. Data was generated over six-months in written, audio and visual formats and this formed the basis of the analysis.

Researching human-animal connections and disjunctures illuminates how speciesism is enacted in early childhood, discovering what these relatings do and how species are shaped and reshape in the process of their becomings. There are broad possibilities here

that question, critique and remake early childhood pedagogy and curricula. More specifically the research energises ethical pedagogy by unsettling animal representation in early childhood education and the contexts of childhood seeking ways to address species and environmental injustice. Multispecies relations are integrated that elevate animal species as crucial earthly companions, co-learners and co-teachers. Original contributions are expressed throughout the study, including the concepts of hum(an)imal and roaming pedagogy that theorise human-animal relationality in the lives of Western children that are critical, ethical and ecological. These ideas acknowledge the complexity of the urgent questions of our time, notably in relation to human dominion, human power and living with ecological crisis. Knowing children and animals in a process of becoming-with is not just about learning about animal species or harmonious coexistence, instead it shifts the exclusive focus on the individual child to one that attends to the earthly collective.

Publications during enrolment

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Declaration

This thesis contains no material which has been accepted for the award of any other degree or diploma at any university or equivalent institution and that, to the best of my knowledge and belief, this thesis contains no material previously published or written by another person, except where due reference is made in the text of the thesis.

Student signature   Tracy Charlotte Young   15/3/2019

Main supervisor   Jane Elizabeth Bone   15/3/2019
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Acknowledgments

The guiding presence throughout this study is the absent referent of the animal becoming product in the industrial machine. You are my touchstone keeping me earthed to the task at hand, with haunting reminders of the scale, violence and destruction of the 150 billion farmed animals slaughtered each year and the coalescence of animal extinctions. Forgive the appropriations and representations I made in your image and the clumsy attempts at entering your lifeworlds. I hope some of the points of connection landed in the right place. For Myf the cat and dogs Cleo, Simba and River who have contributed to this work, as we cohabit through the spacetime of the inquiry, I thank you for the warmth, love and comfort and allowing me to attune with your creaturely ways. I sense an enhanced reciprocity took place during this process that has forever changed these enslaved relations of domesticity that I hope benefit you in some way.

I would like to express my gratitude to my two supervisors. Firstly, Dr Jane Bone. I am grateful that you let me wander with process taking risks along the way, encouraging the practice of roaming and most importantly showed me how to be a brave activist for animal rights. I learned to speak up and speak out, becoming trouble(d) and you were a huge part of this. Professor Amy Cutter-Mackenzie-Knowles. I thank-you for your wisdom and generous invitations to engage with research projects, even when you moved to a new University. You carry me along with you, and your faith is a gift that has enabled me to participate in conferences and writing projects that I will forever be grateful for.

My patient friends Heather Fahnle, Karen Schneider, Jeanette Keser, Susan Werner, Philippa Spring, Catharine Hydon and Anne Stonehouse, who offered support and never made demands on my time, knowing this work is important to me. Deb Moore strengthened and supported the initial stages of the study as she forged ahead with her PhD, guiding the way for me and our shared research aspirations to flourish. Prasanna Srinivasan has been a critical friend and guide throughout this inquiry and her wisdom permeates throughout the pages, our shared work and shared lives. We have both become otherwise by thinking with Animal as othered(wise) as we walked and talked together in the spaces of this inquiry. You have the ability to push me to new places, beyond my comfort zone, challenging me to become a better thinker and writer.

There are also scholars who have influenced the inquiry process, most that I have not met, and some that have fallen in and out of favour through the twists and turns of the terrain. I would like to particularly acknowledge the work of Helena Pedersen as someone who kept me grounded to 'the condition of the animal' enabling me to bravely bring the animal into early childhood education, where of course it had already been, waiting to be found. Pauliina Rautio also gave me strength as we walk the critical-posthuman tightrope together and apart, trying to keep our balance as the forces of both ontologies pull in many directions.

Thanks, beyond words are literally expressed to the animal and human participants who offered their time, energy and insights. To the teachers who generously supported this work providing the terrain of active inquiry as we walked and learned together and the families, the children, companion animals, parents and grandparents who let me enter the sacred spaces of family homes, trusting me to explore these multispecies and multigenerational relations. To the animal participants, even those who resisted my fumbling attempts to get to know them. I hope that I have granted what they graciously offered, the respect it deserves.

Finally, I offer enormous gratitude to my human family who have supported the changes to family life that a PhD initiates, providing an endless source of strength. Georgia, I have studied most of your life and we are both grateful that this has reached its endpoint. Knowing animals is something I feel we will continue to work towards in our relatings. Georgia thank-you for the graphic illustrations and Sunny, thank-you for the beautiful line drawings that you created – a gift to help express conceptual ideas in ways that I am not equipped to do. Sarah and Amanda, you have listened to my ramblings for many years and I could not have done this without you. Sarah, we have shared much during this time – two sisters undertaking a PhD, in the same field, at the same time is somewhat unique and our conversations, shared thinking and checking in with each other's progress have been invaluable. These acknowledgments offer a time and space where the love and support of family can be noted for all the gifts they bring.

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Introducing Inquiry Process

> *At the beginning of a journey, when you are about to cover strange territory, you are always ignorant, and you have to rely on local guides. They are the ones who know the safe tracks as well as places of danger ... one ignores the local guide at one's peril, for he is telling us how to survive in this country, and survival depends not just on the right sort of physical treatment of the country, but also on what one says about it, writes about it, and the images one makes of it. (Benterrak, Muecke, & Roe, 1984, p. 251)*

The strange territory of this inquiry is both familiar and unknown and the local guides of academia who know the safe tracks are not ignored or abandoned in these travelling's, but are taken under advisement, rather than as truths to be followed. Connections and disjunctures with theory and methodology are embraced in critical posthumanist and postqualitative becomings, spawning new guides that attune with atmospheric conditions and circulating forces (Stewart, 2011) generated by and residing within the data assemblage. This approach of thinking-sensing-with and writing-in-collaboration-with philosophy and data speaks and moves through data events in ways that Manning and Massumi (2014) propose as *Thought in the Act* from their text of the same name. This is thinking and doing that is active and always in-motion, never settled or complete. This process ontology enacts a collaborative mode of thinking where political, social and material histories become a vital(ised) part of the conversations and discoveries of the territory where children and animals dwell.

The design of this thesis is not unusual in the sense that it has numbered chapters that travel in an orderly academic fashion, covering the familiar ground of an introduction, mapping of literatures, theoretical and methodological assemblage and enmeshed chapters of analytical interpretation and discussion. It does however venture into new methodological territories that twist and turn through non-linear writing coordinates. The writing integrates anecdotes, autobiography, narrative, neologisms, speculative figurations, philosophical insights, and intertextual citations of and conversations with

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other authors and thinkers within the interpretations. St. Pierre, Jackson and Mazzei (2016) outline the conditions for this type of postqualitative inquiry by suggesting that "one upshot of the work of thought in the 'new' is that we give up a container model of inquiry in which all elements (e.g., data, analysis, representation) are isolated, distinct, and appear in a pre-determined sequence" (p. 105). The chapters come together through an assemblage that takes shape in this thesis in unusual ways, venturing through terrains that are interrelated. As data unfolds through the events, narratives and concepts of the inquiry, they become folded in ways that are never final or complete. Each chapter has "culminations and termination points" (Deleuze & Guattari, 1987/2004, p. 23) and conceptual tools that connect sections in the style of Deleuze and Guattarian plateaus, where chapters are connected but can also be read independently or entered into separately. A summary of each chapter is presented at the end of this field guide for those who prefer to know the lay of the land ahead of time.

This introductory field guide has three signposts: The first introduces the specific focus of the inquiry describing why this research is timely and relevant. Second, the thesis assemblage and configurations signpost the terms and conditions for the way ahead as a means to creating pathways of understanding for unfamiliar territory. The third signpost describes the researcher becomings that are integrated within each chapter as a means to "rupture the all-knowing I" (Henderson, Honan, & Loch, 2016, p. 5) and break free from the corporeal human subject. The inquiry assemblage is steered by a complex multiplicity of human and more-than-human participants, philosophers, guides and imagined guests who chronicle, provoke, enchant, sense, and sometimes speak and perform the unsayable. We commence with introductions and an invitation to a party.

Who are you

Imagine you are at a formal party with a friend you have known for most of your life, with people you do not know. In recent years this relationship has escalated to an intimate partnership where you have barely separated from each other. This friend is *Inquiry Process* and proper nouns are executed in this thesis to indicate the subjectivity of this relational entity, for as Deleuze (2001) emphasises we never really write alone. Our relationship has been fractious and long, tinged with the guilt and angst of doctoral research. This coupling unleashes creative endeavours and rewards, as we are both forever changed in our becomings. There have been interludes and doubts in our relatings

where we blindly followed others down predictable pathways, dwelling in the panicky shadows of dead ends sometimes referred to as "the valley of shit" (Mewburn, 2012). A crack appears in the surface of the research landscape. A crack that enables the force of strange winds to seed the freedom of thought that propels us in-motion – moving, becoming connected, committed and open to possibilities of the unseen and unknown. We are still friends and looking forward to the next stage in our academic relationship.

To create a character and identity for this entity I have come to know, namely 'Inquiry Process' is no glib act of attention, but rather a way to slip outside the constraints of writing a thesis by rethinking the hegemonic terms and representable logic of qualitative research. Derrida (1990) outlines the act of deconstructing human(ist) theories and methodologies focused on a process-ontology of what happens and the personae of Inquiry Process is a constant reminder of this. St. Pierre, Jackson and Mazzei (2016) outline the conditions for this type of practice, suggesting that "one upshot of the work of thought in the 'new' is that we give up a container model of inquiry in which all elements (e.g., data, analysis, representation) are isolated, distinct, and appear in a pre-determined sequence" (p. 105). When we adopt the language and devices of science in qualitative research, we hide behind a veil of certainty that places faith in the rigour of evidence trails and methods that test, cut, code and measure. Methods that do this demand busy work, taking time away from the work of thinking, sucking the life force out of liminal spaces, making them appear lifeless and no longer worthy of attention. Inquiry Process illustrates different pathways, where research ecologies assemble in unexpected ways through self-generated fissures and not pre-determined by foundations of prior methodologies. A crack creates uneven surfaces of such disruptive thought, enabling smooth spaces to prosper. Not smooth flat, foreseeable, easy walkways, more like the smoothness of hitching a ride with forces, sensation and affect, or what Deleuze and Guattari (1987/2004) refer to as 'flows of desire' with the revolutionary potential for forces to intervene in research events.

> *"It is at work everywhere, functioning smoothly at times, at other times in fits and starts. It breathes, it heats, it eats."* These research expeditions are powerful and exhausting requiring mental stamina, the courage to unsettle and *"haptic, rather than optical perception". (p. 557)*

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Territorial diplomacy

Inquiry Process as an immanent partner is shaped by and contributes to the cross-disciplinary contexts of early childhood education, human-animal studies and environmental education. A collective of critical, theoretical, speculative, and philosophical guides accompanies the reader and traveller through multiple passageways as corridors become conduits of limitless discovery, rather than a unified truth of the direction and destination of the inquiry topic. Troubling the power and processes that shape the structures of linear models of humanist research, helps to free the virtual field of possibilities, enabling the unknown to assemble. From this perspective, Deleuze and Guattari (1991) contend that the spaces of education are "already so covered with pre-existing, pre-established clichés that it is first necessary to erase, to clean, to flatten, even to shred" (p. 204). The concept of unlearning is important here, however, there is no desire to shred past learnings, for an act of methodological destruction is not helpful when the legacy of these practices hold meaning for many. I needed a detour of destabilisation to procure travel to a different destination. This destabilisation came in the form of postqualitative methodologies where language and process shift the rules of method to a "method assemblage" (Law, 2004, p. 41). The term *territorial diplomacy* is adopted to balance the demands of the academy and my desire to sense the connections and disjuncture's of "rogue intensities…the lived, yet unassimilated, impacts of things, all the fragments of experience left hanging" (Stewart, 2007, p. 44).

Inquiry Process embraces theoretical and philosophical thinking that become enmeshed through the assemblage of the territory where children and animals dwell, comprising of human and more-than-human participants, researcher, family homes, education, and data events. Barad's (2011), notion of queer relations is enacted bringing into question the anthropocentric dualisms of ontology and epistemology between self and other, mind and body, culture and nature, and human and animal. Inquiry Process is open to sensing with and walking alongside multiple epistemic worlds and these ontoepistemological becomings maneuverer though critical posthumanist and ecofeminist theorising. There are concerns that posthumanist theory alone remains within the "orbit of Eurocentered epistemologies and ontologies. Indeed, the literature continuously refers to a foundational ontological split between nature and culture as if it is universal" (Sundberg, 2014, p. 3) and Inquiry Process emphasises the Western-centric focus of this study. Relationships therefore between place and human-animal interaction become the meeting points that

brings together the work of leading scholars, from a variety of philosophical and interdisciplinary backgrounds to guide the thinking and worldmaking.

Thinking and writing with Inquiry Process as a relational entity also enables 'me' to step aside from the all-knowing first person who never really speaks alone. First, second and third persona writing strategies are adopted to embrace the collective of the assemblage "where it is always the conceptual persona who says 'I'" (Deleuze & Guattari, 1994, p. 64). To think of inquiry in terms of relationality brings to life the words, the events, the places, the wonderings and sticky knots, in a way that is intra-active and always attached to others. In this sense I never write alone, as Deleuze and Guattari (1987/2004) point out *In a Thousand Plateaus*, with writing "there is always quite a crowd" (p.1) and for Derrida "we must be several in order to write, and even to perceive" (Derrida, 1967/1978, p. 226). Each chapter commences with the clear 'I' of researcher becomings as I write myself into the inquiry. Inquiry Process then takes over to indicate the unfolding process that is always in collaboration with the multifarious assemblage of those who venture into the territory, those who are already there, those who interject or come along for the ride for "we are no longer ourselves….we have been aided, inspired, multiplied (Deleuze & Guattari, 1987/2004, p. 2).

Relational practices are embedded in the first three chapters as celebrations that gently mess with the formula of writing of a scholarly thesis, to see what transpires. The processes of celebrations include the party taking place in this introductory chapter, a multispecies banquet of cross-disciplinary scholars and more-than-human agents of the inquiry whom meet to share ideas and literatures in chapter two, followed by after-dinner entertainment that gives shape during chapter three to theory and conceptual ideas. To get things started, it helps to think about how people and doctoral studies are introduced to each other at gatherings such as parties, where information is exchanged, including, names, what you do, how you met and something you care about. This is how it became possible to write this introductory chapter and enter the territory where children and animals dwell.

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Why does this matter?

Children are living and learning in increasingly precarious times as rates of anthropogenic climate change and environmental degradation continue to proliferate with alarming advancement (Malone, 2016). In these makings of the world, Animals are ubiquitous to the lives of humans, to human spaces and cultures (Bull, Holmberg, & Åsberg, 2016) and therefore taken for granted and objectified as human property. Multispecies interactions take place in the spaces of human existence in homes, farms, wilderness, businesses, culture, education and imaginations. Philosophy has paid little attention to this 'question of the animal' and whilst there are some exceptions, many of whom join the inquiry, philosophers throughout Western history have used the collective trope of 'the animal' to develop theories of the human, humanity and humanism, by arguing for human exceptionalism (Oliver, 2009). Animals are a compelling part of human experience both "materially and imaginatively" (Saffron Foer, 2012, p. x) appearing in mythology, creation stories, folktales, fables, art across the times and places of almost all aspects of human life. Animals matter and we "often forget the degree to which our engagements with animals build the world in which our lives unfold from the very beginning" (Saffron Foer, 2012, p. x). Donna Haraway entangles human-animal relations in science, cultural and feminist studies, situating knowledge in cultural and historical contexts where the analysis of these relatings is always in the negotiation of spaces as we come together with animal species and co-constitute each other. The following trope from Haraway is revisited throughout the inquiry as matterings unfold.

> *It matters what matters we use to think other matters with; it matters what stories we tell to tell other stories with; it matters what knots knot knots, what thoughts think thoughts, what descriptions describe descriptions; what ties tie ties. It matters what stories make worlds, what worlds make stories.* (Haraway, 2016, p. 12)

Generating alternative stories and knowledge production (Armstrong & Simmons, 2007), requires Inquiry Process to walk with the hegemony of the all-knowing human that surrounds the relatings between young children and animals. Inventive pathways expose the discomforts, silences, joys and shifting positions that are engendered as children and animals' cross paths. Critical posthumanism enables the Animal to take a step forward to a more prominent position in the research, as a contributor and not merely represented through the telos of humanism or as a cultural tool for the growth and development of children. Of course, these boundaries and borders of place and culture are made and

unmade through human defined relations with animal species that are always precarious, and bound by human terms and conditions as pets, as exhibits, as pests and parasites, as laboratory and farmed animals, or objects of folklore in stories and popular culture. Power relations are present in these shared human-animal and spaces of family homes and an early childhood setting that assemble in the territory where children and animals dwell, revealing contradictions of how these places are storied and how stories of worlds come to matter.

Since 2003 the humanities and social sciences have witnessed what some have called the 'animal turn' in academia (Armstrong & Simmons, 2007; Cederholm, Björck, Jennbert, & Lönngren, 2014; Ritvo, 2007). Weil (2010) describes this as an increasing scholarly interest in the status of Animals beyond that of utilitarian function, agricultural scientific study and the larger-than-human degraded ecological times we are living in. 'The question of the animal' has become a more prominent focus of research since the 'animal turn' in philosophy, psychology, ethology, cultural geographies, anthropology, history, visual arts, and sociology and yet as Weaver suggests (2015) the prevalence of humanist assumptions are as yet under-theorised in education. Critical animal scholars advocate that the animal turn also needs to be concerned with 'the animal condition' (Pedersen & Stănescu, 2012), recognising how animal species have their own cultural interiority, biology, and lifeworlds (Pedersen, 2014b). These ideas are taken up throughout the inquiry and through the mappings of the literatures that aspire to "create theoretical and conceptual bridges that not only link together widely separated disciplines, but also span the gulf between the world of humans and the life of the rest of the planet" (Podberscek, Serpell, & Paul, 2000, p. 2).

What do you do?

The predictable question that take place at parties when you first meet someone who is curious about what we have been doing all this time is explored by Inquiry Process. The lines of flight of the inquiry are discussed in chapter eleven and it is useful to capture a snapshot of these contributions in this territorial field guide to gain a sense of the lay of the land:

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- The multi-disciplinarily focus helps disciplinary borderlines to open through the discourse and literatures of environmental education, human-animal studies and early childhood education. This is pragmatically useful for collective wondering. Moreover, it stimulates and drives an intellectually demanding project: looking beyond the walls of the childhood education setting to unfamiliar worldings of animal species, humans and the more-than-human.

- Theoretical and methodological borders are also being tested here that roam in and out of human, posthuman and critical theoretical realms playing with old and new ontologies in search of pedagogical resistance, anarchy and places that support ethical relations. Specifically, the engagement of 'post' methodologies and theories, invite curiosity and experimentation that pay attention to epistemologies that acknowledge the animal condition in ways that align with their wellbeing and liberation (Hamilton & Taylor, 2017). New terminology is created in this thesis to strengthen theoretical roamings and conceptual understandings.

- The loving and killing of Animals becomes a key focus that is mapped through the political and ethical commodification and consumption of animal species in the territory, showing that how Animals infiltrate educational praxis and the places of childhood. As such, it builds and reworks discussion about ethical practice in early childhood education in challenging ecological times; with the desire to live without places of injustice and violence (White, 2015). Pedagogical approaches are brought into question that explore how human-animal encounters are enmeshed in social, cultural and environmental relations with (and as) animals. Such a remaking of pedagogy requires a radical rethinking of the purpose of early childhood education, that continually questions (post)humanity, animality and animal liberation, accepting how encounters with animal species are educative (Martin, 2011) for both humans and Animals as they become made and unmade in the process of knowing each other.

Inquiry questions and wonderings

To question, is to continue to wonder, even if the answer seems to have been found, as it is through the limitations of an idea that alternative perspectives can be sought. Armstrong (2014 takes up this point in his analysis of wondering as:

> *Not moving too quickly to convert wonder into certainty – being prepared, rather, to experience the suspension between feeling and thought, between the known and the unknown – allows the wonderer to notice the limits to pre-existing thought and knowledge. In this respect, it seems to me that wonder offers the kind of disposition that has great potential to contribute to the urgent task of recalibrating our species' relation to others. (p. 169)*

Questions therefore become enmeshed within the intricacies of the study, however the territory is not mapped with charts leading the way, as travels became heightened by the aesthetic sensibilities to the wondering/wandering ways of the wayfarer (Macfarlane, 2012). The wayfarer creates tracks of ambiguity towards worlds, rather than mappings of certainty towards maps (Ingold, 2011b). To grapple with such an inquiry, it was necessary to develop a broad question and a number of generative questions that continue to intensify through the passing of time and place.:

How can connections and disjunctions between children and animals in early childhood be understood in relation to environments, cultures, and ethical practice?

1. How might place and culture influence the becomings of human-animal relations in early childhood?
2. What complexities of human-animal becomings are enacted when competing ethical concepts and practices are in play?
3. What are ethical relations with children and animals in early childhood and can they mobilise ecological becomings?
4. How might early childhood education (re)make possibilities for ethical relations, animal lifeworlds and ecological justice?

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Assemblage and configurations

Inquiry Process is both an entity who is voiced and a model of containment for this thesis that is configured as the territory where children and animals dwell. These configurations require orientation guides that show the way, but at the same time do not surge from theory to formulaic certainty too quickly (Armstrong, 2014), managing to slow down for uncertainty. Whilst the container for these configurations does not offer a perfect model of clarity, as the tactics, twists and turns could be jarring for some readers; further conceptualisations take place in the chapters that follow. A variety of conceptual tools are adopted for thinking-with affect, including the human and more-than-human and the materiality of spaces, bodies and forces that circulate within the research assemblage. The hope is that they do something new whilst still adhering to the rigorous demands of the academy that Inquiry Process monitors. These tools are used consistently, but not habitually for they navigate the edges of shifting terrains, speculative guides, neologisms sticky knots, researcher/researched becomings and ethical minefields. They create moments to pause at the threshold to take a breath and see what is there, before moving ahead.

Sticky knots

> *It matters what knots knot knots what thoughts think thoughts, what ties tie ties. (Haraway, 2016, p. 12)*

The figuration of 'sticky knots' is adopted by Inquiry Process as a conceptual tool to signal a phase in the research where the assemblage becomes trapped with wayward contradictions. Each sticky knot provides places for diffractive thought where the intention is not to find solutions or ease them apart, but indicate how they become sticky through cultural hegemony, taboo and the ideology and practices of speciesism. Sticky knots are filled with aporic doubt and uncertainty, worthy of further review beyond the scope of this inquiry. The term sticky knot has been adopted from Haraway as the "ordinary knots of daily multispecies living in a particular place and time" (Haraway, 2008, p. 300), however unlike Haraway, Inquiry Process does not shy away from showing the intersections and sticking points of power, oppression, cultural dominion and the violence that is waged against animal species. For when Haraway reminds us that "it matters which stories tell stories" (Haraway, 2016, p. 35) she refers to stories as relational tools for getting along as survivors on a damaged planet with little radical critique of the

asymmetrical power relations between humans and other species. Haraway's stories therefore avoid or minimise the injustice or "bear witness to the cruelty of most of our relations with animals" (Cudworth, 2011, p. 183). Critical theory and critical animal studies offers a commitment towards the radical critique of stories that appear to engage animals with knowledge production in the spaces of education, whilst simultaneously denying animality, cruelty and oppression.

For Deleuze and Guattari (1983) spaces and the broader assemblage of territories are also associated with knots, "affects or drives that form part of the infrastructure itself" (p. 63), forming tangles of lines in subjectivities, and physical places that constantly change in dynamic relation. Sensing-with the 'sticky knots' of encounters that take place in institutions like family homes and education settings reveals connections and disjunctures where domination of animals is glued within the social fabric of life. The stickiness takes shape as "lines and knots form these subjectivities, groups, territories and institutions" (Deleuze & Guattari, 1994/ 2009, p. 68) and poststructural, posthuman strategies for disentanglement (or deterritorialisation) reveal how to loosen their hold.

Introductory sticky knot: Naming as relational worlding

> *This agreement concerning philosophical sense and common sense that allows one to speak blithely of the Animal in the general singular is perhaps one of the greatest and most symptomatic asininities of those who call themselves humans. (Derrida, 2008, p. 41)*

A sticky knot appears immediately in the terminology and practice of naming. 'Animal' as Derrida suggests is a contested term because it lumps together the millions of animal species, in one word. As a scientist and Native American storyteller from Potawatomi heritage, Lisa Kemmerer (2003) pinpoints how naming is an intimate mode of knowing that speaks of careful observation and attention that holds possibilities for inter-species relations, where "finding the words is another step-in learning to see" (p.11). For Kimmerer this verbal activism bestows dignity of autonomy upon life, with intent to create social change, so she adopts the term 'Anymal', a contraction of 'any' and 'animal' that describes "any animal who does not happen to be the species that I am" (Kemmerer, 2006, p. 10). Derrida (2008) also asserts that the boxing of vastly different species under abstract categories should not be attempted as any reductive heading of 'animal'

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subjugates their animality creating linguistic traps of 'us' and 'them'. Derrida is one of the few Continental philosophers who deliberated notions of animality and he critiques and tracks this Judeo-Christian naming of the word 'animal' in his book *The Animal that Therefore I am* (2008), a word "that men have given themselves the right to give" (Atterton and Calarco 2004, p.124). Derrida introduces a new word – '*animot'*, composed of the word 'animal' and the French word for word, 'mot', "to have the plural *animals* heard in the singular" (p. 47). The animot is "neither a species nor a gender nor an individual, the *animot* is an irreducible living multiplicity of mortals, and rather than a double clone or a portmanteau word, a sort of monstrous hybrid, a chimera" (p. 41). Derrida also captures this colonisation of animal as 'other' with his concept of 'unconditional hospitality' that describes the complexities of opening boundaries to let others in. This attention to 'the animal' in text (Derrida, 1967/1997), theorises why writing is not simply a reproduction of speech, for it carries the material effects of how thoughts are recorded in writing and discourse, with power to name and make the world.

Language and terminology gain analytical prominence through the speaking and actings of the territory where children and animals dwell that take place in chapters six and seven. The deconstruction of terminology as verbal activism (Kemmerer, 2006) has been important for emancipatory movements like race, class and gender where biased and oppressive namings are placed 'under erasure', fall out of use or become infused with entirely different emotional connotations. Oppressive terminology is deconstructed and invested with substantially different and liberating meanings such as adopting the term 'farmed' animals instead of farm animals or reclaiming the word 'queer' in LGBTI communities. Post processes invite wonderings and (re)making of textual interpretations as creative concepts that do not take shape "out of disrespectful impatience" (Braidotti & Hlavaova, 2018, p. 10), but rather bring into action posthumanist politics of naming and wor(l)dmaking. Hypens and brackets are semiotic tools for wor(l)dmaking that expose, subvert and trouble discourse though intra-active joinings. They emphasise both separations and connections that "has neither beginning nor end, but always a middle through which it pushes and overflows', whilst proceeding by 'variation, expansion, conquest, capture, stitching" (Deleuze & Guattari, 1983, p. 47). Prominent 'post' scholars Donna Haraway and Karen Barad also adopt playful neologisms in their writings, removing the hyphen to collapse dichotomies into categorical hybrids including 'naturehuman', 'natureculture' 'pastpresents', 'godinuniverse', technoscience,

(Haraway, 1992, 2003, 2006) sociomateriality and 'ontoepistemology' (Barad, 2007, 2014). Inquiry Process came to enjoy these playful strategies where the material-more-than-human-human becomes fused through discursive dualisms, becoming conjoined and also separated in causally significant and complex ways with the multiple contrasts of the many. Morton and Haraway circumnavigate human-animal binaries, but do not resolve their separations, by replacing the naming of animals as 'strange strangers' (Morton, 2010) and more-than-human living organisms as 'critters' (Haraway, 2008). Haraway more recently extends notions of critters with 'kin' and making kin (Haraway, 2015, 2016), a term designed to embrace the more-than-human connective earth forces, recognising that all are already Earth-bound in families of living and dying compost, "not species one at a time" (Haraway, 2016, p. 103).

Many sticky knots are left in the territory as places to dwell or climb through, but this stickiness needed some resolution as the terminology is important to the writing and also used consistently in the thesis. The following decisions are adopted in the writing as tactical vernacular distinctions.   Inquiry Process chose not to use the term 'non-human animal' but it is quoted by others. Non-human subscribes to the Aristotelian split of animal categorisation where the animal category is inclusive of the human animal, whereas the human category is separate and exclusive, compounding the hyper separation of nature/culture, through a sticky knot of binary thinking and linguistic confusion. After all, what counts as non-human in a world of animal/human/machine/plant/air when the shared flows and exchanges that transpire between them become known? The linguistically awkward term 'more-than-human' (Abram, 1996) is adopted to signal the diversity of living and non-living beings, to negate binaries and recognise how "landscapes are co-fabricated between more-than-human bodies and a lively Earth" (Whatmore, 2016, p. 603) Inquiry Process also adopts verbal activism with simple namings where 'Animal' is often, but not always, written with a capital A as a collective noun and the terms 'animal species' and animals' are adopted to acknowledge the individual as well as the multiple many.

Boundaries of nomenclature are also blurred by inventing composite phrases or words. Some human-animal scholars like Birke (2011) reconfigure the term humanimal as a way of semantically and conceptually challenging the human/animal dualism. I take this a step

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further by bracketing the (an) so 'Hum' forms the first section of the word, that is a Hindi pronoun that translates as "we" or "all of us". This is followed by the bracketed (an) that signposts two conjoined meanings that bring together the human and animal to become 'hum(an)imal'. This enables the substance of the sticky knot of naming to disentangle enough to proceed. Inquiry Process first adopts hum(an)imal as a collective term for the territorial assemblage of human and more-than-human and hum(an)imal becomings signifying the "assemblage of contradictory entities" (Latour, 2011, p. 7) that help us to imagine the collective "we". Inquiry Process later adopts hum(an)imal as a concept to think-with in ways that are more expansive in the concluding chapter.

Inquiry as assemblage

Inquiry Process traces how theoretical and methodological pathways of discovery have been sought to demarcate humanist privilege in discourses of animality, where choices are made to not bypass the hazards of difference that take place with interspecies encounters. The philosophical writings of Continental philosophers, Giles Deleuze and Felix Guattari (1972, 1983, 1987, 1994) feature through concepts of becomings assemblage, territory and dwelling that work in synergistic ways. These are situated in the study as a type of fluid-holding place, that temporarily capture where connective networks of species, technologies and ideas gather. Concepts help to identify the multiplicity and heterogeneity within which humanity is embedded and which attempts to facilitate modes of 'becoming' to destabilise the representation of humanist ontology. This is an ontoepistemological strategy of "knowing in being" (Jackson & Mazzei, 2012, p. 119), where knowledge is not only privileged though the discursive domain of human knowledge, sitting outside of the world; but rather it is in the world, as an animal being, experiencing continual becomings-with animal species.

Deleuze and Guattari (1983) contend that assemblages can be made up of all manner of matter: corporeal, technological, mechanical, virtual, discursive and imaginary; for it is within assemblages that becomings emerge. Deleuze-Guattarian assemblage ontology thinks with data in terms of problems (sticky knots), questions (wonderings) events and concepts as tools of analysis (concepts and narratives). Without the creation of new concepts, there can be no thinking with a difference, no line of flight in thought. An assemblage invites new imaginings and unexpected guests that propagate and are propagated by the affective attunement with everyday life (Stewart, 2011). Unlikely

sources of data as assemblage and event emerge from reading novels, gardening, memory, walking, thinking about dreams, stories on the radio and conversations with friends. Professional aspects of the research-assemblage "comprises the bodies, things and abstractions that get caught up in the research inquiry, including the events that are studied, and the researchers" (Fox & Alldred, 2015, p. 2). Political daily encounters also join the mix, through social media conversations, conversations at conferences, films, reading groups and other generative movement of ideas that settle in research journals, before they dissipate. Inquiry Process wonders how to filter this, realising over time that the assemblage is not a messy curation of bits and pieces that appear in the territory where children and animals dwell, for these aforementioned elements become responsive to how components are brought together in this way through time and place, and also sensing, doing, knowing and becoming. We show how this postqualitative process avoids the linear reductive trappings of research with the affective capacities within assemblages that affects and is affected (Deleuze & Guattari, 1987/2004), rather than closing them off.

Territorial borders and boundaries

> *Landscape is not 'land', or 'nature', or 'space', or 'a picture in the imagination', or 'an alien and formless substrate awaiting the imposition of human order', or 'on the side of humanity against nature', or ontologically separate from the 'human perceiver', or 'built', or 'unbuilt', or 'an object…to be understood', or 'a totality that you or anyone else can look at'. Instead, it is 'the world in which we stand in taking up a point of view on our surroundings'; 'perpetually under construction'; 'qualitative and heterogeneous'; 'a living process' and 'a work in progress' that 'becomes part of us …(Ingold, 1993, pp. 153-154)*

Tim Ingold's description of landscape(s) defines the concept of territory that tries to elude the type of representation, that a field guide demands and is useful in this introductory phase. Establishing such boundaries in the early stages of the inquiry is difficult as there is a tendency to venture towards dead ends and rabbit holes, gathering everything we see and know. This is never wasted time as wayfaring verges towards places of interest, hidden treasures and also places to avoid. Three areas of child and animal relations appear more regularly in empirical studies, including children's social and psychological relationships with pets and domesticated animals, child-animal-therapy research, and psychological studies of children who demonstrate cruelty and harm towards animals.

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These were areas Inquiry Process chose not to venture towards, choosing to let the assemblage do its work with new stories of discovery and opportunities for posthumanist wonderings from the territorial milieu.

The territory where children and animals dwell has "a past form, a present form and perhaps a form to come" (Deleuze & Guattari, 1994, p. 101) and is not concerned with topographical perimeters, for territorial mappings offer relational and transversal possibilities. Working with the concept of territory enables a reworking of boundaries and borders that are flexible, and in constant motion. Deleuze uses the vocabulary of the territory to link ideas, including those from animality, to the work of philosophers, all of whom create refrains (strange words, irruptions, sounds, or signs) as territory is in a continual process of being disrupted and left behind, undoing what has already been established (deterritorialization) and forming elsewhere (reterritorialization). Territory data gathers as an assemblage of immanent time and place where it becomes folded and unfolded in the territory where children and animals dwell. Barad (2008) describes this as "not 'composed of things-in-themselves or things-behind-phenomena, but of "things-in-phenomena" (p.135). This notion of the territory as an amorphous holding vessel retains the freedom to see and sense anew, whilst providing some perimeters for how far the assemblage ventures, in order to not become unmanageable or unwieldy for the inquiry. This is a view of reality that is explored in more detail in chapter two as territorial becomings.

Dwelling

The concept of dwelling is influenced by Morton (2010), Plumwood (2008) and Ingold (1995, 2010, 2011a, 2011b) who attempt to reconcile hum/an/imal/nature relatings through storying of everyday lifeworlds and place as a continually unfolding story. Ingold charts an alternative, ecological ontology for an ethics of place where "apprehending the world is not a matter of construction but of engagement, not of building but of dwelling, not of making a view *of* the world but of taking up a view *in* it" (Ingold, 1996, p. 117). Nature is not culturally ordered in these worldings or described as being outside, separated and designed with the principles of built landscapes. Dwelling may be literal, metaphorical and speculative and is less about an actual place and more about living together with sensorial and affective forms of world-making that extends relations (Strathern, 1995).

The dwelling perspective in the assemblage of this study is therefore helpful as it embraces the more-than-human cultural assemblage, whom are not invited in, for they are already there. Morton (2010) shifts the focus on Western ecological dwelling through his entangling metaphor of 'the mesh'. The mesh, like territory, is a porous network, that is celestial, and earth-bound, virtual and actual with no edges or essential centre. This is not the Heideggerian (1978), colonising version of human dwelling, nor the hyper-separate container of self, committed to civilisation and the "eviction of alien elements" critiqued by the ecofeminist Val Plumwood (2008, p. 1). As an ecofeminist, Plumwood's notion of dwelling aligns with Ingold, although she places greater emphasis on advocating for place-based critical discourse that is less about a 'sense of idealised place' and more about knowing the 'shadow places' of environmental justice and power relations.

> *An ecological re-conception of dwelling has to include a justice perspective and be able to recognise the shadow places, not just the ones we love, admire or find nice to look at. So ecological thought has to be much more than a literary rhapsody about nice places, or about nice times (epiphanies) in nice places. (Plumwood, 2008, p. 1)*

The assemblage configurations and concepts of the territory where children and animals have been introduced and we now relay how Inquiry Process and I met. This introduces the third and final section of this chapter that offers a field guide for research becomings.

Becomings

How did you meet?

My professional and personal experiences have orientated me to Inquiry Process since childhood as human-animal relations have consistently been at the forefront of my ontological and professional practice as an early childhood teacher. For me, as for many researchers the catalyst for pursuing research is motivated by philosophical beliefs and values, something draws us to the topic. Environmental concerns and compassion towards animal species are always part of this ethical vibratory pull shaping who I am, how I live and this in turn influences my processional work. I constantly feel out of step with anthropocentric, hegemonic normalisations that privilege all things human. Therefore, understanding the relationship between my view of reality (ontology) and the practices I

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ascribe to knowledge (epistemology) is an important step in sensing the coordinates ahead.

Researcher becomings generate ideas about what is happening in the inquiry as well as trying to produce new thought about why and how things unfold, "rather than trying to construct meaning" (Mazzei, 2013b, p. 777). This is not a quest for meaning or epistemological certainty that can be steered by reflective thought but a way to enter new worlds that reposition researchers as entangled in-and-with the assemblage of data, being affected and causing affect through the co-constitutive process of intra-action and diffractive thought. Postqualitative processes enable the researcher and the researched to become folded through territory, not through hierarchal layers of transformation but where the research assemblage becomes blended into a flattened relationship (Hultman & Lenz Taguchi, 2010) with field studies, data, and participants.

My researcher becomings are situated at the beginning of each chapter where narrative events, diffractive interpretations and conversations shape the forces moving within the inquiry. These becomings vibrate amongst humanist, critical and qualitative ontologies, towards the posts – the posthuman, the poststructural and the post-qualitative. Sometimes they appear through linear temporal pathways and at times align with the wonderings and foci of the data events in a chapter. These ontoepistemological movements forge pathways of freedom and creativity that challenge my writing, what I read and think and therefore, my subjectivity. These becomings are not certain and seamless, as they shift and change direction with a tendency for slippage, sliding towards familiar habitual ideas and practices. Inquiry Process wrestles with these uncertainties shifting between humanist, critical and posthumanist becomings, often-spending lengthy periods of time looking for alternative routes to the new, only to come across sneaky conceptual passageways that return to familiar language, practices, methods and ways of being. Wherever this slippage and resistance occurs, the practice is named to show what is happening and attempts are made to conceptualise what compels these shifting processes.

Embodied becomings are carried through Inquiry Process, where I emerge like many researchers at the end of such a lengthy study, forever changed, transfigured and shaken in my new metamorphic skin. I name my becomings as a way of locating and losing 'self' in the research and naming my bias and positions within. There is no presumption here for objective neutrality as these reflections, intra-actions, imaginings and narratives also

tell the story of how personal and professional becomings bring me to this place, as research, conferences, encounters, conversations have become digested along the way, helping to (re)constitute. This is no disinterested piece of scholarship, but rather a constant companion, a passenger of my hum(an)imal becomings, like a snail shell I have always known is there but have not quite learned how to carry. "We do not leave our history behind but rather, like snails, carry it around with us in the sedimented and enculturated instantiations of our pasts we call our bodies (Hayles, 2003, p. 137).

Deleuze and Guattari's (1987/2004) concept of becomings from the 'becoming-animal' chapter in *A Thousand Plateaus* influence how becomings continually shift within an assemblage, rather than transform. The fluidity of self is noted as a "threshold, a door, a becoming between two multiplicities" by Deleuze and Guattari (1987/2004, p. 291) that are always in motion and never settled. Becomings are not about mimicry, representation or identification and becoming-animal or becoming-anything does not literally or even figuratively refer to becoming a bird, machine or river. Becoming as an unfolding process starts with the physical body, the subject, the organs, the function of this body that is explored on a molecular level "between which one establishes the relations of movement and rest, speed and slowness that are closest to what is becoming and through which one becomes" (Deleuze & Guattari, 1987/2004, p. 318). Becomings are not based in imagination but the reality that ties the molecular particles of the world. The reality for Deleuze and Guattari is not in binary thinking or the order of logic. Becomings invalidate ideas about what we are and what we can be beyond the categories that seem to contain us, beyond the boundaries separating human being from animal being, man from woman, child from adult, the micro from the macro. Becomings therefore assist the practice of stepping back from conventional representations of life and habitual patterns of living to become open towards shifting relations and ongoing production of difference. Multiplicity appears in these becomings of social and structural forces that both shape and are shaped by their milieus.

> *For if becoming animal does not consist in playing animal or imitating an animal, it is clear that the human being does not "really" become an animal any more than the animal "really" becomes something else... The becoming-animal of the human being is real, even if the animal the human being becomes is not.* (Deleuze & Guattari, 1987/2004, p. 238)

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Becoming hum(an)imal

This story commences with my story, with Animals providing the navigational orientation for who I am and how I got here. It begins in early childhood with family pets, that were pets and not strictly companions and an increasing interest and concern towards the injustice of animal species. As Chawla (1990) once eloquently and somewhat romantically noted, "the spaces and views, which we experience as children, become inner landscapes or *ecstatic memories* which then remain with us like *radioactive jewels* buried within us, emitting energy across the years of our life" (p. 18). During the year the study commenced it seemed as if a radioactive force was in play, as the Animal was everywhere in Australia. Two pivotal essays about animality and humanity appeared in the mainstream press. The author Charlotte Wood challenged the romanticism of people who like animals stating, "the more we sentimentalise, the more we also brutalise" (Wood, 2011, p. 31), and the journalist Anna Krien wrote an essay about the importance of animals and the desire to " unlock the puzzling nature of human-animal bonds" (Krien, 2012, p. 7) in her explorations of what makes 'us and them'. Bone and Blaise (2015), responded to The ABC weekly Four Corners television show (Ferguson, 2011) that aired graphic footage of Australian cows in Indonesia being tortured and mistreated in eleven abattoirs with insightful research that "considers what it means to be packaged, commodified and de-humanized/de-animalized" (p. 18). This event sparked a wave of outrage across the country passing in and out of conversations with participants in the territory where children and animals dwell, disrupting the Federal Australian Parliament as politicians demanded a conscious vote to temporarily ban the live cattle trade to Indonesia. Something was humming here.

Krien (2012) asks a central question that travels with these cows and hum(an)imal becomings. "The real question is, just how much of this injustice are we prepared to live with" (p. 8)? Hum(an)imal becomings do not lose sight of the injustice – the 'shadow places of dwelling' (Plumwood, 2008). There are interests and trepidations here with human-animality and animal-humanity, in addition to the unexplained, the uncategorised and the yet to come. In this pursuit with 'the hum' the elusive concept of 'immanence' helps to free human knowing's from linguistic order words, body and mind, beyond the subject and the object - the earth and the sky. Theories of immanence (Agamben, 1999; Nietzsche and Spinoza as cited in Braidotti, 2012; Deleuze, 2001; Deleuze & Guattari, 1987/2004) can be traced from Eastern Vedic philosophies including, Hinduism,

Buddhism, Taoism and Indigenous cosmologies that focus on "relationship and process, rather than essence and substance" (Bauman, 2014, p. 53). For Deleuze and Guattari the plane of immanence comes before philosophy, being pre-conceptual, pre-philosophical. Not terra nullius, but not yet dominated by language that has been captured and ordered by human thought. It is immanent to the multiplicities of what is to come (Deleuze, 2001; Deleuze & Guattari, 1987/2004). They are listening and waiting.

> *With this recognition there no longer exists a notion of 'the human' or 'the animal', of the self or the other, with its concomitant oppressive divisions, but a space where delicate tendrils of recognition work to create some spatial and temporal boundedness of the self that is entirely ephemeral, entirely transitory, and so incredibly valuable that any callous or frivolous disintegration of these bonds would be unthinkable – 'thinking perhaps begins here'. (Bolton, 2014, p. 56)*

Larvae as othered(wise) inquiry

The plane of immanence in this way of losing self, embraces materialism in different ways and new and surprising forms appear in the territory to think and sense with ethical entanglements that show how to speak and name the unspeakable. By unspeakable Inquiry Process refers to the thoughts, actions and events of the data assemblage that venture towards troubling paths, becoming stagnated within sticky ethical knots. Prasanna Srinivasan (2014) is familiar with this dilemma as she adopted a conceptual tool of thinking-with the 'River Ganga' in India, to step outside of dominant epistemology, towards metaphysics. She suggests an Animal guide could be helpful to travel with and the larvae of a Steel-blue Sawfly (Perga dorsalis) comes instantly to mind.

> *I have been listening and waiting. Are you ready? (Larvae)*

Prasanna experienced troubling encounters researching discourses of whiteness in early childhood education (Srinivasan, 2014a), that left her with uncertainties about how or if these encounters should be included in her doctoral thesis about race and whiteness in early childhood education in Australia. "I never used these in my final write-up, as I became overwhelmed with emotions every time I engaged with them" (Srinivasan, 2018, p. 1). As she returns to these data events with the passing of time and "strength in the process" (p.1), they have become conceptualised as an insightful and creative tool for researchers.

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The 'othered(wise) inquiry' is a methodological and analytical tool that is purposefully used to engage in critical acts, including research contemplations and conversations. It aims to challenge and bring to the surface silent forms of silencing, and thereby reveal points of power and resistance during acts of subjectivation of the silenced. Therefore, in this inquiry, the speech is from and with the 'othered' – those who are seemingly rendered voiceless, powerless subjects. Such silenced speakers can be humans, animals and material, abstract, celestial and metaphysical elements. (Srinivasan, 2018, p. 9)

Whilst this strategy of working with an othered(wise) guide may not regularly appear in education doctoral studies, it is a common devise in literature, cultural studies poststructural and posthumanist practices. To help her write with female bodies in ways that transcend the definitions and limitations of patriarchy, Hélène Cixous (1976) summons the Greek goddess Medusa as a powerful mythical figure to question definitions of power, gender, sex and sexuality. Phillip Pullman (1995) also identifies how this strategy becomes a technical tool for writing the *His Dark Materials* series of books. Lyra is a young girl on a dangerous adventure and her shapeshifting animal/daemon provides guidance, solace and support. "She was alone. It was hard to write because what I really needed was someone for her to talk to. It was a technical problem. And when I realized that she had a *daemon*, that she wasn't alone, it suddenly became much easier" (Waldman, 2015, p. 5). It is no coincidence that Pullman chose this concept and term as Ancient Greek philosophers considered a person's 'daimon' as a source of inspiration "situated in between the world of the living (states-of-beings) and some kind of suprasensible world (immanent to the first world) that, according to Deleuze and Guattari, is made up of inorganic life, affects, and impersonal forces" (Beaulieu, 2011, p. 77).

Larvae imaginaries disrupt humanist storylines of nature education and harmonious relations with animal species to engage with curiosity, wondering how fictional stories can inform the inquiry, whilst also leaving space for wise consult that is spontaneous, unsettling and creative. Inquiry Process welcomes Larvae to join the multiple travellers as companion, guide, and provocateur. Larvae appears within real and virtual imaginaries that test the interplay between scientific theorising of reality and the virtual imagination. Discourses about scientific, technological and environmental change can be challenged by the posthuman configurations of myth, alien, science fiction and metaphysics to forge new considerations of immanence from the unseen flows of life and not only those governed by systems that can be measured and quantified? Larvae interjects at crucial

points in the narratives, writing and presupposition of ideas making demands for what has been generalised, missed or trampled; simultaneously de/re/territorialising the territory where children and animals dwell. Derrida (1982b) might refer to this as a manoeuvre of metaphysics that seeks to define the world for whom it speaks, through a logic of truth claims. This is only part of what larvae is doing, as there are no certainties with this wise consult. Larvae displaces and disrupts alterity as the other "is always already there" (Braidotti, 2012, p. 53) with the polyvocal presence of the othered(wise) who is humble, ethical and multiple, with forthright demands to pay attention. Being earth-bound, human-bound and methodology-bound I wondered what might spring forth. If I could transcend being tied to a body, in one space and time as a kind of energy field, rather than being contained within a PhD – what could happen?

Field guide of Inquiry chapters

Inquiry Process has laid out the field guide to the inquiry with an invitation to join the ontological tour of early childhood education that dwells within the territory where "creative culture and taming forces of civilisation meet head-on" (Weaver, 2015, p. 193) in the following chapters:

- Chapter one provides a field guide for the study, where Inquiry Process outlines directions for safe academic passage that lays out why human-animal relations offer rich inquiry for early childhood educational philosophy.
- Chapter two maps the literatures that situate child and animal relations and animal representation from the fields of human-animal studies, environmental and early childhood education. Scholars assemble at a multispecies banquet where communal time with the literatures of the inquiry incite ideas, where research becomes infected and digested as territory. The banquet enables guests to share diverse ideas as the Animal is brought into the realm of ethical consideration.
- Chapter three situates theoretical becomings as critical posthumanist theory takes hold during the banquet celebrations and ceremonies as complex two-steps, foxtrots and polkas leave their marks on the dance floor as the human and more-than-human move together in raucous exchanges of swirling, dancing, howling

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and singing. Philosophical and theoretical guides are invited to accompany Inquiry Process into new ontoepistemologies of human-animal relations?

- Chapter four shows how territory becomes (re)marked as Inquiry Process becomes attuned to the circulatory forces and movements of 'post' methodologies that travel with postqualitative processes, bringing life and energy to the study with inventive methods.

- Chapter five traverses the territorial field where events gather in the data assemblage, and are interpreted through research becomings, narratives and concepts that explore shapeshifting, movement and mobility.

- Chapter six shifts the inquiry with a detour to a different experimental pathway. Inquiry Process is intrigued by the speaking and actings that take place in the territory where children and animals dwell, wondering how and why they perform contradictory relationships.

- Chapter seven brings along the speaking and actings of chapter six as the territorial assemblage expands and attempts are made to cross the artificial boundaries of human-animal existence. Gestures and semiotics support ways of making ecoducts (animal crossings) that are obstructed by conflicting and concealed ideas of loving and killing animals.

- Chapter eight reveals sites of interaction that show how differences get made and unmade through creaturely intra-active relations with children and animals. The connections and disjunctions of the inquiry come to light in this chapter through the concept of dissection.

- Chapter nine troubles what happens when the 'shadow places' of human-animal connections are performed through power relations of environmental violence and injustice. The data assemblage reveals how animal species are emplaced, displaced and replaced in the territory. Inquiry Process shows the forces that drive this consumption of animals and how it perpetuates cultural miseducation.

- Chapter ten diffracts the data assemblage through the concept of roaming that unsettles how the ability to act and reconfigure ethical, ecological and just human-animal relations is supported by othered(wise) roamings with a pedadog called Kosi and the Larvae of a Steelblue sawfly Moth.

- Chapter eleven concludes the study with (re)imaginings and (re)makings that attempt to disrupt the injustice that takes place as institutional violence towards

animals is shaped as animal-becoming-educational-cultural-tools. Inquiry Process shows that unveiling the exploitive practices of the territorial machine, that remain hidden, unspoken and unspeakable, enables hum(an)animal becomings to find spaces to flourish.

The following mapping of the literatures in chapter two offers an invitation to a multispecies banquet. Literatures and empirical studies encompass brief accounts of the three disciplines that inform this study within the fields of environmental education, human-animal studies and early childhood education. These three sections will also be interlaid with the research question and wonderings, including the question of the animal and the question of the animal condition.
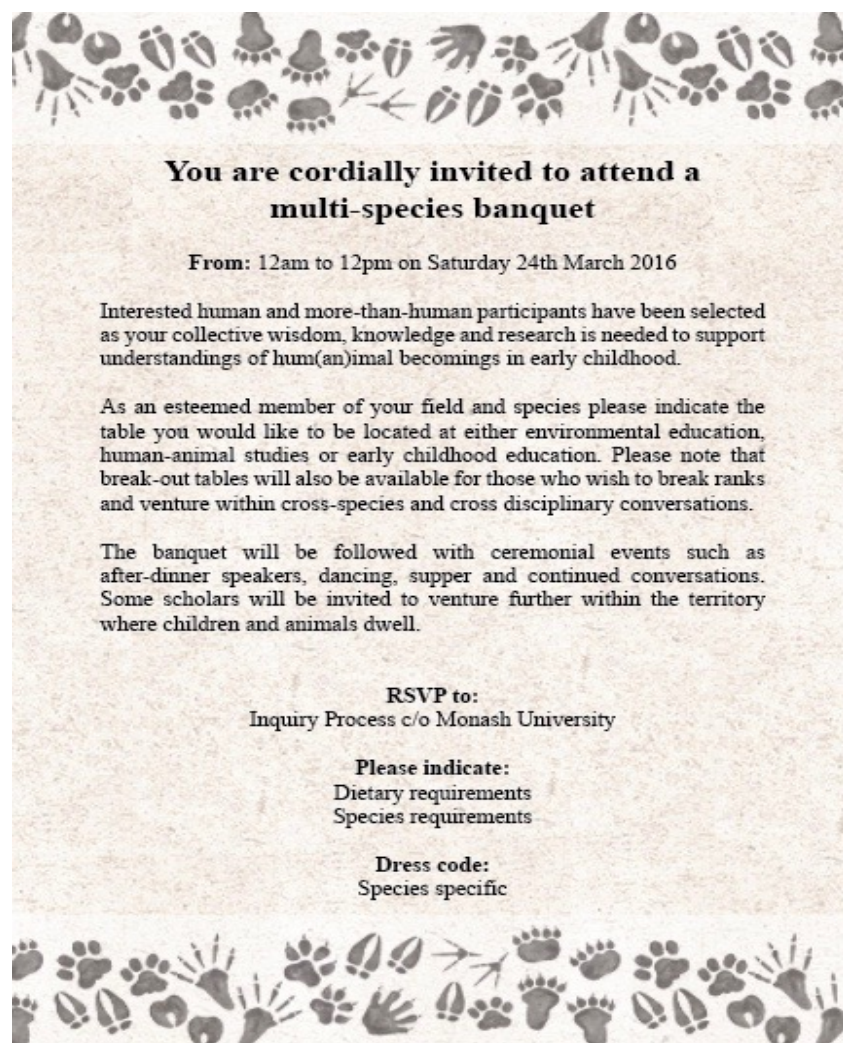
Figure 1: Invitation to multi-species banquet

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Chapter two: Mapping the territory where children and animals dwell

Introducing the territory

> *Literature reviews are the quintessential site of indentywork, where the novice researcher enters what we call 'occupied territory' – with all the immanent danger and quiet dread that this metaphor implies – including possible ambushes, barbed wire fences and unknown academics who patrol the boundaries of already well-populated fields. (Kamler & Thompson, 2014, p. 31)*

This mapping of the literatures provides an impression of the research territory, synthesising how invited scholars join the inquiry to help interpret the significance that children and adults attach to the cultural-political practice of coexisting and relating with animal species. Inquiry Process engages with the discourse, substantive knowledge and literatures of three disciplines namely, human-animal studies, environmental education and early childhood education. A caution sign appears. The risky business of entering the occupied territory of established fields is addressed by Kamler and Thompson (2014) in the opening quote as a reminder to tread carefully. Deleuze and Guattari's (1987/2004) concept of mapping as a process and not a destination, aligns with process ontologies that chart the ways activities unfold, the roles they take up and how others are invited to join in. With these cautionary processes in mind the literatures of each discipline loosely follow two paths. First, a brief overview of the historical-political implications of each academic field is outlined and second, illustrations of how animal species are represented in these three disciplines. This is not a comprehensive chapter as the literatures continue onward as data assembles in forthcoming chapters, expanding in and out of the territory where children and animals dwell. Gaps and silences materialise in the discussion chapters, forming plots for the conceptual telling of the stories, that synthesise and critically attune to the micro stories of the everyday, where co-species entanglements take place and are sustained as part of everyday life. A multi-optic lens (Kim, 2015) is adopted within these cross-disciplinary studies as a useful way of widening the research and this is particularly helpful when ethics, oppression and injustice overlap. The literatures contribute to wider understandings of the accelerating range of human-animal studies now taking place in the 'animal turn' (Armstrong & Simmons, 2007; Cederholm et al., 2014; Ritvo, 2007). This provides a challenge and opportunity for this inquiry where the

collective assemblage of three disciplines has the potential to multiply scholarly thought about cultural production in ways suggested by Pederson (2014) in search of fluid hierarchies and places of justice.

> *If the task of the philosopher is to multiply the image of thought, then one of our most important collective tasks as animal studies and critical animal studies scholars might be to multiply the image of empathy and justice, and to multiply our joint efforts to fundamentally transform human-animal relations towards a society free from oppression where we have learnt how to keep a respectful distance. (Pedersen, 2014a, p. 17)*

Although interest in human-animal research is gaining momentum, where it was once silenced and ignored, there is still an under-representation of Animal studies in education. Research is expanding within the fields of early childhood education and environmental education, as relational theories challenge anthropocentric ontologies with children and environments (Cutter-Mackenzie, Malone, & Barratt Hacking, 2019; Lloro-Bidart & Bansbach, 2018; Malone, 2015; Malone, Truong, & Gray, 2017; Nxumalo & Cedillo, 2017; Nxumalo & Pacini-Ketchabaw, 2017; Pacini-Ketchabaw & Taylor, 2015a; Pacini-Ketchabaw, Taylor, & Blaise, 2016; Rautio, 2012, 2013, 2019; Rooney, 2016; Taylor, Blaise, & Giugni, 2013). Animal species however are often represented through a narrow conservation lens in environmental education research, and the young child can be overlooked in the field of human-animal studies. Inquiry Process decentres the child somewhat in this inquiry, acknowledging the humanist and posthumanist limitations of moving in and out of human-animal ontology. This provides early childhood education, and indeed all areas of the education project, with an opportunity to reposition both the child and animal as worthy of serious inquiry as we attempt to 'meet' the hum(an)imal.

Meeting the multifarious has challenged Inquiry Process to reconfigure the practice of reviewing literatures, by mapping a gathering of minds and bodies that take place as we share a meal at the table, breaking bread as companions "from the Latin *cum panis* with bread" (Haraway, 2008, p. 17). Kamler and Thompson (2014) suggest that research literatures can be reframed as metaphor, notably with the "domestic familiarity of the dinner party and its emphasis on conversation with a community of scholars" (Kamler & Thompson, 2014, p. 40). This ceremonial banquet covers a lot of ground as three courses (fields of study) are served to the hungry hordes who have much to say and offer in these territorial becomings. The guests are thoughtfully selected. Some are known as allies who

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have already occupied territory and attention is paid to those who cannot be left out, those whom cannot be accommodated because of space limitations and the potential of the unknown companions who turn up uninvited. Power is evident in these choices it matters who is excluded and included and various as aspects of power such as gender, race, species and ontological privilege are at play, determining who gets a place at the table. Seating choices demand attention as the layout and hierarchal choice for how the literatures appear in this chapter has theoretical and methodological implications. Should the guests be placed on three separate tables, would it be easier to have an 'anything goes' buffet, or ought the guests by assocated together by theme or genre? Derrida's (2008) phrase 'the question of the animal' comes to mind once more as a focus topic during the feast, with what he claimed is one of the moral philosophical issues of the 21st century (Calarco, 2008). A three-table option is planned where guests associated with environmental education, human-animal studies and early childhood education assemble on round tables so there are no 'heads of table', dominating the time and space. Our banquet starts at midday and continues into the night as ceremonial speakers, celebrations and supper travel through chapter three. There is much to say, sense and do. As conversations get underway, some guests roam through break-out-spaces and share tables assembling transdisciplinary special interest groups with ideas that spill over into other chapters, breathing life into the inquiry beyond the banquet.
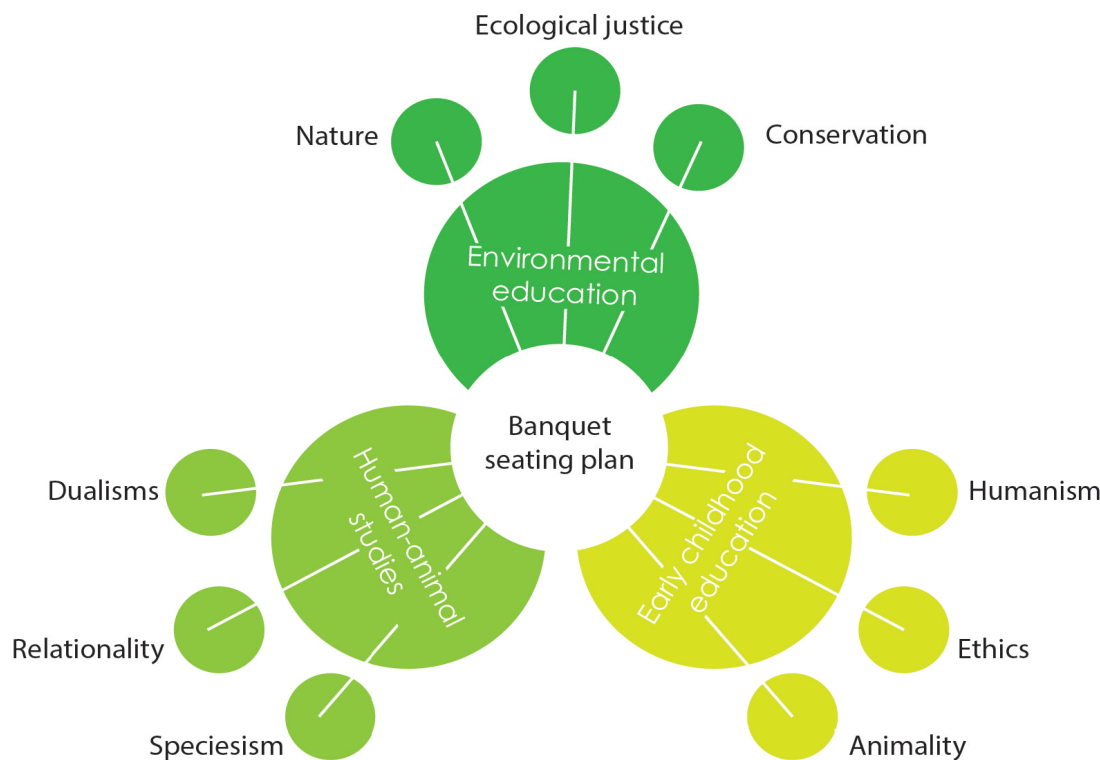
Figure 2: Banquet seating plan

The literatures of the study, like this dining plan, have not been captured and contained in this chapter and left at the conversational table. They continue to accompany Inquiry Process throughout the territorial quest, helping to guide the way, unlock the gates of (un)certainty, disrupt our usual ways of thinking and ignite concepts and narratives through analytic pathways of discovery. Derrida's concept of hospitality (Derrida, 2000) reminds those hosting such events to be mindful of the borders put in place as the terms and conditions of sovereignty steer the conversation towards Inquiry Process, make sure humans don't dominate the conversation and appreciate the work of esteemed guests, whilst also critiquing their ideas. The ethics of unconditional hospitality also welcomes arriving strangers by opening the windows and doors to the flow of fresh air, sensations and estranged creatures, "Come, enter,' 'whoever you are and whatever your name, your language, your sex, your species may be, be you human, animal, or divine" (Derrida, 2000, p. 139). Getting to know the guests, landscapes, and atmospheric conditions is part of becoming territory and these occupied spaces of posthuman share-tables is where this thinking starts. 'Conditional hospitality' reminds us that these relatings are always precarious and the hosts have the power to enable and restrict entry based on the terms and conditions, that determine who is welcome. 'Hospitality' opens a border and can also close it down. The openness and closedness, depends on context, for "hospitality retains the traces of hostility, and hostility retains the trace of hospitality" (Derrida, 1999. Cited in Tatayrn, 2014, p. 185) Territorial diplomacy therefore becomes vital, as we manage the risky business of making sure the multispecies guests do not eat each other at this more-than-human soiree.

Hospitality

Seeing beyond human epistemes invites the unknown to dine and break bread at the table of life.

Nourishing emplacement

Creaturely ethical embracement

Socio-educational engagement.

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Becoming territory

Mapping (un)known lines and entry points in the molecular conceptual device of 'territory' reveals territorial codes that branch across fluid and fragmentary pathways. These are not ordered routes, trying to produce order and places to belong. Becomings are a way to form "new forms of subjectivity, new stories, through the refusal of this kind of individuality which has been imposed on us for several centuries (Foucault, 1982b, p. 785). These becomings have a relational response to how power and affect move within the events and encounters of Inquiry Process. They are seen and sensed, intervening with situated analysis rather than only representing them. Representation "fails to capture the affirmed world of difference" (Deleuze, 1968/1994, p. 55). Becoming territory enacts a less-territorial, less-occupied, territorialised subjectivity that resist's habits of thinking and acting that arise through the similarities and differences of what Foucault would align with power, and Deleuze with desire. Deleuze describes how events enable specific problems to emerge, and this aligns with a threshold in time and space where I was able to pause.

> … every time we find ourselves confronted or bound by a limitation or an opposition, we should ask what such a situation presupposes. It presupposes a swarm of differences, a pluralism of free, wild or untamed differences, a properly differential and original space and time; all of which persist alongside the simplifications of limitations and opposition.(Deleuze, 1968/1994, p. 56)

An example of such an event took place early in my candidature as my supervisor, Jane Bone and I present preliminary ideas from the inquiry at the Australian Animals Studies Group conference at the University of Sydney. I arrive early anticipating the sponsor and publisher exhibit tables, stopping briefly to take a photo of the historic great hall and quadrangle, that would not look out of place in Oxford or Cambridge. The gothic buildings are set apart from newer constructions on campus with little obvious vision for connecting the old and new. Conference book tables usually invoke excitement, but today sensations transmit through enteric neurons to the solar plexus, enabling a familiar gut feeling of uneasiness to take shape. I am struck by the unknown names, terminology and titles. This corresponds with the heightened sensations of unfamiliar territory in an unfamiliar city, where the allies of early childhood and environmental education are not around to offer collegiate guidance. The material presence of books, buildings, artefacts

and neurotransmitters speak to me this morning. They communicate how power and desire is represented in discourse and how the regimes of academia carry legacies of the past and an apprehension to the new. They yell out to me "why are you here?

This encounter forges territorial becomings understood as a constituted event that exposes various potentialities. "Contact zones, where people across cultures, with different histories come together into composition, interact and intertwine" (Barua, 2015, p. 265). The pressure to organise and stratify as subject is strong. Firstly, a new space appears inviting me to step aside from the familiar ground of being an insider with established belongings, to becoming an outsider. I have invested enormous amounts of time in my career, establishing identity and building knowledge in the fields of early childhood and environmental education; only to find myself at a human-animal conference, where I have to start all over again. What am I thinking? Secondly, a crack appears in the strata of identity, a pause opens a threshold, a resting place to notice, to dwell, to step back to a place "where the body-mind of the researcher becomes a space of transit" (Lenz Taguchi, 2012, p. 272). I could find my way back to familiar ground or step outside of territory to reestablish new territory. These thresholds are powerful forces that persist in memory as signifiers that something has shifted and adjusted. I could now see I would always be moving as a nomad in this inquiry (Braidotti, 1994, 2006, 2012; Deleuze & Guattari, 1987/2004) as subjectivity is unstable, continually becoming (re)configured, towards deterritorialisation as experiences converge and intersect with the material and discursive happenings of territory.

An aspect of the inquiry that is under deterritorialisation is animal representation. Inquiry Process seeks to minimise animal representation that bounds animal species within the 'anthropological machine' (Agamben, 2004) of Western thought. There is slippage as representation has been chosen in the mapping of the literatures to emphasise how the three fields of study that guide the inquiry represent animal species with ambivalence. The term representation offers a two-dimensional flattened image of the animal that often aligns with how Animals are perceived in the literatures and this could be elevated by replacing it with the concept and practice of cartography as this has the potential to place or see animals on the map in ways that animate three-dimensional spatial structures that are often graphical, but may also be haptic or audible, or involve elements that mix other senses with sight. Ryle (1949) indicates animals appear as ghosts in the representational

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machine in reference to the Cartesian body-mind split, and Inquiry Process attempts throughout the movements of the inquiry to release them from this human dominion. Representation is firstly explored as an overall concept in human-animal relatings and then with the literatures that addresses specific representation for the three disciplines.

Animal representation: Ambivalent coexistence

> *Animals are always the observed. The fact that they can observe us has lost all significance. They are the objects of our ever-extending knowledge. What we know about them is an index of our power, and thus an index of what separates us from them. The more we know, the further away they are. (Berger, 1977/2009, p. 27)*

In his influential essay from 1977 John Berger asks the question *Why Look at Animals*? This visual interpretation of animal species offers a modernist account of the escalating marginalisation and distancing of Animals that occurs under increasing industrial capitalism, where human relationships with animal species have been predominantly shaped by anthropocentric representation. The essay argues that the increased proliferation of animal images in Western zoos, in metaphor, literature, art and children's toys emerging at the end of the nineteenth century constitutes a phenomenon directly linked to the relentless disappearance of live animals in everyday life. Animal representation works to make animal species present and absent in a particular way, that mirrors the ways that all marginalised groups have been defined in racist, gendered, classed and ableist figurations "without a voice or agency, through the strategies of contradiction, objectification, stereotyping, and lack" (Creed & Reesink, 2015, p. 22). In this way the damage of the human gaze is that animals reflect who we are and not their animality.

Animals are ubiquitous to human societies. This can be observed in the proliferation of animal representation in nature documentaries, art, homewares, photographs and popular culture. Animals are found in public spaces of laboratories, zoos, aquariums, education settings, farms, in wild dwelling spaces and where human and animals meet to make space and place together in homes. The animal is everywhere and nowhere (Creed & Reesink, 2015). Everywhere in the representations of film and media in terms of human fantasy and desire and disappearing in the sixth largest extinction taking place in the anthropocene. The greater the marginalisation, the more grandiose and prolific the image of the animal appears. Charlotte Wood (2011) notices a similar practice of ambivalence

depicted in the way animal species are represented, condemning the 'anthropomorphic slush' that floods Western culture suggesting actual animals decline as human-interest inclines. On the one hand, we foist cutesiness on some animals through representations while others face industrial torture and obliteration. The two, she says, go hand in hand, because of our inability to embrace animality. "We either try to force them to be like us or see them as so unlike us as to be aliens, undeserving of any rights at all. The more we sentimentalise, the more we brutalise" (p.31).

Pick (2015) asks the question *Why Not look at Animals*? As a critique of Berger's humanist essay choosing to complicate the seeing, not-seeing and to make animals visible, so the spectre of the animal gaze is deterritorialised. Lorimer's (2005) refiguring of animal representation "seeks better to cope with our self-evidently more-than-human, more-than-textual, multisensual worlds" p. 83), by disrupting the white patriarchy of Western thought. In this regard, Wolfe (2003) describes how the ideology of speciesism intersects with those of race and sexuality. Speciesism as an ideology like racism, sexism, and colonialism "is not only a logical or linguistic structure that marginalizes and objectifies the other solely based on species, but also a whole network of material practices that reproduce that logic as a materialized institution and rely on it for legitimation" (Wolfe, 2003, p. 101).

Inquiry Process seeks to minimise the ambivalence of animal representation to both show what is taking place and expand animality by drawing on process ontology where connections and disjunctions are shown to assemble lines of inquiry to "produce a kind of allopoiesis" (Probyn, 2015b, p. 74) that keeps refiguring. For example, Timothy Pachirat (2011) analyses the animal-industrial complex (AIC) of meat production first conceptualised by (Noske, 1989) and later expanded by (Twine, 2012), where in spite of the call to make these processes more transparent, the atrocities become diluted by the ambivalent animal machine as the processing of animals is broken into smaller parts where the whole 'animal' is refigured into unrecognisable, smaller productive units. The processes of the AIC desensitise people to animal suffering, unless there are "concerted attempts to make visible what is hidden' (Pachirat, 2011, p. 255) in a system of sovereign power that extracts value from life with the optimum degree of productivity and efficiency from the body, not just behind glass walls.

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This example illustrates the complicated relations with animals. Some are loved dearly, and vast amounts of money and time is invested in veterinary care, grooming, treats and toys and feeding pets with the best foods. People rally for animal rights, and to reduce cruelty to animals, yet animals are held captive for entertainment, sport and profit, roaming wild dogs are shot and abandoned dogs and cats are euthanised. Often little thought is given to the breeding processes of pet dogs and the desire to share family lives with dogs has enabled puppy farms to flourish.

These examples of ambivalence with the complex relatings of humans and animals continue as the banquet is now underway. Some guests assemble at their allocated tables and others move between the break-out-spaces. As conversations become enlivened, red threads start to appear, making their way within the three tables, creating a tripartite binding, that yokes each of the fields of study together as territory. With closer inspection they travel like bloodlines flowing through capillary networks, rather like the Deleuze-Guattarian concept of the spreading rhizome with characteristics of connectivity, heterogeneity, multiplicity, rupture or disjunctures, unpredictability and mapping (Martin & Kamberelis, 2013; Masny, 2015). These bloodlines move and work like rhizomes, however in this process of re-figuration they accentuate something else. A red flag signalling the touchstone question of injustice, animal suffering, and species loss and how "all encounters between humans and animals are ethically charged" (Kopnina, 2016, p. 76). This reminder of the wonderings of life flows through bloodlines between the biological body (bios) and the life of the subject(s) (zoe) (Agamben, 1998) as an indicator that the animal and the animal condition is already under question as "thinking takes place in the relationship of territory and the Earth" (Deleuze & Guattari, 1994, p. 85). The territory is already in the process of de/re/territorialising the fields of reality, the fields of representation and the fields of subjectivity. The attention shifts to the table where environmental education scholars are seated, hoping for lively interpretations of the field and key concepts such as wilderness, nature, ecology and conservation.

The question of environments

Overview of environmental education

> *Producing a citizenry that is knowledgeable concerning the biophysical environment and its associated problems, aware of how to help solve these problems, and is motivated to work toward their solution. (Stapp, 1969, p. 30)*

This quote appears in the first edition of the North American Journal of Environmental Education marking an early definition of environmental education (EE). Environmental education is a relatively new field of study, although the practice of education *about* the environment has a long history (Palmer, 1998), with North American naturalist writers including John Muir, David Thoreau and Aldo Leopold.   The origins can be traced from the civil rights protest movements of the 1960s that spawned increased awareness of detrimental environmental impacts such as increased human population; loss of biodiversity of plant and animals species, contamination of air, land and water and depletion of natural resources (Gough, 2006). Environmental ethics also emerged in the 1970s as a challenge to cornucopian ontologies, drawing attention to human centred destruction of environments (Kopnina, 2012). Environmental education advocated to include ecological content into university courses and school curricula as a means of creating knowledge and motivating citizen action to solve environmental problems.

1972 was a turning point in environmental education internationally as children were recognised in this process of active citizenship as participants at the first United Nations Conference on the Human Environment in Stockholm with the production of the declaration known as the Stockholm Declaration containing 26 principles, including "education in environmental matters, for the younger generation as well as adults" (UNEP, 1972, p. Principle 19). *The Our Common Future Report* (Bruntland, 1987) by the World Commission on Environment and Development also acknowledged the crucial role of teachers and heralded a new term 'education for sustainable development' that expanded the environmental concern and action to understanding the three pillars of sustainability expanded to include society and economics. The United Nations Conference on Environment and Development (UNCED, 1992) also known as the Rio de Janeiro Earth Summit, is where ESD came into full effect.

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Australian environmental education can be traced to the late 1970s and early 1980s where the national Australian Environmental Education Association (AAEE), the first AAEE conference took place and the Australian Journal of Environmental Education were created to meet the expanding needs of teachers, academics and interested parties. The journal is the second oldest journal in the environmental education research field, demonstrating that Australia established a global leadership role with EE. State and Territory education departments also started to employ environment officers (Cutter Mackenzie, Gough, Gough, & Whitehouse, 2014). A shift of direction from environmental education to education for sustainable development emerged in the 1990s after the Bruntland (1987) definition, with increasing global environmental destruction and an evolving awareness about environmental concerns (Tilbury & Cooke, 2005) that coincided with increased globalisation and capitalist governance. In the 1990s environmental education was challenged by the discourse of 'education for sustainable development' (ESD) and scholars insisted this is one among many alternative, evolving perspectives (Cutter-Mackenzie, 2004; Cutter-Mackenzie & Walker, 2003; Jickling, 1994, 2005; Jickling, Cutter-Mackenzie, Gough, Gough, & Whitehouse, 2014; Sterling, 2003). Many of the tensions in their critiques relate to an acceptance of normalising terms with little attention given to the vast range of ontologies and epistemologies that represent the field. Gough (2014) identified that this creates an unnecessary rift where EE is perceived as being nature-focussed and less issue-focussed.

In Australia the accepted term in many sectors, has moved from environmental education towards Education for Sustainability (EfS) at a practice level. Replacing environmental education with the discourse of EfS has been critiqued as it downgrades the importance of the environment pillar of sustainability, amplifying the social, political and economic factors of sustainability with capitalism and technocentric social democracy that works against many of the environmental problems it is trying to address. Challenging dominant paradigms and global organisations like the United Nations who adopt and disseminate these terms is to embrace what Goleman (2009), names as 'radical transparency', the hidden costs of the global market economy that relies on human-centred, colonising economic growth, "marginally offset by ameliorative efforts to take the environment into account" (James, 2017, p. 29). Steffen, Broadgate, Deutsch, Gaffney, and Ludwig (2015) would suggest that this shift coincides with increased warnings from scientists about accelerating global warming patterns, resource extraction, population growth and

consumption that is supportive of sustainable consumption and growth. In other words, sustainable development is an oxymoron that offers a continuation of current ways of living, where humans have the exceptional capacity to create actions, tools and policies to keep things going (Bonnett, 2013).

This brief overview of environmental education has shown a trajectory that is both stimulated by global forces (Jickling & Wals, 2008), government policy, public opinion and discourse, and also undone by them. Terms like 'environment' and 'sustainability' become problematised due to conflicting commercial agendas of humans, responses to more-than-human species and the health of the biosphere. In a lecture at the University of New South Wales, David Suzuki (2013) reminds politicians and corporate executives that they and we are still stuck in the old way of thinking and we have still failed to shift the anthropocentric paradigm driven by desire for profit, for growth, and for power.

> *Environmentalism is a way of seeing our place within the biosphere. That's what the battles were fought over. But we have failed to shift the perspective; or in the popular jargon, we failed to move or shift the paradigm. We are still stuck in the old way of seeing things. (Suzuki, 2013, p. NP)*

Some of the old ways of seeing things that David Suzuki laments can also be aligned with the grand narratives of environmental education that are steeped in the default state of the humanist individual that implies freedom, equality and the right to ownership. These manifest as environmental behaviours, stewardship, conservation and wilderness management that perpetuate nature/culture dualisms, and it here that sustainability is grounded in the most significant influence of political and economic reasoning that drives capitalist-driven development and animal production. These old ways are also attached to the instrumentalism and anthropocentrism of Judeo-Christian doctrines that are inescapably patriarchal and speciesist "as the arbitrary favouring of one species interests over another" (Linzey, 2017, p. 295). The human in Christian ontology is not only separated through the Great Chain of Being "the ladder or stairway of nature" (Jensen, 2016, p. 9) that positions and orders everything from the highest to the lowest, from the heavenly, to human then animal, and lastly inanimate objects. Humans rank close to the top of the vertical hierarchy, under God and angels; as humans are not just different animals in this hierarchy, for they are not animals at all. To embrace new ways that unstick the paradigm that Suzuki speaks to, Inquiry Process adopts aspects of Deleuze

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and Guattari's concept of assemblages that propose a new way. In this conceptualisation nature, culture, humans are not in hierarchical, vertical, nor 'centred' positions. Rather, the decentred, milieu of the world entangle in ways that de/re/territorialise a particular version of reality that operates with metaphysics, to entangle the known and unknown. Human relations with and as nature are marked by planetary modes of coexistence where the hum(an)imal is already intertwined with earthly systems, that help to find escape routes from the certainty of humanism where becoming creaturely, rather than gods, as interpreted by Haraway (1988) is a place to start.

Environmental education adopts pedagogical approaches that build awareness, scientific knowledge, skills and understandings into teaching and learnings about a range of environmental situations. Noel Gough (2015) questions this paradigm of EE and outdoor education, that is centred around adventure, building human character and nature studies as a place firmly located with humanist propensity to situate the human within knowledge production. A key aspect of environmental education must also be teaching and learning that addresses how humans are positioned as animals with, and as nature. Despite the focus on ecocentrism and biocentrism, environmental education research has been surprisingly quiet about the question of the Animal (Oakley, Watson, Russell, Cutter-Mackenzie, Fawcett, Kuhl, Russell, van der Waal, Warkentin, 2010) and "has failed to integrate nonhuman animal advocacy as a serious educational issue" (Kahn & Humes, 2009a, p. 179). Abram (2010) emphasises that "even among ecologists and environmental activists there's a tacit sense that we'd better not let our awareness come too close to our creaturely sensations" (p.7). Frans de Waal (1999) argues that anthropodenial, the tendency to deny characteristics and the social dynamics of cultures associated with human animals to other creatures is present in EE and this means that traditions, habits and cultural practices that are unique to particular groups of animals and individual animals of the same species are overlooked. Gannon expands these dispositions towards "the mobilisation of affect, matter and imagination, …recognising the co-implication, interdependence and necessary entanglement of what have been conventionally separated as 'human' and 'non-human' worlds" (Gannon, 2017, p. 253).

Representing the Animal in environmental education

Environmental education, like all fields of study are made and remade with a particular interpretation of reality and the danger of trying to capture how the animal is represented

in this field is risky as there is vast variation of EE and nature-related programs (Dickinson, 2013).   The representation of animal species is embedded within perceptions of the Western construction of nature as wilderness, a place to learn about, a place to visit, a place of value for children to experience with exclamations of concern when they are not visiting enough and becoming disconnected from it (Louv, 2005, 2011). Animal species fit within these geographical locations of learning and experience in categories as pests, part of a wild pack, products of consumption or props of education in classrooms and education settings located within zoos, aquariums and museums. Peterson (2013) acknowledges the important role of environmental education in understanding nature and how this is also disadvantaged by the binary of wild and domestic animals. "Wild animals are part of nature, while domestic animals are extensions of human sociality, degraded creatures who invade and harm wilderness (Peterson, 2013, p. 13). From this perspective, a study such as this, with a focus on domestic animals in domesticated spaces, like the family home may not even be perceived to align with environmental ethics and education, and yet as Peterson (2013) points out how domestic animals show how bridges can be formed between the domestic and wild. These dualisms between humans and animals and humans and nature are symptomatic of the bifurcation from the natural world that is particularly evident in Western cultures. Nature never existed in this way with conceptual bifurcations that divide the world into categories of natural and unnatural, nor is this a helpful way to understand the complexities of the world that form continuums. A broad and plural understanding of environments is required that attends to ecological justice not the singular, homogenised aesthetic that can be represented in environmental education where spending time outside in 'natural landscapes' is privileged in both the ability to take part in such activities and how what is taught contributes to the bifurcation of nature. As Dickinson (2013) suggests whilst some environmental educators "have noble intentions, their cultural assumptions can obscure core issues and inadvertently promote messages of weak sustainability" (p. 2).

Aldo Leopold's 'land ethics' comprises conservation, ecology, habitats and species (Desmond, 2008). However, Leopold's ecocentrism is grounded in the epistemologies of a qualitative difference between humans and animals. This a view questioned by Kophina (2016) as "environmental ethics can be seen as being inclusive of animal rights, animal welfare and even animal liberation" (p. 75). Species conservation for example aligns conservation practices with environmental discourses of being endangered, and on the

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brink of extinction. Peterson (2013) argues, "any consideration of non-human animals as individuals, however remains missing" (p.23) in the dominant environmental discourse of the land ethic where animals are positioned as part of the environmental whole that is in need of protection, for the greater good of the land community, but without the individual foci. This means that animals in an environmental ethic context can be viewed within the dominance of a scientific paradigm and move from being primarily an economic commodity, (that can be eaten, commodified, controlled and used) to being part of an evolutionary ecosystem where they are positioned in relation to the value to both humans and particular ecosystems. "If they are like machines, our moral obligations toward them are very different than if they are feeling, thinking agents (Peterson, 2013, p. 25). Plumwood (2002) is also critical of ecocentrism, arguing for a "(re)situ-ating of the human in ecological terms where humans recognise their animality and the (re)situating of the non-human in non-anthropocentric ecological ethics" (p. 8). Plumwood (2009) emphasises how this denial of being animal drives a wedge between humans and nature where she identifies critical concepts to promote different ways of thinking and (re)animating, such as animist materialism, writing to reanimate the world and recognising nature as agentic.

Environmental educators can also support animal justice and environmental justice, and yet as Fitzgerald (2019) suggests there are sticky knots that create divisions as contradictions and hypocrisy around issues of carnism and animal commodification such as fur, hunting and animal captivity create ontological differences. The environmental impacts posed by industrial animal agriculture to animal species and human animals are becoming known, demanding that bridges are built that cross the divide between animal advocacy and environmentalism. Oakley (2019) raises an important question that appeals to Inquiry Process in bridging such divides. "What can an animal liberation perspective contribute to environmental education (p.19)? Oakley suggests three considerations are needed including confronting speciesism, through socioecological justice, challenges to humanism and humane food choices. Questioning the practices and violence involved in the practices and processes of killing and eating animals, are examples of slippery events that send philosophers, researchers and practitioners into sticky knots of ambivalence and inconsistent ontology, many that assemble in this study. This mapping of the literatures has tried to plot ideas that frame "how we can move beyond the human in environmental education" (Oakley et al., 2010, p. 12) by examining the dualisms that exclude other

animal species and how these are represented in the work of environmental education and thinking. The positioning of environmental discourse will continue to be discussed as political and philosophical debate, the complexity of the lived experience and cultural considerations move in the territory where children and animals dwell.

People are waving from the human-animal table eager to have their say and the creaturely make their presence felt with the desire to shake up the representations of 'the animal' that have appeared thus far, wondering how they can also be heard. This is the largest and most diverse group attending the banquet and key concepts such as dualisms, the question of the animal and animal condition, speciesism, animality and relationality

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The question of the animal and the animal condition

Overview of human-animal studies

> *As humans' dependence on nonhuman animals increases and as our relationship with them changes in the twenty first century, not examining this relationship within the context of academia seems bizarre – especially given the increased presence of animal advocacy in the world around us. (DeMello, 2013, p. 7)*

Margo DeMello raises the importance of understanding human-animal relatings that resonates for Inquiry Process, giving credence to the desire to travel within the territory where child and animal dwell. Human-animal studies (HAS) and the related field of critical animal studies (CAS) is a growing multidisciplinary field of research that emerged from the social sciences and humanities in the 1990s and has extended to the fields of human geography, literacy and culture studies, humane education, feminism, anthropology, and philosophy emerging in the areas of law, psychology, sociology, public health, arts, and veterinary medicine (Griffin, McCune, Mahomles, & Hurley, 2011). Human animal studies emerged through increasing concerns raised from a rights/welfare discourse that took place in the 1970s as human dependence on animal production increased. Serpell (2009) identifies that until recent times connections with humans and animals have received minimal attention from the social sciences. There is not one fixed discipline of HAS, however the question of the animal is a central inquiry point that binds scholars of animal studies together in the search for animal liberation (Howard, 2009). Calarco (2008) notes there are two reoccurring questions that underpin much of the HAS research: one concerns the being of animals, their animality and the other concerns the human-animal dualism.

Human-animal studies has been defined by DeMello (2012) as "the study of the interactions and relationships between human and nonhuman animals" (p.5). Wolfe (2009) uses the analogy of 'herding cats' (p.564), to describe the field, recognising the complex disciplines that engage with it, and the acknowledgment that contributions vary according to whether this engagement is from a humanist or posthumanist perspective. Wolfe (2010) proposes that the question of the animal goes beyond all other questions and the current wave of human-animal studies emerged from the posthumanities since the 1990s, as a means to dethrone, but not remove human sovereignty of reason, consciousness and rationality he suggests embrace "the sensorium of other living beings

and their own autopoetic ways of bringing forth a world" (p. xxv). Haraway's (2008) concept of 'worldling' as 'becoming worldly' is the practice of trying to think beyond the human by engaging in messy entanglements alongside the Other, (plant, animal, technology, rock) through the process of 'being' and 'becoming'. These 'multidirectional relationships' that (Haraway, 2008) espouses are encouraged in a posthumanist landscape that works to deterritorialise the historical construction of 'the animal' and the dualisms that keep the construction in place.

The separation between human and (other) animals is the subject of a long history that "extends back before the advent of the Neolithic, and ranges from mythic to modern scientific accounts " (Bennison, 2011, p. 41). The scientific seeds of the taxonomy of animal classification for example, were sown by Aristotle who created the species classification and subgroups based on a hierarchy of value from plants, animals to humans (Bennison, 2011). Animals were segregated into parts as part of the process and this perpetuated human/animal and mind/body dualisms, that cast animals aside in "the earliest from of alterity" (DeMello, 2012, p. 82). Dualisms emphasise and privilege human faculties of language and reason as a tool to manifest a socially constructed separation by humanity, to control non-human animals and the environment as a resource that can be exploited. In the 16th century, philosopher and mathematician Rene Descartes separated mind and body and rationalised animals as automata where animal bodies are machine-like and not sentient beings (Wolfe, 2010). This Cartesian split became the perfect discourse to accompany the industrial revolution as escalating animal production could be justified because they animals were viewed as machine-like automata, that could endure pain, hardship and cruelty. Cartesian thinking "governed many subsequent positions and assumptions regarding human and animal nature" (DeMello, 2012, p. 83) that are now being challenged through human-animal studies.

The birth of libertarian values emerged as the 'age of reason' during the enlightenment period of the seventeenth and eighteenth centuries, where animals started to be situated less as objects without sentience, however, even though sentience was being questioned by Kant and Locke who "did feel that cruelty to animals was wrong, but only because engaging in it was bad for people" (DeMello, 2012, p. 381). In the eighteenth century, Rousseau formulated a theory of rights for animals, and children. Rousseau's child is the golden child of nature, freed from the chains of work and the adult world to a time of

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innocence where they can bond with nature. "Assumptions of goodness and innocence contributed to the elevation of the moral status of both animals and children" (Myers, 2007, p. 26), as post-enlightenment Western epistemology marginalised children and animals by setting them aside from the world of adults.

Critical animal studies

Critical animal studies (CAS) directs attention toward the circumstances and treatment of animals, moving beyond the questioning of animals in society to also consider the condition of the animal. "CAS is concerned with the nexus of activism, academia and animal suffering and maltreatment" (Dalal & Taylor, 2014, p. 2) where oppression and the intersections between slavery, misogyny, class and other forms of discrimination also dwell. CAS comes from emancipatory critical theory that questions species subjectivity "through power relations and dominations that have been enlisted to analyse the 'mutually reinforcing logic of domination" (Adams & Gruen, 2014, p. 7). An intersectional approach to human-animal studies seeks commonalities with other forms of oppression and is interested in bringing about social change through forms of discrimination including racism, sexism, classism, ableism, homophobia and speciesism (Nocella II, Sorenson, Socha, & Matsuoka, 2014). It is to that end that (CAS) is critical. The intention of CAS is to reveal how the effects of capitalism and the interplay of culture and economy, deceives and dominates. Furthermore Taylor and Twine (2014) clarify that the 'critical' "expresses the urgency of our times in the context of ecological crisis" (p. 2).

Animal rights, advocacy, activism, speciesism and animality are research foci for HAS and CAS. Animal advocacy can be traced in Western societies to at least two hundred years and awareness of the mass industrialisation of farmed animal production emerged in the 1960s through animal rights (Lockwood, 2018) where Tom Regan and Peter Singer emerged as critical voices for animal liberation in the 1970s and 1980s (Armstrong & Botzler, 2017). The philosophy of ecofeminists (Fudge, 2002; Plumwood, 2000) and posthuman scholars (Cavalieri, 2012; Derrida, 2008; Haraway, 2006; Wolfe, 2010) have recently challenged the rights-based approach to animal liberation based on its reliance upon expanding humanist rights principles that reinforce the human/animal dualism that the movement seeks to dismantle. "The problem with these approaches is that they are "rationalist" in nature...They perpetuate and create a reason-emotion dichotomy that discards feelings and emotions" (Jickling & Paquet, 2005, p. 118). Potts and Haraway

(2010) identify how feminists have been at the forefront of human-animal relations and ecofeminist animal theory emerged to reveal the structural and ideological factors that help to deny animal sentience and normalise the desires of human practices with animals to mask the violence and speciesism inherent in those relations.

This brief passage into the emergence of human-animal studies explores how animals have been positioned through history and within the bifurcation of nature. The thinking of scholars continues to contribute to the inquiry exploring how speciesism, animality and activism influences human-animal relations. Relationality is a central approach to the development of HAS as a field of academic inquiry (DeMello, 2012) and this study contemplates interspecies relations with a range of situated animals where data is generated, not limited by the foxes, ducks, birds, rabbits who assemble in the school landscape, classroom animals and family pets.

Human-animal relations

Animals are significant in the lives of children and families. This is represented in the high level of family pets in Western countries like Australia, that has "one of the highest rates of pet ownership in the world where 63% of households share their lives with 33 million pets" (Animal Health Alliance, 2013). Interestingly living with an Animal outstrips living with children according to Roy Morgan Research (2015) who identify that a higher proportion of people live in households with a dog and/or cat than with a child and 50% live in a household with at least one cat or/and dog in it, whereas 35% share their household with at least one child aged under 16. 38% of the population lives in a household with a dog, compared with 23% who cohabit with cats. Despite the popularity of human-pet relations, it is only in recent times that research has looked at what these relations are why they matter (Irvine & Laurent, 2017). Taylor (2012), notes this type of research barely warrants the attention of social scientists despite enormous research conducted with families from sociological, psychological and educational disciplines and companion animals have only recently been included in the description of what it means to be a family (Tipper, 2011a). Whilst there has been an explosion of research that examines adult relationships with animals, Tipper (2011) reports that "children's experiences are often conspicuously absent" (p. 148) in HAS. Tipper's sociological research with primary-aged children showed that: children were keen to

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speak about the animals in their lives, they expressed affection speaking about them as individuals, friends and kin (p.158) and pets were 'part of the family' and this extended to grandparent pets and an interest in the genealogy of family pets (p. 150). Children's responses differed to comparable adult responses in previous studies (Charles & Davies, 2008), where adults had a tendency to 'laugh off' and joke about their human-animal relationships, whereas, children were openly affectionate about their pets and unashamedly spoke at length about them as part of their family (p. 158).

> *Relationships with the pet animals who share our homes-nestled on the couch, curled in front of the fire, welcoming us home – can also be significant for many people. In fact, around half of the households in most Western societies now have one or more pets ... Yet despite the predominance of pets in people lives and the fascinating issues they raise, sociologists have only recently began to study these relationships. (Tipper, 2011a, p. 85)*

The term pet can be traced to a fifteenth century English term meaning 'spoiled child'. This word probably derived from the French term *petit*, or 'little' and grew to mean anything or anyone that was spoiled or indulged (DeMello, 2012 p.149.). Terminology and naming of species reflect cultural values and increasingly animal welfare organisations and advocates use the term 'companion animal' and also 'guardian' rather than pet and owner. These terms are used to establish and redefine ownership, power and control and "advocates argue that it was not so long ago that women, children and others were seen, in legal terms, as merely property" (DeMello, 2012, p. 164). Animals are still defined as human property wherever they locate, in a farm, home or wilderness as the legal context where they are situated reflects the ambivalent status of animals in Western culture and law (Gillett, 2017). Fox (2010) identifies how ownership and positioning of animals as property is reflected in the naming of these relationships with multispecies relationships, especially dogs " In grappling with such rhetorical and ethical conundrums, our default position, that humans are exceptional, is so deeply ingrained that we rarely trouble to question it" (p.42) and this is reflected in how the animal is represented.

Representing the Animal in human-animal studies

> *The animal, when you think about it, is everywhere (including in the metaphors, similes, proverbs, and narratives we have relied on for centuries-millennia, even), Teach a course or write an article on the subject, and well-intentioned suggestions about interesting material pour in from all quarters. (Wolfe, 2009 p.564)*

Cary Wolfe's words express that 'The animal', when you think about it, is everywhere and well-intentioned suggestions about interesting material pour in from all quarters. This is mirrored by this inquiry as people feel compelled to share their stories about animals, many from childhood that are moving and poignant and have indeed been like those 'radioactive jewels' (Chawla, 1990) that echo across and influence their life. Animal representation in human-animal studies are as diverse as the field itself and the following examples barely scratch the surface of the diversity of scholarly work, including: feminist approach to carnism (Adams, 1990; Joy, 2010), utilitarian ethics and rights Singer (Singer, 1975, 1986, 2009), speciesism (Regan, 1984; Ryder, 1970/2010, 2013) abolitionist ontology (Francione, 2010), historical animal research (Fudge, 2004, 2008; Ritvo, 2011; Ritvo, 2004, 2007), the animal-industrial complex (Lockwood, 2016, 2018; Noske, 1989; Pachirat, 2011; Pedersen, 2013; Rowe, 2011, 2012b; Stanescu, 2013; Twine, 2012) animals and art (Burke, 2015; mowson, 2018; Neumark, 2017; Watt, 2018) animals, media and popular culture, (Cole & Stewart, 2014; Merskin, 2018; Stewart & Cole, 2009b), animals and world religions (Bauman, 2014; Kemmerer, 2011a) and animals and literature (Bartosch, 2017; Jaques, 2014).

The discussions thus far have addressed some of the complex aspects of human-animal relations and animal representation that depict contradictions, connections and disjunctions. Human-animal studies negotiate these representations of animals with political and ethical worldly dilemmas. Pedersen (2014a) for example, reflects on animal representation and animals as research objects. "The urgency of animal studies scholarship to address and respect animals not only as knowledge producers, tropes, text, or metaphor, but as experiencing subjects with their own lives, separate from any form of human intervention" (Pedersen, 2014a, p. 14). The scholars from environmental education and human-animal studies, have had much to say and Inquiry Process now relocates to break bread with early childhood scholars, who are keen to share research studies that have paid attention to children and animals in early childhood education.

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The question of early childhood education

Overview of early childhood education

The period referred to as early childhood both nationally and internationally most commonly refers to the time period in children's lives from birth to eight years of age. This time is also defined "as the period before compulsory schooling which in most countries is the first six years of life" (Early Childhood Australia, 2008). Consequently, although childhood is measured with time, education is defined in the broadest sense of the word, encompassing complex, dynamic ways that human beings live, work, consume, play, feel, construct and share knowledge and learn to be in the world (Rowe, 2012a) and also the specific practices of childhood. Early childhood education (ECE) has its roots in the period of European Enlightenment where childhood emerged as a separate time from adulthood and the first child instruction manuals were written identifying aspects of child, health, learning and welfare (Krogh & Slentz, 2011). Australian ECE developed with the ontological presuppositions of care, welfare and philanthropy with the aim to improve social conditions of vulnerable children (Nuttall & Grieshaber, 2018). Whilst an ethics of care (Noddings, 1995, 2005) still remains as a dominant discourse and practice in ECE, there are also close associations with the kindergarten movement of Europe where the threads of romanticism are still caught up with notions of childhood innocence and play with nature (Elliott & Young, 2015; Taylor, 2013, 2017).

In recent years, globalising policies and reforms have introduced early childhood curriculum frameworks in countries around the world (Lee, 2015). These have been generally framed in terms of human capital investment (Moss, 2014), designed to mediate and maximise young children's development and learning as productive citizens. As such, education is deemed an appropriate instrument to generate the ideals of societies. Like most curricula, they embody the modulations of Deleuze's (1992) societies of control "with the introduction of the corporation at all levels of schooling" (p. 7). Dominant discourses such as play, developmental psychology, humanist values, and evidence-based practice, leave little space for resistance and pedagogy and can therefore become stuck in the past and impervious to change. Early childhood education does however embrace relational pedagogical discourse, that "becomes a loci of ethical practices, and by so doing contribute to relationships, with each other as well as our environment (Dahlberg & Moss, 2005, p. 192). These relations are inherently ethical and whilst ECE as an academic field

has worked hard to understand and trouble the intersections of human oppressive relationships in anti-bias curricula (Derman-Sparks & Olsen Edwards, 2010; Scarlett, 2016) and through diversity and difference in the Australian Early Years Learning Framework (DEEWR, 2009); environmental education and early childhood education research have not granted the same attention to anti-bias curricula with speciesism and animal advocacy (Kahn & Humes, 2009b). Human-animal relations can be aligned within the ethical philosophy and the pedagogical approaches of the Australian Early Years Learning Framework (DEEWR, 2009) that is centred around multiple perspectives and relationships.

> *Fundamental to the Framework is a view of children's lives as characterised by belonging, being and becoming. From before birth children are connected to family, community, culture and place. Their earliest development and learning takes place through these relationships, particularly within families, who are children's first and most influential educators. As children participate in everyday life, they develop interests and construct their own identities and understandings of the world. (DEEWR, 2009, p. 7)*

Studies with children and animals

Gail Melson (2001) and Gene Myers (2007) offer some of the earliest research with children and animals in early childhood education as they studied the influences of classroom animals, excursions to zoos and wildlife parks and animals in the lives of young children from a developmental perspective and through ethnographic studies. Melson's comprehensive research emerged as she awakened to the significance of these relationships after years of teaching and research, questioning how she had noticed this before. "The relationship between children and animals was one I had ignored in my teaching, writing and research even as I explored the significant human ties – parents, relatives, teachers, peers – that shape children's lives" (Melson, 2001, p. 3). She noted like Tipper (2011) how children form relationships with pets that are similar to intimate human relations and how this differed with educational animals:

> *By contrast, in a classroom, zoo or nature centre, even the same species kept as household pets, are no longer companions, confidents and loved ones – in other words, intimates; they become objects of inquiry. (Melson, 2001, p. 74)*

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These observations of different responses to how children engage with animals in a zoo or classroom, where they often appeared disinterested, compared to the family home where they form close bonds and loving relationships with animals. This difference, she notes was because interactions in a classroom or zoo are framed by scientific method of observation, animal study and dualism, compared to the interconnectedness and relatedness of pets in the family home. This research prompts Inquiry Process to situate this study in family homes as well as an education setting. Melson (2001) advocates a biocentric framework where she observes that children are not embarrassed or fearful of the truth of the loving and killing of animals, where they see themselves as both human and animal and these understandings enable children "to gain a sense of their own place in a multispecies world" (p. 199).

Myers (2007) empirical research was originally published in (1998), documenting a year-long ethnographic study with young children and animals in northern American preschool classrooms as they encountered a variety of animal experiences. His findings revealed a longstanding and Western tendency to view children as essentially unformed and animal-like while regarding normal development as a process of shedding these animal-like attributes in favour of human adult qualities, to understand the animal, is to understand self and then to marginalise and become separated. Myers (1999) also contends that the state of animality is controlled by the separation between human and animal that is performed within psychological and developmental theories. These theories marginalise relations with animals focussing on biological bases of "humanity defined by what makes us unique among species" (p. 128). Framing the discussion of human development in these terms, Myers argues, has produced a systematic denial of the importance, not only of human-animal relations, but also of the unselfconscious, nonverbal, and bodily ways in which children experience and learn about their world (Myers, 1998). Children's animism draws them to other animals and "developmental theories produce a systematic, circular denial of the importance of such relations" (Myers, 1999, p. 128) and this denial claims that development is a human process, that makes humans unique and the mature human is actualised through difference to other species. These insights from Myers (1998, 1999) also appear in Fawcett's (2002) research as she laments the idea that "Western culture often teaches children to divorce themselves from their 'animalness'" (p.132). In her study with grade-five-children who displayed behaviour of discarding their animality as their prevalent stories were about fear, running away and harm between the humans

and wild animals they encountered. This was in contrast to the same investigation with kindergarten-aged-children, whose stories about the same animals centered on kinship and friendship. Fawcett concludes that "older children adopt the dominant cultural currency" (p. 136) of the human-animal binary.

The mapping of the literatures has shown how children in Western contexts demonstrate an intense interest towards animals in the early years of life as outlined in the research by (Melson, 2001; Myers, 1994, 2007; Tipper, 2011) have considered the constitutions of children and animals through sociocultural and scientific perspectives. As discussed, Tipper (2011) also maps how children's experiences with pets are marginalised in the field of human-animal studies and by addressing this research gap, researchers could present "a more rounded picture of children's lives" (p. 149). Given the popularity of pets and the patterns of engagement that children place in their relationships with animals, this research is interested in what might be discovered from in-depth analysis of the everyday lived experience of children, their families, their education setting and the animals in their lives.

There has been a marked increase in ethnographic research that adopts relational ontologies with children, animals and place. Giugni in (Taylor, Blaise, & Giugni, 2012) explore the rights of animals as 'queer kin' who are ethically integrated in environmental curriculum, advocating for a learning *with* approach, rather than learning *about*. Posthumanist theories are also inspiring early childhood educators and academics to rethink and reimagine anthropocentric ways of engaging with nature (Malone, 2015; (Malone, 2019)Nxumalo & Cedillo, 2017; Rautio, 2013; Taylor, 2011; Taylor & Giugni, 2012; Taylor et al. 2012). For Snaza and Weaver (2015), a "posthumanist turn" in education suggests any scholar who uses "posthumanist conceptualisations of human/animal/ machine/ thing relations to diagnose how humanism ignores, obscures, and disavows the real relations among beings and things that make up the stuff of the world" (p. 1).

These brief examples of animal integration of animals in ECE signify how education is always political and there is an absence of animality, in early childhood curriculum frameworks and policy that guide early childhood education in Australia. Although the gap in the research literature is narrowing, this is not echoed within curriculum, policy or

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practice and this translates as lack of support and guidance for practitioners through teaching resources and professional development.

Representing the Animal in early childhood education

> *It should come as no surprise that it seems far-fetched to speak of all the animal presences of early childhood in one breath, since we also marginalize them in our understanding of ourselves and of child development… Encounter is mediated, indirect, because some more important human feature intervenes. But in the actual lives of children, the animal is a whole and compelling presence. We can recover that animal by identifying the biases that have led us to marginalize other creatures and most important, by going directly to the source – to children and their experiences of animals. (Myers, 2007, p. 2)*

The animal in early childhood education is everywhere, but also absent. Myers (2007) suggests that to recover the animal it is helpful to spend time exploring what children and animals do. The animal is materially and discursively embodied in children's books, emblazoned on the clothes and bedroom walls of the newborn human, softened and miniaturised as toys to play with, and sometimes found in their hearts as pets, but not often as kin animals or the animals that secretly disappear on their plates. The coupling of children and animals ambiguously occupy similar in-between positions in the Western world where children are referred to as cute wild animals and animals become cute furry children. This representation not only denies their respective uniqueness, it can also disregard their capacities to be agentic. Mindy Blaise (2013) examines the historical, political, and postcolonial influences that govern and drive the popularity of the pet/dog/child in Hong Kong where dogs are treated like children as they are dressed and pushed in prams in ways that attend to the complex, fluid relationships taking shape with human relations in Western communities with more-than-human families. Taylor and Giugni (2012) explore queer kin relationships as points of resistance to romanticised perceptions of children, animals and educational discourse.

> *Haraway's queering ethics helps us to resist over-sentimentalising and thus de-politicising children relations with the more-than-human world. It helps us to reframe our (early childhood) common worlds around a relational ethic. On the one hand, this relational ethic retains hope in the generative possibilities of children's relationships with more-than-human others. On the other hand, it appreciates the political imperative to grapple with the dilemmas and tensions that inevitably arise when we co-inhabit with differences (p.113).*

The inclusion of the animal in childhood has historic and pedagogical significance where animals are co-opted into childhood projects (Lorimer and Driessen 2016), and their bodies, habitats and territorial spaces are enmeshed into narratives of friendship, family, violence, education, entertainment and speciesism. Animal bodies are also commodified in the production of knowledge as cultural tools that teach children about life and death and what it means to be a good human. The ethical integration of animal species within education settings is therefore dependent on how and if this inclusion is culturally valued and how teachers and education communities teach about animal life and death. This representation of the animal as cultural tool, supports the objectification of the animal whose dead or alive body become a fetishized commodity and children and animals become 'sentimentalised subjects' that validate a natural bond "as well as the fantasy of reconnecting with the primordial and the innocent" (Pedersen, 2011a, p. 13).

Education research barely features in human-animal studies, with the exception of humane education (Pedersen, 2010b, p. 243). Scant attention is paid to ethical considerations of living animals in early childhood education (Bone, 2013a; Young, 2010; Young, Clancy, & Ahern, 2015). Even though animal study is a part of early childhood science curricula, and has more recently been influenced by research that adopts posthuman and postcolonial perspectives (Nxumalo & Pacini-Ketchabaw, 2017; Pacini-Ketchabaw & Taylor, 2015a, 2018; Taylor et al., 2013) where there are increased considerations of the ethics of animals in ECE; the question of the animal condition and animality still rests in the margins. There is little research that addresses animal liberation, speciesism or alternative ways of thinking or living such as a vegan politic in education, including environmental education (Oakley, 2019). Young and Bone (2019) question the positioning of the animal and animal condition in early childhood education where cultural and pedagogical normalisation of human-animal binaries are entrenched in Western minority world childhoods, subsequently speciesist practices are subverted through a naturalised order of experience and hegemonic structure that consistently reinforces human dominance. Although animals feature heavily in pedagogy and practice, they become epistemologically erased as subjects of inquiry and holders of knowledge. The following representations of the Animal in early childhood education appear in the territorial assemblage, through witnessing practices in education settings, the research literatures, and conversations with early childhood teachers.

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In a literature review of empirical research in Western early childhood education, Bone (2013a) argues for the animal to be respectfully considered as a pedagogical support for learning. "I argue that it is time to consider human and animal relationships in early childhood settings in all their complexity and variety" (Bone, 2013a, p. 62). The animal therefore for Bone is not a pedagogical tool to be used, but rather a collaborator in the learning with children. Bone (2013a) notes how early childhood teachers stick to familiar scripts about pets, farm and exotic animals with children's literature, but not the violent and contained lives of farmed animals. Industrialised animal production practices gloss over the violence inflicted on farmed/hunted animals, perpetuating human/animal separation through difference where they become invisible and the human act of consuming such astonishing numbers of animals are hidden, subverted and denied, especially with young children (Cole & Stewart, 2014; Stewart & Cole, 2009a). Unsettling accounts of animals in ECE show how animals become expendable products appointed as pedagogical aids to teach children about biology, relationships and how to care for a living creature and dispose of a dead one. "Pets are frequently placed in the service of children's development as a tool of socialisation, resulting in notable differences of power between them that manifest in their interactions" (Feuerstein & Nolte-Odhiambo, 2017, p. 5). Bone (2013) observed how educators make jokes about the disposable animal, flushing dead goldfish in the toilet, letting the children play with a dying lamb, and how guinea pigs rostered to families on the weekends do not return. The "condition of being tamed is not always a happy one for animals (Bone, 2013a, p. 60).

The material, discursive and institutional practices that take place in early childhood exploit animals while concurrently teaching discourses of speciesism. Young (2010) also recalls seeing a live, single Betta fish in a small decorative bowl as part of the design aesthetic of a low table setting in an ECE home corner and noticed the way hermit crabs were regularly introduced as classroom animals in cold climates, captured within the tiny flat, plastic prisons that slowly suffocate them, with little understanding of the care, nutrition and habitats required to keep these sensitive and complex, tropical creatures alive. Hermit crabs can live for over thirty years and enjoy climbing and foraging in large colonies, where they choose to sleep piled together with kin and collaborate in teams to find food (Weis, 2012) and despite popular belief Betta fish do not always live alone in small spaces. The animal is also represented as a pest to be feared and destroyed through biophobia of spiders and insect (Edwards, Moore, & Cutter-Mackenzie, 2012); as a life

and death coach teaching about life cycles and to teach about the experience of death of a once living animal. The virtual animal appears in digital applications, computer programs, Pokémon cards, Tamagotchi or robotic animals and as a popular culture trend where animal characters become entangled with commercial enterprises and are partnered with the consumption of fast food, product placement and film and television shows (Cole & Stewart, 2014).

These brief examples of animal representation in early childhood education signify how education is always political as culture, pedagogies, curricula and governance are formed by epistemologies of what we think we know, what is valued to pass onto future generations, what is kept silent and how this knowledge frames what is possible. These ideas are revisited by Inquiry Process as entanglements with data disrupt these representations by questioning the animal and the animal condition in early childhood.

Chapter two: Mapping the territory where children and animals dwell

Chapter summary

This mapping of the literatures assembles in the midst of the banquet as cross-disciplinary ideas circulate at the dining tables, signifying the academic fields relevant to the inquiry, namely environmental education, early children education and human-animal studies. Environmental education remains a field of knowledge that aligns with disciplines of science, wilderness, outdoor education and influenced by ecological and biocentric paradigms. Early childhood education is a field steeped in humanist discourse and traditions that has also become influenced by posthumanist and new materialist theories have seeped into the early childhood landscape. Human-animal studies as the newest member of the group is experiencing a flurry of scholarly interest and activity from broad places where the question of the animal is stretched in multiple directions and is hard to pin down. These disciplinary ontoepistemologies bring the multiverse into play as the creaturely, the earthly and the more-than-human become vitalised to join the conversations. As Haraway in (Potts and Haraway, 2010) suggests "real sentient beings change each other – book-to-book, face-to-face, story-to-story, year-to-year. I think we need each other at the table together, and that is sometimes incoherent or difficult, not in itself a bad thing" (p. 332). A range of studies that draw ideas from environmental sources, human geographies, nature and natureculture have appeared in the literatures, whereas the research of human-animal studies barely rates a mention in early childhood discourse. This provides opportunities for Inquiry Process as the collective assemblage of research and literatures joins the territory to explore child-animal relations, with the desire to seek, sense and know hum(an)imal entanglements.

Inquiry process now moves the banquet celebrations to a new location as after dinner speakers, entertainment and debates become enlivened with the theoretical framework, positioned within a critical posthuman landscape. Some of the guests continue onwards and others are left behind as the productive work of theory is interrogated in the search for new ontoepistemologies of human-animal relations.

Chapter three: Theorising the territory where children and animals dwell

Introducing the theoretical terrain

Something in the world forces us to think. This something is an object not of recognition but of a fundamental encounter (Deleuze, 1968/1994, p. 176).

As the territorial banquet draws to a close it's time for ceremonial speeches and the after-dinner entertainment to commence. The territorial literatures are digested, joining the assemblage in the territory where children and animals dwell. As processes of digestion ensue, two significant speakers take to the stage and these orations breathe life within the three encounters that prompt critical becomings as spaces of ambivalence are revealed within posthumanistic ontology. The after-dinner speeches are followed by music, movement, dancing and supper. This shared time enables the scholarly and more-than-scholarly to take part in the complex dance of entangling with theoretical and philosophical approaches that are not bound in this chapter as Inquiry Process invites them to continue to entangle with the events and concepts of each chapter. We kick up our heels, lift our tails, becoming wild on the dance floor, shaking off the serious movements of the day.

This chapter travels with theory through three distinct spaces. First, pathways for critical becomings need to dwell for a long time as something significant takes place in these events that shape the inquiry. Time is needed to uncover why posthumanism could not work alone as entanglements with critical theory are needed to support the digestion of ethical molecular (flowing and fluctuating) and molar (coded matter) (Deleuze & Guattari, 1987/2004). Three events shape these critical becomings that unfold as narratives and then Inquiry Process thinks with them, going inward and outward to inquire how such knowledge is produced, applied and circulated in the territory where children and animals dwell. The second space shows how posthumanist and critical theories work in collaboration to compensate for theoretical gaps that can no longer be paved over. Inquiry Process addresses the tensions in both theories, in partnership with Rosi Braidotti (Braidotti, 2013, 2017; Braidotti & Hlavaova, 2018), inviting others who have adopted

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this multi-theoretical approach into deliberations, exploring how they can be epistemologically compatible, not as either/or but rather as and, and, and (Braidotti, 2017).

The third space features philosophers and philosophical perspectives that roam in and out of the assemblage as nomads, remaining unattached to particular chapters. The concept of the nomad as continually unsettling notions of 'the human', in relation with Animals, environments, and materialism (Braidotti, 2012), is why theory does not stay in this theoretical chapter as it appears at particular territorial junctures, proposing alternative ontologies that contribute and enrich how data events and sticky knots become implicated in the multispecies contexts where children and animals dwell. Many of these theoretical perspectives can be placed under the contested umbrella of the 'posts', as thinking-with Derrida, Butler, Deleuze, and Foucault enable Inquiry Process to challenge conventions of animal-human relatings through the work of these scholars. The conceptualising in this inquiry is less about marking territory and more about different readings of philosophy that expand and contract as multiple concepts and inventive practices (methods) breathe through situated problems (data events) as a way to see anew and let becomings unfold.

Becoming critic(al)

> *To critique is risky work, not just because it might alienate those who are deeply attached to, or personally implicated in, the discourses to be placed under scrutiny but also because to draw attention to the very terms through which existence is made possible, to begin to dismantle those very terms while still depending on them for shared meaning making - even for survival - requires a kind of daring, a willingness to envisage the not yet known and to make visible the faults, the effects of the already known. (Davies, 2005, p. 2)*

Bronwyn Davies (2005) highlights how critique is risky as the capacity to affect and be affected is part of the process of researcher becomings. After-dinner speeches, radio broadcasts and scholarly discussion groups chronical the contexts of the haunting grounds of these critical becomings where posthumanism is tested as theory and the intensity of the research foci is drawn to the complexities of human-animal becomings, particularly when competing ethical concepts and practices are in play. I offer the following narratives and my responses to them as brief immersions into the politic of living and dying, that moves through territorial airwaves generating a rupturing of life, suffering and dying with unsettling and enduring affects that spill over, despite my efforts to contain

them. They do not represent analysis of the events at this time, but rather an analysis of affect. These are more than feelings, for the intensity of affect is visceral as forces "beneath, alongside, or generally other than conscious knowing that can serve to drive us towards movement, thought, and ever-changing forms of relation" (Gregg & Seigworth, 2010, p. 405).

Since childhood I have felt uneasy about nature documentaries that represent a voyeuristic dominion of nature and have resisted them, despite the acclaimed pedagogical value of the genre. I define this learning as a type of nature pornography, a spectator performance that (mis)present the world through the imagery of pristine landscapes, glossing over environmental damage, whilst overplaying conditions of nature. The explicit environments of naturalist cinema are produced with a particular type of capitalist aesthetic that shines brightly on the large television screens hugging the walls of electrical stores. This idealised, uber representation of nature masks environmental degradation and the social systems that produce it, whilst at its worst, stages animal death and suffering to suit an anthropocentric storyline to draw a crowd of spectators. The CBC (McKeown, 1982) film *Cruel Camera* for example*,* reports on many faked and cruel incidents in documentaries and films such as the 1958 Disney film *White Wilderness,* I vividly remember watching as a child, as lemmings were forced to run off a cliff to their deaths in the creation of the dramatic effect of species mass suicide, that was completely falsified. The lives of animal species in this way are reduced to instinctive drivers of predation where survival, killing, being killed and reproduction are 'red in tooth and claw' (Weiss, 2010). Nussbaum (2013) might refer to this as the 'tragic spectatorship' of life where witnessing the hardships of 'the natural world' has the capacity to build human compassion through the concept of knowing about such suffering. I am not convinced that this type of compassion is helpful if it misrepresents the implications of how such tragedy or suffering occurs and the implicit role of humans in this creation. George Monbiot (2018) calls out the BBC and David Attenborough for "knowingly creating a false sense of the world" (para.1) and the health of the planet, that causes ecological confusion and complacency. I find these nature representations disturbing to watch, for like Pick (2015) the politics of visibility has unspoken connections with extinction, "where rare or endangered animals are fatally observed, and where animal sighting acts

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as a lure and reward against the backdrop of animal vanishing" (p.6). They puncture my ontology of relations with a narrow essentialised view of the world that takes on the type of mythical sacred proportions that Barthes (1957/1972) might refer to as iconoclastic, where the icon of nature exists on screen for the viewers gaze, unquestioning of causality and agency.

The intent of animal rights documentaries is not to mask environmental issues or animal violence and are therefore less palatable than the previous descriptions of nature documentaries. 'Earthlings' (Monson, 2005) for example, exposes the mythology of food production and 'Blackfish' (Cowperthwaite et al., 2014), reveals harmful training tactics of the entertainment industry with orcas in captivity. Whilst I respect the honesty of these films, I cannot bear witness to the deeply disturbing imagery of Animal cruelty and suffering. I also avoid reading graphic animal studies texts and turn the radio on and off when listening to news reports of Animal suffering, trying to tune into the bits that I need/want to hear, whilst shutting off those that ignite distress. These acts of self-protection are far from avoidance, for I am continually immersed in the condition of the animal through everyday living and research. I have learned however to be cautious about what I see and hear as these coalescing hauntings are rhizomic, (Deleuze & Guattari, 1987/2004) creeping and spreading like bloodlines through sensory modes that play over, and over, and over again in a loop of entrapped images, sounds and anguish.

Getting ready for work, a reporter on ABC Radio National (Arnold, 2014) is describing the Rivalea piggery, one of the largest pig factory farms in the southern hemisphere in Corowa, New South Wales. My bedroom enters the territory assemblage as situated knowledge is carried through hauntings of mind, place and muscle memory. My immediate response is to turn the radio off. I hesitate as the desire for knowledge takes precedence, and sound tends to carry less trauma for me than vision, that becomes harder to forget. The presenter speaks about the film 'Lucent' (Delforce, 2014) that exposes how pigs are farmed in Australia, that she recently watched at a cinema screening with animal activists, describing how and why she had to "turn away at scenes of overt cruelty, noticing how most of the audience held their gaze" (Arnold, 2014). I listen to the description of three pigs being "loaded" onto a metal gondola as they are lowered into a chamber of carbon dioxide to 'stun' them before slaughter. This 'gas chamber' is masked by

the discursive renaming as 'controlled atmosphere killing'. I'm attuned to the commentator's voice as the sound of pigs screeching in distress takes hold. The pigs thrash their bodies against the metal tools of containment as they enter the gas filled cavity and their panicked sounds are transported through the airwaves, to the capillary networks of my body, spreading into graphic imagery that reverberates through my bedroom. I picture the violent desperation of this fight for breath as oxygen is replaced with painful chemical compounds surging through porcine lungs. My half-dressed body leaps on the unmade bed to hit the radio off-button. It's too late. This sound can never be taken back and settles in resonating waves in my body and mind. Pigs are far from voiceless, expressing themselves with such vociferous clarity and I had tricked myself that this act of acoustic witnessing would not hold affect.

I need some time here to manage these emotions to slow them down through breath. Breath denied to these pigs. Breath of life replaced with breath of killing. I turn to Cleo whose pig-like-dog body is lying next to me on the bed. I wonder what she thinks about these distressing sounds and I sense no reaction; hoping she is unconscious to their pleas. No gentle ride to unconsciousness for these pigs or the one million that meet their fate in this Australian abattoir each year.

Claire Kim (2013) is the first after dinner speaker. Her presentation triggers further hauntings as she relays the harrowing case of the elite American athlete Michael Vick, who bred, tortured, and killed thousands of dogs in an interstate dog fighting ring that operated on his property for five years. The process, technologies and techniques of this violence leave many of the guests reeling in horror, trapped in our seats with no trigger warning for what was to come. A sticky knot of affect appears. This is an old knot that churns in the solar plexus of wondering how cruelty is played out by humans and how it is enacted to constantly keep these dogs 'riled up' so they fight. Kim describes how even in the final moments of death as the dog is fighting for breath, the human gets down low in the fighting ring to talk softly with a breathy assurance to the dog, capitalising on the dogs' desire to please him, following their gaze and urging them forward in

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the final act of cruel betrayal. The canine capacity for sociality and the characteristic loyalty, is turned and used against them. This inversion of the human-dog relationship that is held in such esteem by humans and many dogs, becomes a tool of oppression in the most barbaric way. As Kim (2013) laments "this is not just about prize money but about honour, masculinity and strength".

These chronicles of re/dis/membering interject my thoughts at opportune times and are carried forevermore in troubled becomings with troubling data in chapter nine. If events include film or sound footage of this violence, instead of adopting descriptive narratives, they become unbearable, rendering such force that I am unable to sleep or shake the images from my mind. This notion of bearing witness to the ongoing suffering of animal species is an important strategy of critical animal studies (Gillespie, 2016; Lockwood, 2018) with the intent of making visible the everyday violence towards Animals, as productive knowledge, brought into the public domain. Attuning to the Animal as a subject of witnessing is different to observation, as an emotional engagement is required with a desire to create some form of political action and social change. Witnessing is also an act of solidarity with the Animal, grieving for, and with them in what Gruen (2015) refers to as 'entangled empathy'. According to Gillespie (2016) "Witnessing has been under-theorised as a method of academic research" (p. 572). Whilst no theorising occurs at this stage, I have like Gillespie attempted to write myself into the analysis as an absent witness "and as a grieving body" (Gillespie, 2016 p. 573). As an Animal rights activist, active witnessing has merits and I have adjusted how I can advocate and bear witness in ways that does not lose sight of the body. This reminder from Melanie Joy speaks to the power of such witnessing:

> *Virtually every atrocity in the history of humankind was enabled by a populace that turned away from a reality that seemed too painful to face, while virtually every revolution for peace and justice has been made possible by a group of people who chose to bear witness and demanded that others bear witness as well". (Joy, 2010. p.139)*

The final event takes place in the latter stages of the after-dinner celebrations, before a light supper is served to the departing guests. It's been a long day but a group of posthuman scholars and thinkers have gathered to continue the conversations that started at the banquet. Rosi Braidotti is the final after dinner speaker who provides a comprehensive overview of the history, discourse and variations of posthumanism

(Braidotti & Hlavaova, 2018). Blood and breath circulate through the capillaries of the following vignettes as Animal bodies become rendered as subordinate products within normalised practices of killing, hunting or what Joy (2010) names as 'carnism', the invisible belief system, that conditions people to eat certain animals. They mark critical becomings that signify the connections and disjunctions of the inquiry, as the relational entanglements of posthumanism play familiar, sneaky, humanistic games of power and desire, that sanction 'the war on animals' (Wadiwel, 2009, 2015) through strategies of oppression such as silence, avoidance and humour about slaughter that is named by Inquiry Process as (s)laughter.

> *As Rosi heads for the dance floor, twelve of us take our conversations to an empty classroom, eager to continue the robust lengthy discussions we had started during the banquet. We are a diverse group from the three disciplinary tables. We are enthralled with posthumanist possibilities of thinking with ethical, entangled, earthly relations. I cautiously make a measured comment about the treatment of female, farmed animals, framed within an ecofeminist perspective (rather than as my ontology), in my reticence to be a trouble maker. I highlight the intersections of sexism and speciesism that are present through gendered productions of milk, eggs, and meat. Another participant Kit is less hesitant, explaining how the discourse and materiality of factory farming carries patriarchal and sexist language, where machinery such as the 'rape rack' is used to hold down and inseminate female farmed animals. Sarah becomes agitated as the subject of killing animals fills the classroom. She states how "hunting is an ancient practice of the Canadian Inuit communities" where she works as a teacher/researcher, "that has been colonised by settler communities and hunters speak about the respect they have for the animals they trap and hunt". Kit acknowledges the legitimacy of this human cultural practice but wonders if culture is also used to deny animality, under the sanctity of Indigenous cultural practices.*
>
> *A scholar who researches multispecies entanglements talks about how they explore troubling notions of ethics when researching children and animals. The conversation steers towards animal death and Sarah once more raises the topic*

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of hunting, describing how the kindergarten children experienced the process of skinning a fox with an Inuit parent, that had been caught in a trap. She speaks with excitement and wonder about how the 'pelt' has to be removed quickly before rigour mortis set in. I gasp, not because of the act of hunting or skinning, or the impact of young children witnessing this act, but how Sarah had skipped past the trapping and killing, rendering the fox's body and suffering invisible. I wait for the other participants to speak, in light of the ethical debate we have been ensconced with for so many hours, and my reluctance to 'make trouble', but they hold back. The scholar speaks about us all being animals who need to kill and be killed. I find myself at a threshold of wanting to speak but not knowing how to do this. Kit has no such problem, asking, "who is thinking here for the fox?" I breathe a sigh of relief, as he brings attention back to the fox, subverting her erasure by staying with the body. I follow his lead asking Sarah "if she could describe the trapping practice and how the fox was killed"? Sarah explains. "This was a trap and when they got to the trap to retrieve the fox, 'it' was still alive, and the hunter pressed down on the trap, so all the air is pushed out of the fox's lungs and 'it' dies".

I wait once more for a response as the silence reverberates through the room that contains us. I hold back tears of disappointment. No mention of the excruciating pain where trapped animals attempt to chew their limbs off to free themselves from the pain, or the hours or days she was trapped or the act of crushing that extinguished her breath and smashed her rib cage. "It's okay" I thought, hanging on to a semblance of hope. These are posthuman thinkers and we have been questioning human dominance, multispecies relationality and more-than-human ethics and my strategy of staying with the body, returning to the fox who has been 'made killable' (Potts and Haraway, 2010) will be effective. The silence was deafening as no one spoke, taking on an unquestioning cultural milieu "where it is "humane" and "ethical" to make certain animal bodies killable" (Lloro-Bidart, 2015, p. 93). It was time for supper and the scholar relieved the contained tension in the room with a flippant attempt at humour. "Let's go and eat some dead animals"!

Encounters with breath

Breath

A silent wind circulates supplanting disappointment that sucks the air from cavities of hopeful coexistence. To lament, to conceal, to laugh, to betray.

Affective emplacement

Creaturely displacement

Theoretical replacement.

Breath runs through these mammalian bodies that are sensing and becoming fox, breathing life into pivotal events, joining the assemblage and surveying how affect probes the connections and disjunctures within and between creaturely bodies. Paying attention to the visibility of the body in the events of this inquiry is part of an increasing focus on the biopolitics of life as an active presence of embodied, corporeal bodies, not as dissected parts, but as bodies entangled with a range of affective emotions such as joy, anger, fear and loyalty. Affects become known, not only in the storying of these moments but the visceral relations that govern action and thought emotionally, culturally, physically and metaphysically. Barthes' (1957/1972) theory of the naturalising power of myth in everyday life breathes life into the (in)visibility of slaughter. Culture trumps cruelty in this event, rendering suffering as insignificant through common sense, common consent, common worlds of what appears as 'natural'. One form of decolonisation is condoned and another celebrated. No mention of the intersectionality of simultaneous exploitation of animal and Indigenous bodies (Belcourt, 2015). The practice of trapping transforms the fox from a living subject into a material and educational object (Pedersen, 2010a). Critical theory scholars like Barthes argue that mythology, is a capitalist tactic that signifies cultural norms and truth claims. In particular, it is the way the world becomes arranged, represented and betrayed, like those nature documentaries I dislike so much, where human discourse is turned into a mythological image of nature and it becomes taboo to critique these representation as they take on a mythical status of aesthetics, culture and truth claims.

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Haunting affects of (s)laughter

This attention to the visibility of bodies is a key aspect of biopolitical thought (Agamben, 1998; Foucault, 2008a; Wolfe, 2013) that is concerned with the manipulation and control of lives and life processes. Embodiment as an ontology disrupts bodymind separations and normalised hierarchies of how animal populations are made killable through politicised life by redefining how 'the body' is entangled with power, biology and capitalism. The suffering of Animals in the process of production and consumption of food, entertainment and education is mediated and stripped of its significance through discursive normalising practices like those described in the three narratives, that render the animal body invisible. Drawing from Foucault's three drivers that keep the Other at a distance, namely difference, separation and protection. Humour is also adopted as a silencing act that protects the oppressor as objectifying laughter masks animal sufferance and death, and mocks those who raise issues of injustice. I name this practice of laughing as (s)laughter. Bacon jokes anyone? This normalising and silencing strategy of violence in the process of animal production is expressed by Wadiwal (2015).

> *If violence can be smoothed in such a way that it does not appear as violence, then the process of converting an animate sentient being into a "thing" is complete, and resistance and war become hidden under a veneer of peaceability (p. 13).*

Encultured 'smoothing of violence' is a persistent part of the data assemblage that gathers momentum over time as affective flows between relations are in constant flux. The Spinozist notion of affect (Deleuze, 1998), to affect or be affected becomes entangled with the virtual and actual data assemblage. It became clear how inventive ways of conducting research have a pragmatic power "where the work can be seen as performing its own content" (Massumi, 1996, p. 395) trying to let forces speak, or reach out in creative ways, that does not signify solutions (Fraser, 2009), but rather becomings as a continual change of state or the changing capacities of an entity. These becomings can be physical, metaphysical, psychological, emotional or social, as affects are rhizomatic, generating further affects that spread outwards in unexpected ways. These acts of bearing witness from a distance I describe in these becomings, explore the relationship of the body to animal activism in the sense that they attempt to activate the bodies of the animal species. Blood and air circulate through these bodies, with a shared precariousness (Butler, 2012) as human, pig, dog, fox are made present within a dynamic interplay of

haunting, troubling affects. Witnessing in this way as a political act attempts to observe and record the events in a way that makes them available to the imagination of others, who may otherwise look away, ignore or deny the suffering. The hauntings connect with empathy from a human perspective and compassion for the Animals as creaturely ethics (Pick, 2011), and in ways that Lockwood (2016) associates with the shared environments we inhabit.

> *That is why this exploited and abused pig with whom we share so much, who is put to death in the CO_2 killing chambers just as we are gassing ourselves to death by emitting too much greenhouse gas into our thin air – can be an icon of our times… What are we willing to do with our bodies for all of our good, before this thin air we breathe runs out? (Lockwood, 2016, p. 92)*

Cavities that contain and control

Breath circulates through cavities in these events as tension in the air, exchange of gases, collapsing lungs, whispers, forced intake of air and final gasps of life. The pigs drop into a cavity of death, the fox is contained within a metal cavity and the fighting ring traps the dogs who are convinced not to leave. The cavity of the classroom contained our group, controlling what was said and who could speak it. The hopes I had attached to posthumanism dwelled in this space, with possibilities for entangled and ethical hum(an)imal co-existence. Posthumanism falls away at this point with theoretical contradictions, onto shaky ground as the body of the fox was hidden and literally flattened by the aporia of flat ontology, despite attempts to bring her back and tend her suffering. These acts of denial and silence hold the greatest affect, extinguishing faith in theory in a way that ignites despair, with this rendering of the less-than-animal, that is always expendable. If this group of posthuman scholars could not trouble these actions, the words, the material effects, to at least acknowledge cruel practices, or intersections with other oppression; it is difficult to perceive how the paradigm of posthumanism could be helpful in disrupting humanist discourse in education. The following illustration summarises how affect circulates through bloodlines of mammalian bodies. There are signs here already of melded ontoepistemologies that keep expanding outwards in this chapter.

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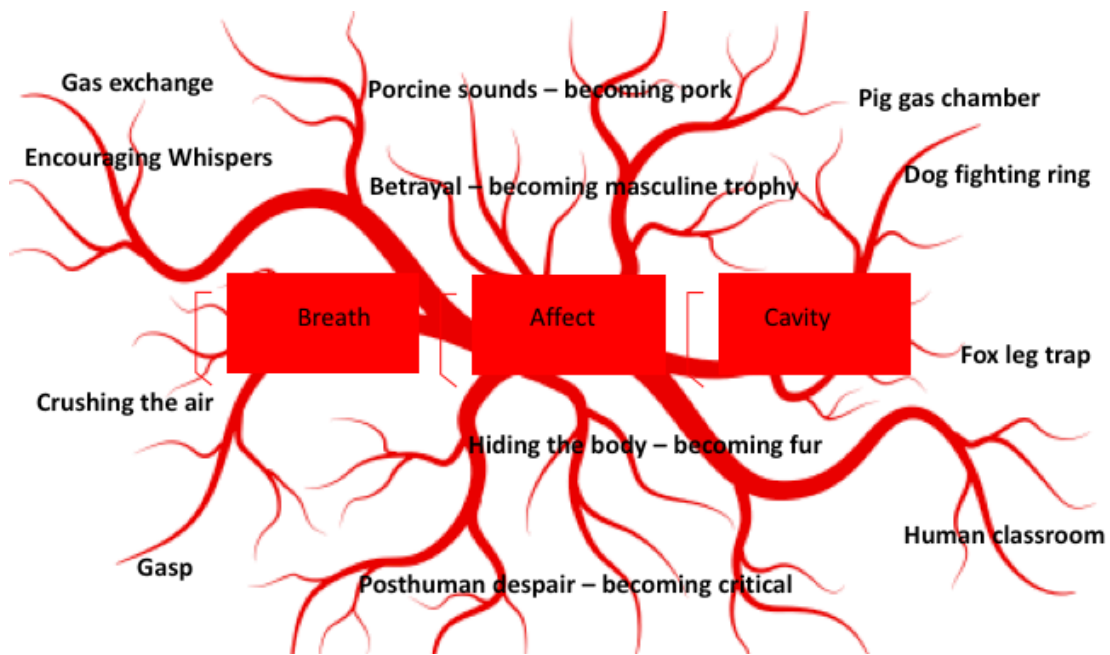
Figure 3: Encounters with breath, haunting affects and cavities of control

Critical and posthumanist becomings

> *From this vantage, the territory being studied becomes a virtual space, but for this mode of thought called posthumanism, virtual here doesn't mean less real, it means more real (Wolfe, 2018, p. 358).*

Cary Wolfe expresses how posthumanism demands expansive thought, moving beyond the tools that map the world such as language and semiotic systems, as they also cognitively distance us. Following the lives of children and animal species with posthumanist ontologies incites entanglements of difference and similarity that challenge human-animal binaries. Posthumanism offers dynamic and sometimes contradictory ideas, where the motivating force for knowledge production is "not disciplinary purity, but rather the modes of relation these discourses are able and willing to engage in" (Braidotti, 2017, p. 88). Inquiry Process embraces the porous nature of theoretical perspectives, enabling them to join forces in cluttered, affirmative assemblages of hum(an)imal becomings. Becoming expansive, becoming concept, becoming ethical, becoming biopolitical, becoming ecological, becoming body, becoming 'hum'. The convergence of posthumanism and critical theory becomes necessary as Inquiry Process exposes weaknesses in posthuman frames of reference which limit the capacity to think and act differently about animality, as they often default to humanist power relations that favour the human. To be clear, posthumanism has the potential to hide the bodies in the

way the fox got hidden under the chair in this classroom, as human power, inequity, injustice and dominion over animals is not addressed and "there is something odd about an ethical paradigm that leaves the other behind, that, effectively, renders the other irrelevant (Ruti, 2016, p. 18).

In theory critical approaches do not hide the body, however, because speciesism is a dominant construct in all human thought and action, in practice, the animal body is almost always concealed. Critical approaches sanction the ethical ambiguities at work, interrogating the social, cultural, political and economic context of institutions, like education to show how education serves the dominant cultural interests in any society, by creating a community whose members are taught to accept the mythology of their times. Adding 'critical' to the theoretical framework signifies that posthumanism as a theory is not able to challenge speciesism as cultural values and traditions "almost always remain locked within an unexamined framework of speciesism" (Wolfe, 2003, p. 1). Helena Pederson (2011b) interweaves relational posthumanism with critical animal studies to confront speciesism and oppression in her research in education. Both theories fluctuate between two different ideas, bringing new interpretive insights that question the boundaries between human and animal that challenge anthropocentric assumptions. These two theories become melded as critical posthumanism, remaining open to the complexity and creative methods of posthumanism, that Braidotti (2017) refers to as "simultaneously critical and creative (p. 84).

An overview of posthuman and critical theory is outlined, followed by a brief discussion about how the features of these theoretical approaches have been combined and put to work in this inquiry. To this extent, it is useful to further consider the lineage of how both theories came to be and to grapple with some of the ties to humanism.

Posthuman theory

The terms posthuman and posthumanist are interrelated, but not the same. Posthuman applies to a broader field of studies, including advanced robotics, technological human advancement as transhuman, nanotechnology and bioethics. Posthumanism refers to a detour but not abandonment of humanism. Posthumanism as knowledge production confronts how changes in society across time and place require researchers to rethink the

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human, theoretically, methodologically and ethically. There is no singular form of posthumanism as it is a theory that is synonymous with within multidisciplinary approaches. Humanist epistemology is no longer adequate, and 'post' ontologies extend beyond anthropocentric worldviews, towards entangled, complex relations with more-than-human, animal species, environments and technology. Barad (2007) describes posthumanism not as something that comes after humanism but, rather, a way of being attentive to the construct of the human in its various entanglements with more-than-human 'Others'. Similarly, Haraway (2003) emphasises becoming-with the symbiotic nature of all life and choosing the term "compostist" (Haraway, 2006, p.101, rather than posthumanist as we are all living and decaying matter. Wolfe (2010) illustrates that in an effort to recover the human rather than transcend it, the human in this imagining is not the autonomous, rational subject that humanism gave to itself; rather, it is a notion of the human that is aware of its:

> *...embodiment, embeddedness, and materiality, and how these in turn shape and are shaped by consciousness, mind, and so on... It allows us to pay proper attention to the material, embodied, and evolutionary nature of intelligence and cognition, in which language, for example is no longer seen (as it is in philosophical humanism) as a well-nigh-magical property that ontologically separates Homo sapiens from every other living creature. (p.120)*

The integrated nature of the human with the more-than-human can be illustrated through human-animal-animal hybridisations that are dismissed and disregarded by humanistic exceptionalism epistemology. The use of leaches to heal wounds, for example or understanding the microbes and parasitic settlers that occupy the human body are perceived as primitive medical practices that do not align with modernist medicine. Even though there is a resurgence in understanding the microbiome and how these life forms can be beneficial to human health, it has taken a long time to acknowledge how symbiotic, hybrid assemblages are literally embodied and embedded within human flesh and functions. Haraway (2013b) playfully reminds us during a lecture that we have never been human, "we are bacteria, having a human experience" and Nayer (2014) suggests we have always been posthuman "who counts as fully, properly, human? And what is *only*, or *merely*, an animal" (p.80). Posthumanism pays attention to these biopolitical, material and historical contexts, asking what it is to be human in relation with other species, other nature, other matter and other cultural agents. Posthumanist ontology grapples with what it is to move beyond the constructed boundaries of being human, to becoming liberated

from the constraints, to an awakening of the more-than-human, where the human and the more-than-human emerge to define each other in mutual relations. More precisely, a posthumanist worldview rejects the essentialist separation between human-animal, emphasising hybridisations of life and their intra-active interplay.

The philosophical beginnings of posthumanism resides in poststructural thinking from the continental philosophy tradition and ecofeminist theory. Inquiry Process draws substantially from the writings of Gilles Deleuze (1986/1988; 1968/1994), Deleuze and Felix Guattari (1980/1987), Jacques Derrida (1967/1997, 1982a, 2000, 2006/2008) and Donna Haraway (1991; 1992; 2003). These authors combine poststructuralism, bodily materialism, and ecological feminist philosophy to continue the humanist inspired project of asking 'how ought we to live together,' while recognising the overlapping ontologies of animal, human and machine. The work of recent post scholars includes: agential realism and diffraction, Karen Barad (2003, 2007), actor-network theory (ANT), Bruno Latour (2004a, 2005), companion species, Donna Haraway (2003, 2008), animal rights and biopolitics, Cary Wolfe (2003, 2010; 2013) and new materialism, Jane Bennett (2010). Scholars in this diverse interdisciplinary space traverse material and relational histories as the image of science as neutral and objective is questioned, highlighting the various aspects of science that reveal it to be very much a social enterprise; affected by social constructions, hegemonic powers and inequities. Thus, histories of posthumanism consist in an ongoing undecidability of the future of living on a fragile planet.

Critical theory

Critical theory originates from Marxist thought, anarchism and the Frankfurt School where Theodor Adorno, Max Horkhelmer and Herbert Marcuse developed critical cultural analysis and social critique of western history and culture (Outhwaite, 2012). Animal exploitation was also considered under this critique, a rare ideology in philosophy (Pedersen, 2010a). Critical theory and pedagogy enacts radical resistance epistemologies, "they are firmly grounded in the world, which means that they take real-life events and, by extension, power seriously" (Braidotti, 2017, p. 85). Critical pedagogy was devised by Brazilian educator and activist Paulo Freire and subsequently by scholars including, Michael Apple, Peter McLaren, and Henry Giroux and Joe Kincheloe (Kincheloe, 2011),

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who have continued to devise pedagogy about, with and for social justice, advocacy and activism. Helena Pederson is one of the few scholars who align critical animal studies with critical pedagogy in studies of education (Linne & Pedersen, 2014; Pedersen, 2010a; Pedersen, 2010b, 2013, 2017) and she guides the flow of ideas in chapter eight as we venture further into troubling territory. Critical theory and pedagogy are self-reflexive practices with long histories in education that challenge the power structures of dominant discourse that marginalise and penalise through race, class and gender, deconstructing what they are, how they work and how they can be resisted. Critical perspectives have been condemned for their failure to challenge humanist epistemologies (Haraway, 2008), for not being future-forward (MacLure, 2017) and failing to move on from reductionist ideologies that debunk, towards those that assemble (Latour, 2004b). Whilst tools that acknowledge and address these inadequacies are available within critical reflectivity, the ideology is grounded in humanist traditions and therefore insufficiently self-critical however, all theory, including posthumanism has the potential to obscure animality and become attached to its own dogma.

Inquiry Process wonders how theories and philosophies of ecology, education and human-animal studies can assemble within a posthumanist critical inquiry? Inquiry Process uses indicators in chapter six that highlight differences between critical and posthumanist theoretical perspectives that extends conceptual understandings of these transdisciplinary approaches. This in turn strengthens the philosophical inquiry exploring how hum(an)imal relationships could be (re)conceptualised. The approach adopted by Inquiry Process comes back once more to a type of territorial diplomacy that balances molar critique with inventive, molecular vitalism. Noticing, describing, imagining the togetherness of things, whilst also deconstructing and reconstructing. Keeping reservoirs of hope alive, whilst maintaining the rage against injustice. As Brian Massumi suggests "it's a question of dosage. It is simply that when you are busy critiquing you are less busy augmenting" (2002, p.13). Thus, critical posthumanism minimises the dichotomy of the theory wars (my theory is better than your theory), between totalising perspectives that cannot see the other point of view.

Key concepts of critical posthumanism in this inquiry include:

- Experimental and speculative work
- Challenging anthropocentrism and humanism
- Aligning historical and geographical contexts
- Hum(an)imal aporia
- Earthly ethical relations
- Shared futures that dismantle injustice and speciesism

The need for experimental and speculative work is addressed in chapter four as methodology is (re)marked, describing how and why alternative ecologies for living and becoming are adopted by Inquiry Process. The following discussion in this chapter explores the five remaining concepts that shape the theoretical framework.

Challenging anthropocentrism and humanism

Human exceptionalism and instrumentalism are part of posthuman decentering. Posthumanism is situated at the intersection of humanist paradigms that revere the exceptional human as distinct beings, in an antagonistic relationship with their surroundings, with dominion granted by the cogito of language, culture and scientific endeavour. According to Wilson and Haslam (2009) humanness can be considered "as an essentialised, species typical human nature and as a non-essentialised human uniqueness that distinguishes humans from other species (p. 257). Humanism exaggerates the case for human exceptionalism leaving little room for exception in other species to the extent where animal difference and achievements are overlooked, silenced and rendered invisible. Posthumanism on the other hand extends embodied relational continuities with an "extended technological world" (Pepperel, 2003, p. 1), seeking possibilities for circumscribing humanist privilege with discourses of animality. Posthumanism extends what it is to be human without either a rejection or transcendence of humanism (Wolfe, 2012b). Disrupting the human experience and anthropocentric dualisms in this way raises an important question, "what if the human doesn't have to be the measure" (Snaza & Weaver, 2015, p. 3) of ecological entanglements?

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Expanding the ways early childhood education is measured by decentering the human and recentering the more-than-human, enables posthumanism to become a reterritorialising tool in education. Firstly, spaces of learning are opened to seeing, listening, sensing and theorising the more-than-human experience in everyday life and not only through the all-knowing human. What changes in thought and action are possible if the human is decentred? This is not easy to contemplate, for as Rautio (2017a) points out, "to envisage new answers to the question of animate life on Earth is to overcome decades of sedimented ontologies - settled ideas, lived constructs, privileged positionings and understandings of what it is to be human" (p.723). A critique of humanism challenges species hierarchy and human exceptionalism. It honors the exceptionalisms of others, seeking to know how power and desire are theoretically and politically enacted to expose "power both as entrapment (potestas) and as empowerment (potentia) in the production of knowledge and subjectivity" (Braidotti, 2017, p. 84).

Secondly, as a consequence of these realigning processes it manoeuvres attention to how determinedly humanist almost all educational philosophy and research is, revealing the need for new directions in research, curriculum design, and pedagogical practice. This realisation is a revelation for new ways of seeing education, for whilst posthumanism has become a driver of inquiry in the fields of arts, human-animal studies and human geographies, there is less research that describes the praxis of posthuman methodologies and methods in ECE (Osgood & Scarlett, 2015). Critical posthumanism for example, is rarely included as part of studies in education. (Herbrechter, 2013; Pedersen, 2011a, 2011b, 2011b). As Weaver (2015) points out education is where "the focus of creative culture and taming forces of civilisation meet head on" and posthumanists "are missing the sites of where the tensions of posthumanism and humanism play out" (193). Critical posthumanism provokes insights and practices that problematise humanist dominance "that is mirrored and, even magnified, in and through acts of education" (Letts & Sandlin, 2013, p. 2) by challenging how pedagogies are tangled up with, and used by regimes of power and cultural dominance. Inquiry Process seeks to question how connections and disjunctions between children and animals in early childhood can be understood in relation to environments, cultures, and ethical practice? Are speciesist practices for example discussed or ignored? Are ethical issues of sentience, autonomy and oppression considered (Pedersen, 2010a) and how are topics such as food production and

hunting discussed at mealtimes or the containment of animal species in zoos and aquariums during excursions or in picture and story books?

Historical and geographical contexts

By decentering the human, spaces are opened for 'posthuman performativity' "that incorporates important material and discursive, social and scientific human and non-human and natural and cultural factors" (Barad, 2008, p. 126). Barad (2008) proposes that the performance of things, concepts and events requires a genealogical analysis of the geographical and historical relationships between discursive practices and material phenomena. Historical and geographic contexts are key aspects of both critical and posthuman theory, with differing ontologies. For Foucault, (1980) discursive practices produce historically situated social actions that are contextual and not just attached to words. For example, discursive practices can be unspoken and unwritten where groups of people accept, over time that that this is the expected way for things to occur. Sometimes this is unquestionably named and normalised as a natural order or as common sense. For Haraway (2016) situating knowledge production in historical contexts of natureculture and technoscience for example, identifies ideological and political power relations that take place through cultural practice. Cultural-historical perspectives for Haraway are not enough unless they locate and "critically examine where and how authoritative knowledges are produced" (Faber McAlister, 2010, p. 128). Posthumanism is less interested in the representation of material phenomenon such as what is looks like or what is says, but rather what it does and critical approaches are interested in the phenomena as material effects have the capacity to influence power. Critical posthuman understandings of these genealogical connections helps to question the effects of humanism for human, animal and machine.

Hum(an)imal aporia

In offering these historical and geographical accounts of critical posthumanism it is clear that boundaries between human, animal and machine are being tested. These boundaries create constant aporia, the state of contradiction and doubt, as the Animal is both loved and killed, subject and object, flesh and machine, desired and disposable. Three concepts move in an out of Inquiry Process in these experiments of boundary (re)making, namely

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becomings, attunement and hum(an)imal that work together in the inquiry, in different ways. Hum(an)imal relations will continue to be conceptualised throughout Inquiry Process as a type of 'oneness' of co-dependence. The 'hum' moves through the contexts and complexities of relating when competing ethical tropes are in play, transporting issues of justice, difference, ethics, and equity to the the forefront of hum(an)imal ontoepistemology. This is in contrast to the thinking of 'becoming-animal in Deleuze and Guattari's (1987/2004) 'A Thousand Plateaus', that is guided by a nuanced virtual relatedness between humans and the more-than-human that is not defined by ontologies of being, but movements of doing "that are not about the more familiar relations of pity, identification, analogy, imitation, representation, resemblance, or reproduction" (Neumark, 2017, p. 37). Becoming animal, as one life among many and always traversing between interactions and dispersed subjectivities to 'becoming minoritarian' takes place according to (Deleuze & Guattari, 1987/2004) by leaning outward to join the animal pack. Attunement is more grounded in earthly realities of the everyday, unlike becoming-animal that "feeds off a series of primary dichotomies figured by the opposition between the wild and the domestic" (Haraway, 2008, p. 28). Relations of attunement lean inward to the individual, to affect, to the with-ness of bodies that intra-act through Despret's (2013c) notion of "embodied empathy"(p.69) and her understanding of bodies, affect and emotion as "mediating devices" (Despret, 2016, p. 15).

The animals uncertain and ambivalent status is also hitched to aporia in a priori models that flatten human–animal-matter differences into homogenous identities with the desire to decentre the human and bring the assemblage of human, animal, matter to the fore. Haraway (1980) adopts the hybridity of the imagination and the material in her 'Cyborg Manifesto' to deconstruct the human through ambiguity. "We are all chimeras, theorised and fabricated hybrids of machine and organism; in short, we are cyborgs" (Haraway, 1980, p. 150). This flattening ontology can be helpful for disrupting normalised human boundaries of race and gender, however, it can sideline the Animal into the shadows, as some cyborgs are more equal than others, reducing their ability to resist and bite back. Shining a light on the aporic relations between humans and other animal species reveals the fleshy animal knottings and animalistic constitutions. Critical vigilance is required as these ontologies are filled with traps and landmines that restrict the building of bridges across the human-animal divide. Hum(an)imal aporia recognises the light and dark of these complex relatings and rather than erase, conceal or resolve uncertainty, such

ambivalence foregrounds the limits of language and representation by highlighting the contradictions of speciesism.

Ethical relations of possibility

Critical posthumanism implores us to become implicated in the times in which we live, and to meet the ethical challenges of interspecies relations. Haraway (2008) refers to this as learning to inherit and respond, and Inquiry Process shifts the exclusive focus upon the individual child to one that attends to ethical relations, including interspecies relations. Critical posthumanism in this study highlights the assemblage of human and more-than-human actors such as the animals, plants, affects, discourses, institutions that are constituted through unfolding relations across bodies and within environments that are always vibrant and ever-changing (Bennett, 2010; Lenz-Taguchi, 2011). To this extent, these theories accentuate the relational fields of possibility, bringing alternative ways of relating into sharper focus as "ethical, political, and pedagogical implications of addressing the colonial histories and material geographies" (Pacini-Ketchabaw &Taylor, 2015, p. 2) that shape children's more-than-human encounters become known. Critical posthumanism draws attention to the production of the human in its various entanglements (Pyyhtinen & Tamminen, 2011) where the exceptional human is not distinguished and separated from animals, plants and material forces, nor is culture set apart from nature.

Entangled futures that dismantle injustice and speciesism

Learning to inherit and respond to the complex and messy legacies of the anthropocene, helps to explore shared futures that acknowledge the entanglements of lifeworlds. "We will not see justice for animals by deconstructing species. Rather, species must be included in the agenda for critical social science" (Cudworth, 2011, p. 13). Post approaches in this research for example are attuned with ethical ontoepistemologies of response-ability (Barad, 2012; Haraway, 2008), recognising that seeing the 'Other' as different has to be more than relative mutual recognition, for response-ability requires an eradication of otherness and assimilation of difference. Subjectivity, thus, is never fully accomplished, and is always under constitution as entangled with others. Karen Barad (2007) conceptualises the inseparability of ethics, ontology and epistemology in research

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as knowledge production with subject-object 'intra-actions' that carry ethical responsibilities, perceived through our empathetic responses to being in the world. Inquiry Process therefore attempts to pursue justice and coexisting relational coordinates that "unites the creatures of being against the creatures of knowing" (Lukasik, 2013, p. 10).

Animals ignite animality when we look in the mirror to see beyond the image of 'us and them' to un-think the human and see not what separates the divide, but what brings us together with possibilities for shared futures with interspecies ethical relations. "Once we accept that we are difference, perhaps we will cease to be worried about difference as Other" (Nayer, 2014, p. 156). In past writings about primates for example, Haraway identifies how being human is articulated through animal otherness as "we polish an animal mirror to look for ourselves" (Haraway, 1978, p. 37).

Haraway's more recent works (2003, 2006, 2010, 2012, 2013a) sets the 'important' human aside as she calls for relational ontologies where animals do not reflect humanity in the mirror, because they (re)make each other. This remaking has been theorised through cosmologies of difference that reconstitute identity politics and disrupt what it means to be human as an immanent critique of living together on a troubled planet. Haraway continues to rework the terms 'posthuman and anthropocene', moving from cyborg, to companion species to being compost as Chtonic beings of the Earth living in the "Chthulucene' - past, present and to come" (Haraway, 2018, p. 81). Haraway's ideas identify shared futures in the shifting landscapes of what it means to be human, with her making kin with the gender politics of cyborgs, breaking bread with more-than-human companions and becoming composted through kin relationships that embrace the cross species "dance that links kin and kind" (Haraway, 2008 p.17). As highlighted Haraway, along with other posthuman scholars adopt a lack of radical critique, that glosses over human-animal power relations in favour of processes of relating such as connecting-with and enriching animal lives, whilst still upholding domination and oppression of animal species. This type of welfarism (Cudworth, 2011) is reminiscent of 'Meat Free Mondays' that introduces the concept of learning how to live with less meat that would not be acceptable in the same way if a 'Child Abuse Free Tuesdays' was proposed, as there is less social acceptance for animal liberation for meat production than human child abuse.

Critical posthumanist theorising opens up sink holes in these relational discussions identifying how they traverse only parts of the landscape, where the effects of human social power on animal species who are marginalised, exploited and oppressed are habitually denied. Territorial holes are flooded with light so troubling ideas cannot hide as they cling to the dark sides, pretending they are not there. Critical posthumanism in this inquiry acknowledges this injustice and shows how "human centrism, human power and social justice provided by elements within political ecologism and critical animal studies" (Cudworth, 2011, p. 13) are also needed to guide the way.

An assemblage of philosophical companions

Philosophy in general has never quite known what to do with animals or where to place them on the conceptual map. (Calarco & Atterton, 2004, p. xvii)

Critical posthumanism has been located within the six concepts defined thus far that highlight political and cultural theoretical understandings of human-animal relations. A gap is still present, and Inquiry Process seeks philosophical guides and companions to stick around after the banquet, whom are eager to traverse the territory, stirring up the dust of the events, knots and thinking of the relational terrain of hum(an)imality that many have not ventured through before. A consensus is shown for routes that bypass the dualisms of Western thought, in favour of alternative courses by which animality might be conceptualised. The terrain ahead unsettles notions of species boundaries, contributing to emergent conversations which expose the erasures of the humanist negation of animality. Post philosophers Deleuze and Guattari, Derrida and Haraway have already made their presence felt along the way providing tools-for-thinking and energising signals that take us out of normative spaces. Deleuze-Guattarian influences in particular generate continuities as becomings in ways that are affirmative, rather than oppositional. New guides Helena Pederson, Rosi Braidotti, Valerie Plumwood, pattrice jones and Erika Cudworth join the travels with critical, ecofeminist ontologies that bring new concepts to the fore. Feminist scientists such as Karen Barad extend posthumanist and new materialist concepts as non-binary, non-essentialist and material-discursive phenomenon. These

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conceptual interpretations are then applied to knowledge generating practices in this inquiry.

Michel Foucault joins the territory in chapter six guiding the discourse and apparatus of power and knowledge and whilst Foucault did not write explicitly about animals, his ideas of socio-political theory have been widely adopted in various fields of inquiry and some HAS scholars (Cavalieri, 2008; Chrulew & Wadiwel, 2017; Palmer, 2001a) consider how Foucauldian concepts could forge new critical posthuman pathways. Pathways that Foucault chose to overlook. For example, his concepts on human life as biopolitics, labour as productive capitalism and language in culture can be attributed to animal life (Nayer, 2014). Foucault's theorisation of discourse (Foucault, 1970, 1972), also enhances the line of inquiry with an emphasis on how the materiality of language and discourse are always entangled and critical researchers wishing to explore power relations can gain deeper understandings of the relationship between discourse and materiality. Foucault challenges separating matter from language, not only because he is obviously attached to humanist ideas of the speaking human, but is also drawn to the intra-actions that are minimised when only seeing "the enigmatic treasure of 'things' anterior to discourse" (Foucault, 1972, p. 52) because this dismisses how power is constituted through language to "systematically form the objects of which they speak" (Foucault, 1972, p. 54). Discursive and material effects of human and animal relations are therefore present in the knowledge and representations of childhood and in the pedagogies, curricula, policy and governance of institutions like education.

Ecofeminist becomings

We call her mother Earth, so we can sanctify her rape. (Author unknown)

When Charles Hopkins the UNESCO Chair for Education for Sustainable Development commenced a speech with this inflammatory quote at a conference many years ago, it prompted the audience to gasp and enabled Inquiry Process to cast it to memory. This quote travels through ecofeminist sensibilities that draw on knowledge from ecology, feminism and socialism, finding overlaps between "the domination of women and the domination of nature" (Warren, 1990, p. 126). From this perspective, Sheldrake (1994) traces the history of maternal metaphors with a bountiful Mother Earth who is both fertile and generous and wild and destructive. The association between nature and feminine names is a part of many European words for 'nature'. "The latin word *natura* literally

meant 'birth'. The Greek word *phusis* came from the root *phu* – whose primary meaning was also connected with *birth*" (p.10). Judeo-Christianity shifted the idea of Gaia or Mother Earth and by the seventeenth century "Nature was no longer acknowledged as Mother, and no longer considered alive. She became the world-machine, and God the all-powerful engineer" (p.22). Carolyn Merchant (1995) conceptualises earthcare as ecofeminist ethics that "neither genders nature as female nor privileges women as caretakers, yet nonetheless emerges from women's experiences and connections to the earth and from cultural constructions of nature as unpredictable and chaotic" (p. xii).

Ecofeminists have been at the forefront of both theory and practice in human-animal studies and the ecological movement (Potts & Haraway, 2010). Ecofeminism espouses how environmentalism is entwined with women's emancipation and other forms of social justice. These scholars, writers and activists include Carol Adams, pattice jones, Greta Gaard, Lynda Birke, Vandana Shiva, Valerie Plumwood, Marti Kheel, Alice Walker and Annie Potts who critique ideologies of patriarchal exploitation and oppressions of nature, by surveying the intersectionality with race class, gender, sexuality, physical abilities and speciesism. Ecofeminist theory helps Inquiry Process challenge binaries and dualisms that dominate anthropocentric thinking between self and other, mind and body, society and nature, human and animal and embrace the commonalities and differences of these entanglements. Ecofeminism is also attached to ethics and Karen Warren devised a framework that aligns ethical decision making with the principles of feminism (Warren, 1988) whilst Barad (2007, p. 90) defines "ethico-onto-epistem-ology" as the everyday ethical entanglements that are inseparable from knowledge and being-of-the-world. We are not innocent bystanders observing life through a fish bowl, being voyeuristically comforted by the stylised aesthetic of nature documentaries and viewing the world as a "god trick" (Haraway, 1988, p. 581). For humans are always ethically embedded and implicated with and as Earth dwellers.

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Material becomings

Matters of matter or the 'new materialisms' have emerged with a plurality of approaches and disciplinary perspectives that challenge ideas of natural and material worlds constructed only as resources for human consumption, economic production or social construction (Bennett, 2010). Central to this movement is the extension of the concept of agency and power to the more-than-human, thus calling into question conventional understandings of the vitality of life. Inquiry Process poses two questions that invite theories attached to new materialism into the territory where children and animals dwell. What happens if attention is paid to the potentiality of diverse agential matter and what could a critical posthuman and new materialist ethic look like in education? Materiality and affect are often dismissed in research as the human subject takes centre stage. New material approaches are therefore posthuman as the objective is to not only bring the human, non-human and more-than-human into inquiry, but to know they are already there. Indigenous ontologies are also helpful as they are strongly materialist in their recognition of the agency of nature and liveliness of matter that is relational, embodied and embedded (Horton & Berlo, 2013). Karen Barad (2003) also theorises 'posthuman performativity' through a 'new materialist' framework, attending to nonhuman (animal or technological), contending that discourse, matter and biology are important in holistically understanding virtual and actual worlds. By way of this framework, matter is understood as agentic, emergent and dynamic rather than passive or essentialist. New materialism also prompts reconsideration of ontology, epistemology, ethics and politics, challenging Cartesian dualisms between mind/matter, thought/knowledge human/animal, and nature/culture, and instead arguing that they are inherently entangled as 'ontoepistemologies' and 'naturecultures'.

For example, we share a planet with a conservative estimate of 8.7 million species and 86% of all plants and animals on land and 91% of those in the seas have yet to be named and catalogued (Mora, Tittensor, Adl, Simpson, & Worm, 2011). This quantitative assessment of the taxonomy of life is part of the separation process, but can also be seen to challenges human exceptionalism, when humans are one species among the multitudes of many who dwell within the multitudes of many more who are unknown. How would our notion of reality change if we asked different questions? What phenomena are therefore out of the realms of human thought? What is unknowable? How much of what makes humans-human dwells within the animal territory and how human are we when

we share and intra-act with more-than-human others? These ideas are further exemplified by Hiroch (2013) highlighting the deception of separation:

> *Further, if we consider more recent explorations of our genetic composition for evidence of the ways in which we dwell in other species, and other species dwell in us, comparative geneticists note that we share 99.9% of our DNA with other humans, 99% with mice, 95% with bonobos, 75% with pumpkins, 70% with sea sponges (and, though they are not animals, 50% with bananas). And finally, if we consider sub-genomic, and indeed, sub-cellular, atomic scale of our existence, we learn that by mass we as humans are composed of 65% oxygen, 18% carbon, 10% hydrogen, 3% nitrogen, and 1.5% calcium. This means that not only are we animals, and not only are we related to all other living entities, throughout our lives and after our death, we are also in a perpetual process of sharing and exchanging component elements with our earthly habitat—the atmosphere, the soil, the ocean, and stones. (Hiroch, 2013, p. 19)*

Attending to the sensations and intra-genetic movements that Hiroch outlines traverses ecological connections of earthly and elemental bodies. Dolphijn and van der Tuin (2011) acknowledge that thinking with matter attempts to break from notions of transcendental universalism of cultural discourse and materiality. This is not an 'add-on' of the 'material' to other theories but a way of conceptualising how matter, living entities, forces like weather, or mineral elements intra-act as they "mutually constitute each other in a process of making themselves intelligible to the other" (Lenz Taguchi, 2013, p. 712). New materialism, like other post-theories engages through questions, and radical ideas that challenge dominant notions. "By pushing dualism to an extreme, 'difference is pushed to the limit'. Consequently, by radically rewriting the emancipatory dualisms of modernity, new materialism precisely becomes a philosophy of difference that opens up for a 'new' ontology" (Dolphijn & van der Tuin, 2011, p. 383). New materialism theories attend to material (active, agential and affective matter) and embodied knowledge.

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Chapter summary

This chapter frames critical posthumanism becomings as a theory to think and act with, releasing potential new pathways to wander in response to the research questions and thinking that moves through and with Inquiry Process. Relations between children and animals in early childhood is the primary question and this chapter aligns with the sub-question that asks: how might early childhood education (re)make possibilities for ethical relations and ecological justice through multispecies entanglements? Inquiry Process commences this chapter by describing how becomings assemble critical accounts of history, culture, economics and biopolitics, that act as catalysts for the oppression, captivity and control inherent in speciesism. These ideas assemble in the territory where children and animals dwell with the desire to decentre the human. Territorial paths welcome the more-than-human, Animals, bodies, objects, affect, speculative companions, powerformers, technologies and geophysical configurations to illuminate the blind spots of humanistic terrain. An intriguing combination of critical, theoretical and philosophical approaches assemble eager to awaken the territory. By offering a brief overview of ecofeminism, new materialist approaches and critical animal studies, Inquiry Process lays out why multiple perspectives are needed to unsettle the complexity of the inquiry and the research data.

As the remaining guests depart and the banquet draws to a close, sleep is on the minds of all have taken part in the lengthy celebrations. The post entanglements of this chapter bump headlong into the fieldwork, tainting methodology, and what was thought to be known. After generating qualitative data through a narrative inquiry, it became clear that this methodology was not able to recentre the animal, even in partial or limited ways, nor take the kind of risks Inquiry Process was demanding. The territory required a shift of direction, capable of entering and altering the terrain. This acknowledgement at a crucial phase in the data generation led to the adoption of postqualitative processes that remark the territory where children and animals dwell.

Chapter four: (Re)marking the territory where children and animals dwell

Introducing the process ontology

Some of the major disasters of mankind (sic) have been produced by the narrowness of men with a good methodology. (Whitehead, 1929, p. 12)

Instead of methodology I prefer movement of thought. Too many methods seem to prevent thought from moving. Analytic or interpretive thought that is moving is more likely to allow and recognize movement in the thought being interpreted. (Frank, 2010, p. 73)

The path widens in this chapter as 'post' thinking continues to flood the territory with complex ideas and obstacles. The purpose of the posts (posthuman and postqualitative) in this inquiry, is not to clutter and complicate the landscape, but rather to slow it down and awaken 'post' research ontologies that strengthen ecologies of thought in the inquiry assemblage known as the territory where children and animals dwell. The fluid interplay of philosophical 'posts', described in the previous chapter, moves beyond humanistic world views and assumptions of knowledge (Taylor, 2012), towards 'posts' ontologies that seek alternate epistemic openings of inquiry. Postqualitative research emerges as a means to disrupt and challenge representations of truth, being and absolute knowledge (St. Pierre et al., 2016). This thinking is always in-motion, never settled or complete, moving through data events as 'thought in the act' (Manning & Massumi, 2014), that transpire through practices of sensing, reading and writing, generating intricate paths and patterns that do not rely upon the strong foundations or well-trodden paths of prior methodologies. Postqualitative thinking is therefore a process ontology where the doing of the inquiry is mapped, to enable new wonderings and concepts to continually arise. Inspired by Derrida's notion of sous rature (under erasure) and St. Pierre's (2015) counsel to change mechanised terminology, terms like ~~methodology~~ (inquiry) and ~~method~~ (practices) and ~~analysis~~ (interpretations) are initially struck out in this chapter as a way of indicating that the term and concept are "being deterritorialized and reterritorialized as a rhizomatic process that does not engage in methodological considerations in a conventional way" (Masny, 2009, p. 16).

The chapter travels across six terrains. First, it begins as postqualitative scholars inspire becomings in this chapter, guiding the way of the wayfarer and introducing why the

territory needed to become (re)marked. This remarking creates a change of methodological direction that moves within the second space as inherited patterns of scientific knowledge production are set aside for postqualitative "spaces of transit" (Lenz Taguchi, 2012, p. 272). The third space explores the territorial assemblage, showing how data generation practices take place within family and early childhood contexts. Children's interactions and experience with animals provides a canvas for the inquiry, so paying close attention to the practices through which children encounter animal species at home and within their education setting reveals intra-actions between early childhood pedagogy and political, social and material histories. The fourth space expands outward showing how the territory research assemblage and inquiry practices (un)fold within the inquiry. These practices venture to the fifth space as a photograph prompts a narrative about a captured fish that continues to mark the territory with ambivalence of human-animal relations. The sixth space outlines the processes and practices of the combined analysis/interpretations/discussions and how they appear in the thesis.

Becoming wayfarer

> *As the pen rises from the page between words, so the walker's feet rise*
> *and fall between paces, and as the deer continues to run as it bounds*
> *from the earth and the dolphin continues to swim even as it leaps again*
> *and again from the sea, so writing and wayfaring are continuous*
> *activities, a running stitch, a persistence of the same seam or*
> *stream.(Macfarlane, 2012, p. 145)*

The naturalist writer Robert Macfarlane espouses walking as a sustenance for thoughtful writing where entanglements with landscape, wondering and the practice of wayfaring become helpful partners. Walking is featured as method and practice in the data generation process of this inquiry so becoming wayfarer enabled nomadic practices to emerge. Macfarlane is part of a tradition of first-wave Western, humanist nature writers such as Henry David Thoreau, John Muir and Aldo Leopold (Dickinson, 2013) who document the grand narratives of wilderness and nature in North America. There is a contrast between these grand narratives and those of ecofeminist scholars who write about the everyday small encounters. Rachel Carson (1951, 1956, 1965) writes with land, sea life, flora and fauna, Robin Wall Kimmerer (2003) with mosses and Alexandra Horowitz (2009, 2013) the up-close elements present in all life-scapes prompting us to see, sense and know. The territorial becomings of the inquiry provide temporal retellings of the assemblage that move beyond experience towards places of interpretation and conceptual

expression. Engaging with Ingold's (2011a) concept of wayfaring, provides an alternative becoming-centred understanding of movement that is significant in this study as walking is already part of the practices of the early learning centre where field studies take place with children who wander and wonder through territory, providing lessons in wayfaring. Becoming wayfarer shifts from controlling the research space and participants, to letting the assemblage unfold and slowdown in the way of the wayfarer, that rambles along unexpected routes. Becoming wayfarer through movements of thought and body, incites nomadic practices of travelling as a sensing and expressive act, that makes and remakes methodological choices that implicate a particular view of knowledge and reality. This enlists theory and concept to think and act with the assemblages of living creatures, matter, places, and histories.

Wayfaring also enabled Inquiry Process to shift methodological tracks, letting go of the rules of qualitative narrative methodology, casting aside maps of the known with the desire to bring the research alive through practices that diffract (Barad, 2014) and de/reterritorialise. Wayfaring becomings begin with mo(ve)ments of affect in the middle of the inquiry as I sit in a lecture theatre listening to Elizabeth St. Pierre unveil the history, purpose and rationale for postqualitative approaches at a research conference. Something starts to stir. The field work and data generation have recently been completed, leaving me with uncertainties about qualitative methods that require order and logic; where territorial data is messy and unwieldy. This first encounter with postqualitative methodologies and inventive methods (Lury & Wakeford, 2012) is emancipating and I leave the auditorium with the anticipation of change in the air. Deleuze describes this process of embodied becomings of affect: as "the perception of the situation, the modification of the body and the emotion of consciousness in the mind" (Probyn, 2010, p. 77). Rautio (2013) speaks to this situation directly offering acts of methodological resistance and awakening. "Interrupt yourself as a researcher, stay on your toes, change methods in the middle of your data-collecting phase if that is what it takes" (p.414). So, I did.

Wayfaring becomings are joyously liberating and also tinged with trepidation. Once the flourish of excitement of abandoning reductionist epistemologies dissipates, the realisation set in that inserting the process of research into the habits and formulas of the past is no longer an option as few established routes, research studies, 'how to' guides

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and "histories and implications" (Taylor and Hughes, 2016, p.1) are available to lead the way in a postqualitative inquiry. Consequently, as the researcher I am implicated, affected and entangled by what unfolds in the research assemblage, through 'tentacular thinking' (Haraway, 2016), the deep thoughtfulness, that invites researchers to become wayfarers and recognise themselves as entangled. Postqualitative pioneers such as Maggie Maclure, Pattie Lather, Elizabeth St. Pierre, Hillevi Lenz-Taguchi, Lisa Mazzei and Alecia Jackson are drawn into wayfaring conversations, offering guidance and reiterating the need for original ideas and concepts that birth 'inventive methods' (Lury & Wakeford, 2012), unique to the study under question. St. Pierre (2014) clarifies the need to begin with theorising ourselves, being open to becomings that are yet to come. This is arduous, but also freeing. We can reimagine things differently. I had to go back to theory and read and analyse, for it is here where becomings take place. "If we've done our reading, I wager we cannot not put it to work. It will have transformed us – we cannot think and live without it. We will be living it" (St. Pierre, 2015b, p. 92). I practised learning how to not be in charge (Tsing, 2013) and trying to become humbly decentred to see who or what else steps up to show the way. It is challenging work that took a long time. I worry time is slipping away in my candidature as Inquiry Process is entangled with circular patterns of chaotic thinking, until I notice that circular forces enable the unexpected to blow in. St. Pierre (2015b) references Foucault and Deleuze as experimentalists who work this way, acknowledging that the new is already here and cannot be sourced or traced through repetition of the well-trodden paths of qualitative manuals and 'how to guides' as these lead to the same places. It is when you make your own paths, going off the beaten track towards the unknown that the new and different appears. This means that the process cannot be driven by method as this comes later or for St. Pierre "it will always come at the end, too late" (2015b, p. 95). Once I stopped looking for directions and put the readings to work by thinking, planning and writing in non-linear ways, things started to move, and I was ready for territory to become (re)marked.

Marking the territorial posts

> *It might be hard to believe that the release of the bladder is a 'communicative act' right up there with polite conversation between friends or a politician orating before his constituents. At some level, it is like both of these: it is part of normal dog sociality, and it can also be a bellowing self-promotion writ on a hydrant". (Horowitz, 2009, p. 115)*

Changing from a qualitative to postqualitative methodology marks a seismic shift in the inquiry as the assemblage reassembles, becoming remarked with a changing paradigm. Horowittz (2009) observes this process of marking and signalling through the genius of canine socialisation and the phrase 'pissing on posts' knots humanity with animality in the visceral practice of marking territory to dominate or claim virtual or actual space. There is an intelligence in this canine marking process that leaves an embodied sensual, calling card for those who follow the scent; in the tracings of the many who have travelled this way before. Many animal species including dogs, cats and mice use scent marking to define the boundaries of territory that signals ownership, communication and status. Scent marked territories indicate a warning that this is my space. Humans mark their territory with property lines and cultural borders that keep other humans out, and attempt to keep animals either in, or out. By engaging the term 'marking the territory' Inquiry Process is not framing, shaping or designing the inquiry with predetermined formats, awaiting content (concept of x, representation of y) but where concepts and representations become active productions in themselves, constantly affecting and being affected by the assemblage that is awakening to deterritorialisation.

(Re)marking sticky knot: Becoming (un)stuck

Sticky substances take hold and simultaneously become (un)stuck through wayfarer becomings that reawaken as methodology shifts in the middle of the inquiry process. The restraints of qualitative methodology, like those of the narrative inquiry originally chosen for this study, adapt the linear discourse of quantitative scientific methods that are "structured, formalised and normalised" (St. Pierre, 2015a, p. 16). This prior method moved too fast for the timelines of data collection, my inexperience as a researcher and the slow-pace of the territory where the trails and tangled paths demanded new becomings.

The convention of researching and writing a doctoral thesis also becomes sticky as structures "are necessary while at the same time necessarily limiting" (Koro-Ljungberg & Mazzei, 2012, p. 728) As previously indicated, postqualitative processes enable the demands of rigorous clarity and rigorous confusion to work side-by-side. A thesis as assemblage attempts to avoid the type of 'pinning down' that qualitative methods require, in favour of becoming "unstuck from its own line of thought to follow the objects it encounters, or becomes undone by its attention to things that don't just add up but take

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on a life of their own as problems for thought" (Stewart, 2008, p. 72). This act of unsticking pays attention to what appears or might be absent or unknown. The goal is not to provide a representation of something, "but to wonder where [analytic objects] might go and what potential modes of knowing, relating, and attending to things are already somehow present in them as a potential or resonance" (Stewart, 2008, p. 74).

Postqualitative practices move in "spaces of transit" (Lenz Taguchi, 2012) as researcher and researched assemble through embodied intra-relations with thinking that welcome the unknown of "intervention and invention; responsibility and ethics" (Lenz Taguchi, 2012, p. 278). Inquiry Process requires academic rigour in addition to porous places where the unexpected can creep in. Places where figurations, narrative and postqualitative processes are employed to dismantle the inquiry structures simultaneously revealing what these are and trying to become lost in the creative process. It's a slippery, tricky, foxtrot that moves in and out, back and forth, zig-zagging through territory in a disorderly way. Laws (2004) advocates for such messy methods that disrupt the practice of organised data, and tidy answers, questions academic validity, evidence trials, and certainty. Ambiguous research practices however do not subscribe to an 'anything goes' approach. Manning and Massumi (2014) adopt a model they call 'enabling restraint' that builds confidence with methodological choices that are not dichotomous. "In our experience, unconstrained interaction rarely yields worthwhile effects. Its results typically lack rigor, intensity and interest for those not directly involved, and as a consequence are low on follow-on effect" (p. 93). A thesis needs to adopt this enabling restraint by meeting the needs of the academy as well as avoiding habitual ways of conducting research, by adopting techniques that invite experimentation "to make felt the intensity of thought in practice" (Manning & Massumi, 2014, p. 98).

Territorial diplomacy

Inquiry Process brings together the edges of the actual and the virtual through the process of writing with assemblage and territorial diplomacy. This honours the demands and requirements of the production of a thesis that reports and describes within the borders of academia, whilst using postqualitative ontologies. Territorial diplomacy temporarily grounds the territory where children and animals dwell to the actual. It does not constrain virtual worldings, on the contrary, it takes up a philosophy of immanence, of immanent discovery, that enable the desires of the inquiry and the needs of the academy to appear

together in negotiated spaces of internal relations. Diplomacy is the employment of tactful respect for those who have come before, but not becoming immobilised by them. These negotiations particularly appear in the introductory field guide where explanations are required to define and guide the paths ahead.

Postqualitative inquiry: Spaces of transit

Because posthuman and postqualitative researchers (Baofu, 2011; Lather & St. Pierre, 2013; Lenz Taguchi, 2012, 2013; Lenz Taguchi & Palmer, 2013; St. Pierre, 2013; St. Pierre, 2014; Vicars & McKenna, 2013) call into question the hegemony of objective, positivist ontologies that privilege humanist scientific method and discourse, seeking alternative approaches to aspects of life that are neither settled or fixed. All knowledge is therefore fallible and in need of constant (re)marking in the Nietzschean sense that brings conceptualisation and interpretation to the forefront as relational ontologies that are neither wedded to the objectivity of science, or the subjectivity of the humanities (Lorenz, 2015). These shifting becomings are embraced as open, speculative, generative futures of who and how we might become in a more-than-human world.

> *The post-qualitative turn, new empiricisms, and new feminist materialism, coupled with the interest in ecological perspectives, are all manifestations of a rapidly growing engagement with posthumanism. However, in such a theoretically and philosophically rich field, insufficient attention has been paid to the specifically methodological import of these debates. (Taylor & Hughes, p. 1)*

The insufficient attention to methodological certainties expressed by Taylor and Hughes are indicative of the recent arrival and unique features of the postqualitative turn that first appeared in a research handbook chapter by Elizabeth St. Pierre in 2011 (Nordstorm & Ulmer, 2017). Postqualitative researchers continue to challenge the presumption of qualitative research, what is defined as 'good research' and who decides the perimeters of good. Academic rigour can be propped up with lingering positivist ontologies that privilege "logo-scientific discourse which normalises method as rigour and positions critical methodologies as at best partial and/or not empirical" (Vicars & McKenna, 2013, p. 1). Postqualitative perspectives challenge methodologies that rely on experience, truth, voice and data (Jackson & Mazzei, 2012). Relinquishing the control of traditional researcher methods with a becoming–with practice, strives to make room for data that

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may be absent, less obvious, as attention is turned to the everyday material-affective-semiotic entanglements. Researchers are therefore prepared to take risks as they do not follow the well-trodden paths of others and are drawn into thinking and feeling relations with self and others in ways that are personal and political.

Postqualitative researchers express a desire for deeper engagement with theoretical, conceptual and interpretive ideas that enable freedom of thinking, rather than the constraints of scientific, humanist method that are at odds with postqualitative ontologies and "sustained poststructural critique of method" (St. Pierre, 2013, p.4). Lorimar (2013 asserts that methods have not yet caught up with theoretical developments from the material and posthuman affective turn (Barad, 2007; Deleuze & Guattari, 1987/2004; Haraway, 1997, 2003, 2008; Latour, 2013). Appropriated concepts are thoughtfully assembled to create movement of thought that can be risky and experimental, but also liberating. They are always messy and becoming and never neat, fixed and finished. Language and discourse that is privileged and ever prevalent in social constructivist and poststructural ontologies are reconceptualised through inventive methods and open interpretations that attempt to transgress binaries of human/language/matter and the more-than-human. These studies have escalated in recent years paving the way for others to follow, not through footsteps of duplication, but forces of originality. Banerjee and Blaise (2013) for example consider intra-actions between human, nonhuman, the material and discursive, while Coleman and Ringrose (2013) decipher the affective mapping of bodies and Lorimar (2013) and Higgins (2017), consider how human and non-human interactions teach about living with embodied response-ability. Postqualitative researchers such as Holmes and Jones (2013) disrupt and rework conventions about data intensities and decoding, where other writers challenge methodological simplicity (Koro-Ljungberg & Mazzei, 2012; McCoy, 2012) and seek hidden intensities of data through concepts like wonder, glow, silence and speech that are adopted as analytical tools (MacLure, 2013a, 2013b, 2013c; MacLure, Holmes, Jones, & MacRae, 2010).

There is no recipe for postqualitative data analysis because it is driven by theory, data and events and not bound by a fixed methodology. Postqualitative inquiry disrupts normalised research binaries as theory is worked as a force to understand multiple, complex, ideas, concepts and practices that are plugged-into a research inquiry (Jackson & Mazzei, 2012). MacLure (2008) describes the process of research analysis as a rich, dense practice that

can be simplified, and many would say over-simplified by the process of categorising, coding and organising data into neat themes and these acts of slicing, dicing and boxing can overlook the-between-spaces. St. Pierre and Jackson (2014) outline the difficulty of post-qualitative data analysis and explain why most researchers resort to the recipe of scientific methods that can be found within research textbooks.

> *Having opted out of a theoretical analysis, these researchers have nothing much to say and, often, they are too exhausted from months of coding to theorize at all. In fact, we have learned in our own teaching that coding data can be an excuse not to read theory. (St. Pierre & Jackson, 2014, p. 716)*

Imagining the animal in research

Constant attempts are made to notice, attune-with and integrate Animal participants in the inquiry, and this is a productive focus for new thinking in education. Connections and disjunctures provide markers of investigation that are troubled in this study as a deliberate way of differentiating between human-animal relationships that are defined with dominant anthropocentric and scientific archetypes of animals with prescribed biological instincts of insensate creatures, who are entirely different and inferior to humans. Postqualitative inquiry demands a disruption of humanist ontologies that privilege knowing over being (Lather & St. Pierre, 2013) and methods that write out and silence more-than-human entities such as trees, frogs and rocks. How could you interview a frog for example, ask a tree to fill out a survey or re-story a narrative with rocks (Young & Cutter-Mackenzie-Knowles, 2019).The tools adopted to study these relations contribute to the social and political histories of oppression and separation that sets animals, and sometimes children as Other. Researching child-animal relationships in this way is a constant challenge (Taylor & Pacini-Ketchabaw, 2015) as the human is a dominant presence demanding attention and power and the privileged human knower is always the prevalent subject (Colebrook, 2014). Animality is therefore perceived as embodied through action and interaction and Myers (2007) notes the fertile ground of new approaches with human-animal research that does not invisibly marginalise animal species:

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> *Research on human-animal interaction is fertile ground for new discoveries because animals present variations on the characteristics of a social interactant. To be open to these discoveries, we have to grant that unique phenomena may be present, and we have to be willing to assume, at least provisionally, that the animal contributes to the interactions in equal measure as the person or child. (p. 44)*

Gendered pronouns are used by Inquiry Process where human and Animal genders are known as a way of intentionally acknowledging animal subjectivity, as human subjectivity in research. This shifts the text in subtle ways, so Animals are never an 'it'. This specificity and emphasis of language is a focus of chapters six and seven where semiotics, gestures and discourse come under the inquiry spotlight. Actively including animal species as participants in research matters but it also matters how their unfamiliar worlds are storied. Representation is always bound by humanist vision of culture (Haraway, 2013c). There is a need to tread carefully so the questions posed by Fawcett (2000) take on greater significance:

> *How do we tell stories that acknowledge other animals/beings as subjects of lives we share, lives that parallel and are interdependent in profound ways? How do we ensure that their voices are audible and that we can co-author environmental stories to live, teach, and learn with? (p. 140)*

The markings and re-markings that transpire indicate changing terrain as the inquiry shifts direction, moving from qualitative to postqualitative research. This adaptation occurred as immanent forces shaped how the inquiry assemblage expanded and circulated with the arrangements, elements and agents of postqualitative, ethnographic field studies. The terrain now settles into place as the field studies and design of the study became remarked. At least for a while.

Territory assemblage

> *Places, then, are like knots, and the threads from which they are tied are lines of wayfaring. A house, for example, is a place where the lines of its residents are tightly knotted together. But these lines are no more contained within the house than are threads contained within a knot. Rather, they trail beyond it, only to become caught up with other lines in other places, as are threads in other knots. (Ingold, 2011, p. 149)*

For Ingold, the wayfarer moves beyond parameters and borders of experience that are not circumscribed in a given place, but rather every "somewhere is on the way to somewhere else'' (Ingold, 2011, p. 149). The territorial assemblage therefore is not just the physical

space of the inquiry, but also the lines and threads of all that takes place as we unfold along intersecting lines, of thought, event and movement. The early childhood setting where children and animals dwell in this study is an assemblage of teachers, families, children and animal species that reside within a small independent school and early learning centre located on 42 hectares of traditional Boonwurrung Country (Briggs, 2015) in the south-eastern region of Melbourne, Australia. An imperative of the study is the inclusion of any animal species in the four family homes and education setting. Data is generated through postqualitative practices and immersion in ethnographic field studies and daily happenings of an early learning setting with a group of children aged five-six years, for two days each week. Field studies took place over a six-month period where walking, roaming, talking, observing, sensing, are part of the daily curricula.

Kate, the early childhood teacher/director eagerly gave permission to take part in the research and she sent the photo that appears below of 'Kosi' when he was a puppy, who was joining the children during their regular walks. Kate was keen for someone to research these canine/child entanglements as Joe, the outdoor education teacher who lives at the school had started to engage Kosi as part of the teaching and learning.

Figure 4: Kosi and the ELC children. Living, playing, learning and walking on Boonwurrung Country

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The early learning centre was a familiar place as Inquiry Process had conducted research here before, returning as it was difficult finding an early childhood setting where animal species were present and integrated within the teaching and learning. The early learning centre is located within a private school situated on marshland with a lake, orchard, an island (gathering place) and an extensive area of bush, a multitude of wild animals, domestic farm(ed) animals and children who spend lengthy periods of time on this Boonwurrung land. Parents and younger siblings are welcome to join the meandering walks and take part in a range of outdoor activities that take place each week in all weather. A campfire is also a feature of the gathering place where children assemble on an island in the middle of the lake for morning tea, often cooked on the open fire.

Figure 5: The Gathering place on the island at the ELC

Animal species who live on the property include: water birds, rabbit's foxes, cows, sheep, birds and alpacas. Stick insects, chickens, yabbies, turtles and a dog named Kosi are Animals that assemble specifically within the early childhood space.

After successfully gaining ethical approval from Monash University (MUHREC Project ID CF14/848) and the Victorian Department of Education and Early Childhood Development (DEECD) the families were recruited for the study through Kate the kindergarten teacher. The following table introduces the participants.

Table 1: Inquiry Participants

Families	Human-animals	Animals species
Wild family	Hunter (Child age five)	Bobbie - Dog at the ELC
	Zoe (Mother)	Thor - Deceased Rottweiler dog
	Richard (Maternal Grandfather)	Working dogs and wild animals on country property
Dog Family	Holly (Child age five)	Butch - Bulldog
	Rory (Brother age three)	Tillie - Heeler/cross dog
	Emily (Mother)	
	Ross (Father)	
	Earl (Paternal Grandfather)	Teddy – Deceased Terrier dog
Lizard family	Toby (Child age five)	Ralph - Great Dane/Mastiff dog
	Sharon (Mother)	Stan - Blue tongue Lizard
	Poppy (Paternal Grandmother)	Flipper - Siamese fighting fish
Turtle family	Jag (Child age five)	Graham - Turtle
	Sally (Mother)	Charlie - Shared family Poodle dog with grandparents
	Ted (Maternal Grandfather)	

Teachers	Human-animals	Animal species
Kindergarten teacher	Kate	Domestic and wild animals
Co-educator	Imogen	Yabbies and turtles
Outdoor education	Joe	Kosi – Heeler/Cross dog

Focus children were chosen based on Kate's perception of how the children connected with animals at the early learning centre (ELC) and if they shared their lives with an animal/s. Focus families needed to therefore have an animal/s that resides in the family home in addition to one grandparent and one parent willing to take part in the study. Kate suggests four families and distributes the consent forms and information sheets to them. The families are enthusiastic about the study and return the forms promptly where

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meetings are arranged to talk though the research design and grant informed consent. The Dog family want both parents to be participants and Ross (the father) expressed his fascination with the topic, talking about the books he had read about human-animal relations. Pseudonyms have been adopted to protect the identity of the participants and disguise the education setting where field studies took place. This was not an easy process, particularly with animal participants whose names were difficult to erase, as discussed in later chapters, naming is part of animal subjectivity and the act of naming privileges and "confers dignity upon those who are named" (Kimmerer, 2003, p. 12) . Whilst participant anonymity is an important part of ethical practice and pseudonyms are used throughout the inquiry, the naming of the school dog Kosi, remains unchanged, as it forms part of his identity described in a narrative that appears in chapter ten.

Family assemblage

Children's relations with animals are a central part of the inquiry, and the family home is recognised in the literatures as spaces where children cohabit, develop relationships and construct identities of animals (Melson, 2001; Myers, 2007; Tipper, 2011a). These animal species were more likely to be pets; however, the study was open to any animal species that children and the teacher identified that had developed relationships with. It is in these territories that children sleep, eat, play, touch, sense and possibly bond with animals. Meetings took place with three generations of participating families in their (parental and grandparental) homes, to support collaborative and trusting relationships, before the research starts. Getting to know each other, including the family animals offers "opportunities to establish relationships within the familiarity of the family home" (Harcourt & Conroy, 2011, p. 41). During this introductory visit, the research directions and ethical considerations are discussed including the need for a parent/guardian to be close by at all times for the children's participation in the research. We also talk about the purpose of the research practices adopted in this study including the child guided walks and play sessions.

Education assemblage

Attending the early learning centre two mornings each week and often staying for full days helps to get to know the children, teachers and families. Following the introductory stage, the focus children conducted child-guided tours of the ELC and their family homes. This was also a time to attune with these research spaces, taking photographs, talking

with teachers and families and taking observational field notes that recorded the flow and chronology of events. As time progressed field notes captured less obvious details of the "the actions of participants and my reaction to them" (O'Toole & Beckett, 2010, p. 142) such as approaches, gestures and impressions and simultaneously recorded notes about the early childhood environments, contexts, pedagogy and practices, family residences and neighbourhood, and the relatings with teachers, children, parents, other family/community members. Observing the process and educational spaces in this way helps to gain a sense of ideas, emotions, and impressions that can be missed. For example, The ELC handbook states how this space "offers the best of all worlds – a secure and creative space inside, a gently challenging outdoor investigative zone which supports young children to develop emotional and physical confidence and skills, and then the wider property where they can feel the freedom of a fully natural environment" (N.D, p.19). In this handbook a sense of separation is apparent between the secure inside spaces that are perceived as not fully natural, and the outside spaces that are.

Ethical markings

Ethical sensibilities and practice must be embedded in all research studies, especially those that work with children and gather personal information about the lives of participants. Lichtman (2013) acknowledges the need for trustworthy research spaces that are aware and sensitive to the position of power that the researcher holds. This type of intrusive research is especially notable when studying the lives of others and this is more prevalent in the private spaces of the family home. Paying attention to the ethical and cultural settings of the family home, required careful consideration, especially with children and animals. In an attempt to generate less intrusive data video recording was not used.

Ethical issues in research, other than those for direct animal research, are predominantly concerned with human ethics and the challenges of participatory research with more-than human participants are often overlooked (Bastion, 2017). For example, the university ethics application advises that animals should be kept outside when conducting research in family homes and a section was created about thinking though ethical issues with animals in family homes and education settings. Thinking 'with' and sometimes 'for' Animals is fraught with agentic and ethical contradictions and speculative tools of writing helped challenge dominant ideas, open different perceptual worlds and reconcile

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conflicting principles of representation. For example, thinking with gestures as concept, takes place in chapter seven proposing alternative modes of communication to the spoken word, placing the attention on more-than-human bodies, materials and movement of ethical relationality.

The ethical necessity of informed consent by participants is essential in any study and participants could leave the study at any time. Edwards and Cutter-Mackenzie's (2011) informed assent strategy was adopted with the focus children that is sensitive to their age, as they would write their name, or make a mark on a smiley or sad face on each separate research occasion to gain a sense of their ongoing assent rather than assuming the original agreement was sufficient. Similarly, children were reminded of this if they exhibited signs of unwillingness to take part. Often a child's choice to not be involved on a particular day was because they did not want to be separated from their friends at the ELC as an unwillingness to participate did not happen at their family homes. This is why the data generation practices are multi-faceted with opportunities to switch between visual, spoken and play-based strategies.

Inquiry ~~methods~~ practices

Research practices in postqualitative inquiry are situated in novel ways that are explicitly open-ended, inventive and attempt to do different work of sensing, doing, making, becoming and listening. Method as concept or practice is inventive if it can be deployed to 'lure' virtual forces into continual problem making (Fraser, 2009) or what Rautio (2017 p.722) suggests as "answers to questions posed by the world". Examples of this diversity of thinking include: Inventive methods as devices (Lury & Wakeford, 2012), apparatus (Agamben, 2009; Foucault, 1980), configurations that join together (Suchman, 2012) or techniques and propositions revealing movement between bodies (Springay, 2015). Process ontology incites experimentation and an emphasis on 'the doing'. Function, rather than meaning. Postqualitative practices focus on data that is always entangled in assembled relations and where field studies experiment with ideas, events and what might be absent (Springay & Truman, 2018). Practices reverberate in relation to the territorial assemblage of subjectivity, materiality, space and activity that Lury and Wakefield (2012) define as "the semiotic-material relational-doing-thingness of methods"(p. 12).

During field studies observational field notes recorded "the actions of participants and my reaction to them" (O'Toole & Beckett, 2010, p. 142), that were descriptive with a consideration of the flow and chronology of events. Participants gestures, and mannerisms were noted during interviews and rich descriptions of the early childhood environments, contexts, pedagogy and practices, family residences and neighbourhood were recorded. Attempts were made for becoming–with practices but this was not always easy as familiar patterns of writing notes, observing and taking photographs needed to enfold with unfamiliar think-be-feel practices that become attuned to the atmospheric forces of relations of child-place-interspecies entanglements with the potential for new figurations.

Inquiry Process continues to describe the assemblage of dialogical, material and visual forms of data generation practices, and the considerations that arise particularly when researching with young children and animals as participants.

Walking-in-place

The children's scheduled walk days take place each Tuesday and Wednesday morning where the children venture into the extensive school grounds in all weather conditions. Each Tuesday, children would spend approximately three hours walking and engaging with the natural elements and features situated on the school grounds. The ELC has an open policy so many parents, grandparents and siblings take part in the weekly walks and this becomes a fruitful way to engage in conversations. This generated rich and plentiful data that was difficult to capture and keep up-to-date with as the 'animal' was everywhere. On Wednesdays the group are split into two groups, so children engage with Joe the outdoor education teacher and his dog Kosi. These mornings were often filled with wonder and surprise as we moved through the school location exploring water pathways, bird habitats and rabbit warrens where the freedom of space afforded hum(an)imal encounters and poly-vocal accounts of these spaces in transit. Some of these appear in narratives in subsequent chapters.

This experimental adventuring takes place through walking, talking, observing and sensing in ways that are recognised as a method of knowledge production by researchers, especially human geographers and early childhood researchers (Cele, 2006; Hall, Lahua, & A, 2006; Phillips, 2005; Springay & Truman, 2018; Thrift, 2009; Trell & Van Hoven,

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2010). Banerjee and Blaise (2013) call this a "walking-to-think-with" approach that is less about moving from point to point and more related to the movements of thought that are highlighted throughout this chapter. They acknowledge how these "intra-actions between people and things constitute and reconstitute the specific intra-locations of time–space configurations of places" (Banerjee & Blaise, 2013, p. 243).

Child guided tours

Child guided tours introduce the places that the focus children share with families and teachers at the ELC and family home. Suggestions were made to show me things they were interested in and children presented their soft toys, bedrooms, mud kitchens, trampolines, hiding places, toys and places where they dwell both inside and outside of their homes. Specifically, Toby demonstrated his dog feeding and training skills, Hunter shared his extensive knowledge of Pokémon and knowledge of animal species with his collection cards, Holly showed me her grandmothers ashes, while we watched 'Frozen' and Jag fed his Turtle and played alongside his younger sister. The use of child-led tours enables children to share their spaces in active, lively ways where wayfaring takes place on their terms (Clark, 2010b). These visits were chronicled with audio recordings, field notes and photographs.

Interviews and conversations

A semi-structured interview took place with all eleven adult participants in addition to regular conversations during walks, home visits and field studies. Interviews were recorded and transcribed verbatim to pay attention to details that can be missed such as background noises, interruptions or hesitations. Interview record sheets with background information are created to record notes about the context of discussions, material effects and prompts for follow up questions that may not be captured on the audio recordings. These pieces of paper with notes and scribbles in the margins are a conduit of intergenerational memory that cross-infect children, parents and grandparents with molecular family stories, that seep into the assemblage of shared narratives. These examples created lines of effect "where the data itself is considered to have a constitutive force and be working upon the researcher as much as the researcher works upon the data" (Hultman & Lenz Taguchi, 2010, p. 525).

In the initial stages of grappling with the large amount of data, the focus was placed on transcribing participant interviews where the flow of questions and conversations started to form ideas. These appear in similar ways to the themes of qualitative research and Inquiry Process had to be careful not to slice and dice the data into neat topics. Attending to this process enabled connections and patterns to be known between participants in the same family, between families and the ELC and between past and present events. Sometimes there were connecting ideas and events across multiple families. Almost all of the family interviews ranged from 60 – 90 minutes and the conversations could have gone on for far longer. Parents and teachers were eager to speak about the inquiry focus that provided a rich canvas for the conversations about their childhood experiences with animals, interpretations of their children and their experiences at the early learning centre.

Child play-and-tell

Participatory methods with young children have seen a "shift away from research *on* children to research *with* and *by* children (Barratt Hacking, Cutter-Mackenzie, & Barratt, 2013, p. 439). Children engage in the research process as co-constructors of knowledge. (Brooker, 2001; Clark, 2010b, 2011b; Clark & Moss, 2001; Hart, 1997). Inquiry Process supports these practices of research *with* and *by* children but experimental becomings made it difficult to consider children or other participants as 'co-researchers' when the inquiry is attempting to de-centre the human (Lenz-Taguchi, 2010)in this study in recognition of their entanglement with others. This meant that participants, including children, (and to some extend Animals), collaborate through data generation that takes place in the everyday happenings through listening, sharing ideas, attunement and relinquishing aspects of control throughout the process to enable the assemblage to take us to surprising places. Rautio (2013) justifies this approach.

> *Methods that confuse scale, time and space would tap into the very grounding as if logic according to which everyday life is undergone. Follow children who write, draw, speak, jump and shout without a clear purpose. Create space for this. Join in. ...Seek the moments in which children produce the unfinished and the pointless and move on... (p.404)*

The creation of child play story bags as a research practice is designed as an optional tool to support the four focus children's engagement with the inquiry in their homes. Drawstring bags were created with a range of materials including fabric, pieces of wood, stones, and small animal figurines that represented a wide range of the animal categories

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including pets, wild, bird, domestic and sea animals. Two human figurines were also included with a white woman in a doctors/vet coat and a brown man dressed as a ranger. The human figures were introduced to prompt ideas about human-animal relations and how children might navigate them into their play scripts. None of the focus children wanted to include the humans, even when encouraged to do so as their play was built around separated human and animals worldings. Conversations are driven by the children and how they chose to use the materials and I would play with/or alongside them guiding the conversations, but never dominating them. There were no pre-planned questions for these play sessions and Figure 4.3 illustrates how each child chose to use them in very different ways. Jag played alongside his sister on the kitchen bench and particularly liked the small guinea pigs, Holly flitted around the lounge room in her Elsa Frozen costume only using the materials for a brief time, whereas, Toby spent lengthy periods playing with the materials insisting that I bring them each visit. It was a helpful research practice for relating with Hunter who was at times a reluctant participant in the study. Hunter is very specific about positioning the animals in clusters ordered by species and habitat that can be seen in the following images.

Figure 6: Focus children play-and-tell sessions

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Photographs and family stories

The use of photography and visual images such as drawing are often adopted as method in early childhood research (Barratt Hacking et al., 2013; Hultman & Lenz Taguchi, 2010; Jones, Holmes, MacRae, & MacLure, 2010; Jorgenson & Sullivan, 2010; Koro-Ljungberg & MacLure, 2013; Lenz Taguchi, 2013) as a practice to make young children's thinking visible. Photographs are used in Inquiry Process to open discussions and explore the relational field with participants as photographs are part of family histories, educational documentation and data generation. Each family was asked to take or use existing photographs that reflect the relationship and connection that children of other participants may have with the animal/s in their lives. These images provide contextual information, help to elicit conversations about the flows, rhythms and intensity of data events, and carry material affects that travel across generational lines, helping to see and say something within, beyond and behind the photograph as a "distinctive pattern of seeing" (Jorgenson & Sullivan, 2010, p. 14).

Photography supports critical animal studies practices where the Animal is situated as a participant, as photography helps to see and sense the social worlds of animal species beyond the linguistic and cognitive, at least in the sense that they do not privilege human language. Visual images offer snapshots of the context of everyday lives of participants, including animal species and place. This was helpful when parents took photographs in the home context that were used to promote discussions between children and myself about their relationships and experiences with animals. Although young children are very aware of the benefit of taking and looking at photos to "reflect on the past" (Lemon, 2007, p. 5), the focus children were often outwardly surprised when I showed them photographs from home that their parents had shared with me. These images created a visual bridge between home and the early learning centre, that the children had not previously made connections with. Photographs are a key part of pedagogical practice at the ELC where teachers and children regularly take photos to explain and interpret the subtle elements of the lived and learning experience.

(Re)marking narrative

Photographs are also used to prompt memory during the adult interviews. Lemon (2007) contends that, photos in themselves do not narrate, "it is the voice behind the photograph that allows for memories to be triggered, the place and time, and that in turn brings the photograph to life" (p.3). This bringing to life is often reliant on human voice and story and this narrative marks new optics, not solely reliant on language and discourse to assemble the narrative as more-than-human and materialist forces creep into the data in ways that are haunting. An image of a large Golden Perch fish, in a small tank placed within the dark solitude of a garage, reveals colonising desires of the human condition, marking connections and disjunctures of the inquiry

(Re)marking narrative: Presenting a fish becoming crystal still

Figure 7: Three generations of Lizard family photographs

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Toby's grandmother Poppy has taken Inquiry Process's instructions very seriously, talking through each photograph she has curated for the interview. "Well, I've always been mad about horses" she says as she places them in genealogical order of ownership on the table. Those she has loved, lost and "passed on". Poppy's adult son loves fishing and was once a member of Native Fish Australia, where he learned to catch, breed and release native fish. The Golden Perch in this image was caught on a line and hook and does not return to the wild. "That fish" lived in the garage for so long we called it the "fish room". My son took great care of him and he built that tank that held a tonne of water and "that fish swam up and down in that tank fish 'til it he got so big he had trouble turning in it". My son would say "it was like he was watching me" and one day he went out of the fish room and looked in through the hole in the door because there's a little hole and he was just swimming up and down, up and down. "When I go in there", he said "Mum, he just, ... he's always up that end of the tank". And we laughed because we thought it's a fish, but fish are smarter than we think.

That fish is admired, but not released. There is talk of a bigger tank, but it never eventuates. That fish is sick with 'ich' and the son sad, but the icky final act of euthanasia is handed to Poppy as she places the fish in the freezer. He wants to taxidermy that fish, but he takes too long, and the fish ends up in the bin.

This image helps to discover and demonstrate human-animal relationships that can easily be overlooked. This image and narrative speak to what it means to capture a wild animal species, spatially confine them and keep them in isolation. What is communicated in the emotion imparted by this practice speaks about the contradictions of human desire to connect with an animal species in ways that also control, contain and ultimately kill them. Becoming-with the material artefacts of the photograph provide tangible details that were missed in the conversation with Poppy, such as the gun and fishing spear that are the tools of capture that once seen become prominent in the photograph.

Probyn (2015a, 2017) researches interdisciplinary representations of fish and she thinks about a small ornament sitting on her desk that speaks to this narrative. "The fish fossil

reminds me that while a fish passing may be quiet, it is certainly not straightforward" (Probyn, 2017, p. 55). Critical interpretations of this narrative haunt across time as continuous flows of intensity and connections and disjunctions appear side-by-side in "the politics of the ordinary" (Stewart, 2007, p. 15), in ways that cannot be comprehended by Poppy.

Fishing is a thread that runs through the three generations of Lizard family data from Toby, his mother Sharon and grandmother Poppy. Toby goes fishing with his father and Sharon shows images of him with a large fish they have caught. Toby tells me "when the fish is dead it is 'crystal still'. Its dead from the air, no oxygen. The fish's oxygen is water and our oxygen is air. Fish's gills are used for air and sometimes it makes me sad too". Toby and Poppy in the telling of their stories have enabled the crystal still fish to become enlivened in death. The photograph lives on as a testimony to biopolitics in the inquiry where attention is directed towards the systems, institutions and practices where animal bodies, those who are unnamed, those who are hidden and silenced. This Golden Perch fish becomes known in a minor act of resistance to his capture, his immobility, his solitude and death.

Inquiry Process practices have been discussed in detail leading the way for the final space of this chapter to introduce the assemblage of seven practices of analysis. Each of these practices are folded within the assemblage of relations, theory and data, becoming interpretative forces that move in the inquiry as concept-driven analysis.

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Analysis as an assemblage of practices

Everything is an assemblage – everything is a 'hum'. There is a hum in everything – hum, hum, hum.

Discussion so far has outlined how postqualitative ontologies position data as an assemblage of relational practices and entanglements, where data uncovers multiple ways of knowing and being. Novel ways of thinking-with the data and research focus are considered that may be overlooked or silenced by humanist approaches and these include the materiality of the worlds we make as we live and do our research. Research across the three disciplines is complex and Inquiry Process grapples with sticky knots/tensions/asymmetries thrown up by the messy relations between children, environments and animals. The research analysis for this study is conceptualised in the doing as the data comes together through interpretive writing. This analysis assemblage involves seven practices. They are not linear processes on a continuum, but in themselves create an assemblage of ideas that link researcher, data and theory together. Each one injects something into the other constantly infecting the research with expansive ideas in contrast to slicing the data into smaller and smaller chunks that become disconnected from the whole. Augustine (2014) advances the idea of analysis as assemblage and writing as a method of analysis exploring multiple ways that analysis forms an assemblage of ideas that build the process, using writing, creating and creative tools that starts with a commitment to focused reading.

Analysis through focused reading

St. Pierre (2014a) insists that intensive reading of historical ontoepistemological texts enables researchers to (re)position and deeply understand the paradigms that shift across time and place. "Researchers need something to think with; they need different and even conflicting theories to help them think about the complexity of the world we live in and to imagine other possible worlds" (p.25). Focused reading therefore becomes a tool of analysis where I read and write my way into understanding (Richardson, 1997, 2000) and grapple with theory using the concepts that align with theories and methodologies. Augustine (2014) outlines the process of how she used the concept of assemblage in her thesis to think, write and analyse her data "Writing is the thinking that brings into focus the theories central to analysis, but writing is never enough. Analysis requires the researcher to read widely at first and deeply once immersed in the data (p.752). The data

becomes by reading as suggested by the postqualitative scholars in this chapter, reading and reading and reading (St. Pierre, Jackson, & Mazzei, 2016), to the end of the territorial timescale.

Analysis through writing

Writing as a practice of inquiry has been outlined by Inquiry Process as a way of attuning to what assembles within the territory. This is not limited to field studies or the participants as it circulates through all that happens during the timescale of the inquiry, as continual becomings. These interpretations are therefore ongoing and do not happen at the end in the phase of 'analysing the data'. As expected they appear in the researcher journals, field notes and scribbles made on interview summaries, furthermore, the assemblage of ideas in the territory where children and animals dwell expand to life events, such as watching films, observations from travel or listening to interviews. Reflections from conversations at conferences, with colleagues and supervisors provided opportunities for rich deliberation. In this way Inquiry Process was trying to explore multiple dimensions of life, rather than engaging in a quest for essentialist meaning that appeals to humanist ontology.

A Glossary of tracing and tracking

A glossary of research terms and conditions became a practical tool to grapple with complex ontological, epistemological, methodological and theoretical ideas. A glossary or 'theory dictionary' (Augustine, 2014) is therefore a practice of analysis that helps to "sculpt the linguistic terrain" (p.750) of narratives in interpretation chapters. This taming of philosophical concepts and ideas enabled Inquiry Process to enter the foreign territory of the PhD process described by Pearson and Li (2008) as researchers think through the meta discourse of specialised language, discipline conventions and cultural vernacular they have to learn. The process of recording and tracking these ideas fosters productive work of making non/sense/s through reading and writing with new associations. This also becomes an aspect of identity work as scholarly subjectivity is bound within these understandings that reveals what can be cast aside and what is emerging from becoming writer, reader, researcher and therefore a member of the scholarly community. Developing a glossary tool with columns that included the term, the definition of the terms and contextualised examples of how these terms could be both remembered and useful. St. Pierre reflects in an interview with (Guttorm, Hohti, & Paakkari, 2015) about

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how she developed glossary tools, such as dictionaries and quotation repositories as a helpful way of drawing on ideas that support writing, analysis and the formation of ideas as she returns to the quotations and descriptions she has entered for the past 25 years.

Discursive analysis of animal positioning

Postqualitative analysis veers off course for a while as discursive analysis creates a picture of linguistic patterns that govern speech about Animals in the production of specific material and ideological effects in chapter six. Human behaviour, attitudes, language and materials that appear in the data assemblage are placed into categories and columns where mapping became an assemblage thinking tool (Jackson & Mazzei, 2012) with social and institutional constructions. Attention is paid to how language and semiotic systems mediate these ways of speaking and acting to find out what they do in human-animal relatings. This brought to light normative practices of oppression and interpretations of object-body-mind of the research. This was not used with the intention of separation and breaking apart, but rather by integrating critical and posthuman theory with ontoepistemological interpretations of what the discourse is saying and doing.

Troubling relational encounters that hum

A reoccurring aspect of posthuman and postqualitative research is the idea of troubling and being troubled (Haraway, 2010; St. Pierre & Pillow, 2000) toward a "thinking otherwise" (Lather, 2016, p. 104). This has also become a method (McCoy, 2012). Jackson and Mazzei (2012) capture the importance of this affective moment, arguing it has "no function, purpose, or meaning until it is connected to other spaces", and through these affective connections, "something new happens" (p. 6). Thus, the affirmative power of trouble as a concept or practice lies with their ability to make available relational associations that hum. This research started to hum or 'light up' as troubling ethical animal encounters emerge, and it was here that the connections and disjunctions of the inquiry become known. These seemed to speak back to Inquiry Process, infiltrating other aspects of the data as encounters with territorial actors were contentious, and events fragmented notions of conflicting societal discourse. These encounters always reveal more than expected, opening multiple doors to being and thinking other(wise) about children and animals, moving beyond romantic paradigms, beyond an aesthetic of cospecies-entanglements, towards critical spaces of ecological (in)justice.

Analysis as crafting the narrative

It matters what matters we use to think other matters with; it matters what stories we tell to tell other stories with; it matters what knots knot knots, what thoughts think thoughts, what ties tie ties. It matters what stories make worlds, what worlds make stories. (Haraway, 2011, p. 4)

Haraway's words once more remind about what matters, and how matterings can be swayed by ontological worldings. Narratives appear in Inquiry Process as part of the analysis and as a means of other(wise) becomings that are complex, multiple and nuanced understandings of the lived experience. These are as varied as the participants that are present and throw up sticky knots that both trap and set free. This is a deliberate process chosen to integrate multiple entities and perspectives from the human and non-human participants. Others are invited into the telling. Some imagined, some real, some more-than-human. The narratives are not always easy, linear reads, as writing conventions did not adhere to synchronous telling's, nor plots appear in chronological order. The intention here is not to confuse, but rather incite the messy forces that were present in the events of the data. These forces are put to work on the page in story form as memories flow across generations, bodies, subjectivities, relations, histories, materials and contexts, that entangle and intertwine.

Narratives are created with multiple concepts adopted as method (St. Pierre, 2017) to both tangle and untangle the desires and influences of family practices and intra-actions among animals, environments, teachers, children and families. Children and animals were not innocent players in these narratives for these relatings are "characterised by domestic intimacy and exploitation" (Swabe, 2000, p. 292). Narratives like the one in this chapter, are recognised by the use of italics in the form of short and long stories, retellings, hypothetical narratives, vignettes and poetry. Not all narratives appear in Inquiry Process as the generation of data is extensive and choices had to be made about what could be included. Narratives are written from participant interviews and conversations and data generated during field studies in addition to territorial encounters and events that transpired. There was not a prescribed amount of narratives for each participant, as they were written when an event or participants memories triggered an idea for how these aligned with the research questions and focus of the study. Some of the narratives link multiple participants and many crossed through rhizomatic generational stories gathered from families.

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Crafting the narratives is a synthesising activity where data intra-acts with political, material and historically situated relations prompting decisions about how to think-with text/voice/story, and not becoming bound by the rules of narrative methods. Gough (2015) refers to this as 'narrative experiments' where he plays with "art, paradox and humour that might motivate us to imagine and invent maps of networks that experiment with the real rather than provide more tracings of it" (p.159). This is a very freeing effect of writing with the 'posts' as ideas springboard in unexpected ways. What was now becoming expressed as narrative was more nuanced, risky, emergent and complex. Multiple voices emerged through non-linear plots, sparked by critical events and embodied "space in transit" (Lenz Taguchi, 2012, p. 265). These are not truthful consistent tales, but ways to invite the messy, silent and unexpected onto the page. Crafting the narratives also unlocks a sense of writing as a conjuring of visual images and metaphors that are evocative and playful. Bone (2007, p. 86) refers to this as a way of "seeing through writing". This was a new experience with writing, that increases confidence and unleashes a sense of creative freedom in the power of postqualitative writing practices for how they can be written as a visual experience.

Analysis as concept

Concepts form and expand movement of thought in the data assemblage and are also put to work, not as a priori methods, or prescribed ideas for becomings are mobilised by what they do, their affects, and how they relate and "reorient thought" (Lenz Taguchi & St. Pierre, 2017, p. 643). Concept moves at a fast pace in the territory, in contrast to many of the slower processes. They are mentally challenging to keep up with, never settling, they are hoarded and then let go, replaced with another idea in the theoretical dance, finally settling as a concept that illuminates the narrative and the foci of each chapter. Becoming connected in the reading and writing of Inquiry Process, emerging ideas are tracked on sticky notes of the research space. The concepts enter the study space, as a conceptual, movable wall – a feast of ideas released from one-dimensional pages of texts and digital screens, clearly visible and on show so they can be moved, expanded or discarded.
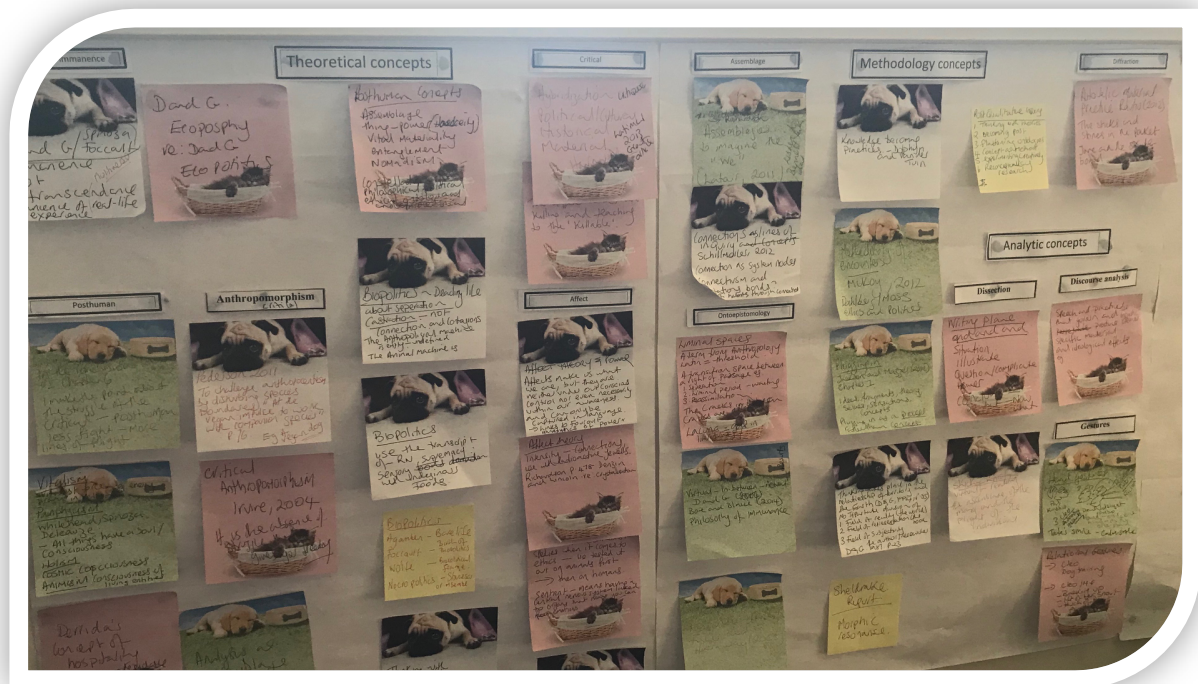
Figure 8: Conceptual moveable wall

As suggested concept driven analysis is arduous as there are no formulas and concepts manoeuvre through pathways of difference. Jackson and Mazzei (2012) suggest three manoeuvres that plug-in to theory by disrupting and decentering the theory/practice binary, naming questions that come from theoretical concepts and (re)working the same data repeatedly to deterritorialise. Rautio (2017b) suggests that concepts offer answers to normalised questions and actions posed by the world, where she too continually returns to the question of human and animal. Her relations with pigeons and crows pose new questionings that leave a residue of how analysis as concept is adopted by Inquiry Process:

> *To find a point of view outside conventional language games or conceptual responses is to attend, however incompletely, to what the world asks from us and to go about it like solving a riddle, trusting that no existing concept can tell us what to do. What we need to do is work backward to learn what questions the concepts are answers to. (Rautio, 2017a, p. 730)*

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Chapter summary

This chapter begins by questioning the process it engages as postqualitative ~~methodology~~ inquiry. Drawing from postqualitative scholars and the territorial assemblage, practices and interpretations are mapped in ways that set the scene for response-ability toward ethical relations of possibility. New associations are sought through field studies that move beyond the humanistic, agentic, individual participants; towards a complex assemblage of human, more-than-human, more-than-animal, more-than-material.

In summary, postqualitative inquiry has expanded in the same time frame as the theories of posthumanism and new materialism. Taken together, these emerge as the theoretical and postqualitative assemblage that adopts characteristics that are diverse and varied and not reliant on prior methods. "Thinking with theories, becoming post, flattening ontologies, turning to concept as method, experimenting creatively, reconceptualising research, and rethinking how and why are the lines to which postqualitative scholars often return" (Nordstorm & Ulmer, 2017, p. 6). Research becomes experimental and risky, travelling through places of uncertainty in the quest for the unknown, but is still required to produce legitimate research. Inquiry Process has set the scene for how this is reconfigured as inventive ~~method~~ practice that is dynamic and always under question. Seven research practices are enfolded within situated data events, enabling the combined interpretation, discussion and wondering chapters to now unfold. Embracing complexity and invention creates expansive thought that builds through rich interpretations, theoretical underpinnings and unexpected worldings. Furthermore, postqualitative ways of thinking and doing help to (re)imagine other worlds for the not-yet possible. This is timely as we enter the spaces of field studies in the territory where children and animals dwell and these reconfigurations start to surface, informing who we are and who we could be. Will the established ideas, structures, practices and policies assemble and reassemble in the early childhood contexts of this study enable these worldings to take shape?

Chapter five: Traversing the territory where children and animals dwell

Introducing the field

Human life is what is traversed by and embedded in flows of life that cut across species, life forms and inanimate things. If human evolution depends to a very large extent on its neighbouring species as well, then does it not follow that human life, or subjectivity, is inextricably linked to these other life forms. (Nayer, 2014, p. 79)

The territory continues to assemble as data moves in and out of the inquiry as human life becomes entangled with the more-than-human in this first chapter of field studies. It takes up the methodological (re)marking of the previous chapter that configures each of the chapters that follow. Nayer's quote describes the interconnectedness of the assemblage of human and more-than-human actors and material effects as "things-in-phenomena" (Barad, 2008, p.135) that traverse the territory through paths of uncertainty, forming unwieldy ideas, forces, emotions and intensities. The practice of wayfaring energises unexpected provocations of postqualitative practices, describing how ideas move as 'thought in the act' (Manning & Massumi, 2014), through unfolding, situated data events, settling into narratives that become interpreted through concepts. Inquiry Process seeks to explore generative ways in which young children experience shape their dynamic relationships with animal species in family homes and an early childhood education setting as these events offer possibilities for child-animal relations, particularly when these explorations trouble anthropocentric and 'normative' ways of being, knowing, and doing. The child is no longer always positioned front and centre, as different kinds of pedagogical relationships with more-than-human entities are taken seriously to reimagine what it means to live and learn with relational reciprocity.

Data moves through these chapters generating concepts, tools and narratives to think with. Layers of dust, data and debris become redistributed as some layers are carried away by the wind, while others settle revealing fine cracks in territorial surfaces. The institutions of early childhood are complex and difficult to navigate as much is hidden and unspoken and time for field studies is limited. As Inquiry Process becomes ensconced with the

ethnographic data, the territorial assemblage entangles with the history of the education setting, landscapes, family genealogy and pedagogical practice. Creative and emergent approaches for data generation are adopted, including those drawn from postqualitative approaches of walking, mapping, observation, ethnographic attunement, conversations and child-focused methods, that were unfamiliar territory. Encounters with the aforementioned actors and material effects shape the continuous motions of territorialisation where cycles of de/re/territorialisation offer unsettling potentia within humanist discourses.

The chapter traverses three spaces. The first introduces the field of inquiry where bodily becomings reveal a slower body-in-motion a body-in-transformation and a body-in-time, as circumstance diverts attention to knowing forces of production that liberate what is thought to be known; both personally and professionally. A sticky knot also appears in these introductions, further slowing the inquiry. The territorial assemblage shows how Inquiry Process becomes materialised within descriptions and practices of the school location where the early learning centre is located, as networks of relations are explored as situated ways of being, knowing and showing. Children are enmeshed in the second space as educational, cultural and environmental relations with animal species and place feature in the two traversing narratives that unfold within the historical-material-contexts of the study. The third space reveals how the concept of 'mobility' is injected within the integrated analysis/interpretations/discussions. As data travels, becoming absorbed in the territory assemblage of actors-data-place, it is shaped and reshaped by the flows, events, forces, materiality and performances of who and what is there, who we are and what was constantly under question. According to Deleuze (1990) becomings unsettle history. History provides the ordering conditions for an event to take place, but in itself, such an experience is beyond history as events cannot be anticipated or planned, for in the successive moments of history their affects are unknown and often appear as ordinary.

Becoming shapeshifter

> *The pull of the ordinary - The ordinary throws itself out of forms, flows, powers, pleasures, encounters, distractions, drudgery, denials, practical solutions, shape shifting, forms of violence, daydreams and opportunities lot of found. Or it falters, fails. But either way we feel its pull. (Stewart, 2007, p. 29)*

The pull of the ordinary that Stewart conceptualises is the influence of the shapeshifter in this chapter. The pull of subjectivity, as an embodied researcher is felt through the push and pull of the bodymind and natureculture continuum (Braidotti, 2018). Selfhood is under question as an ethical response is always uncertain, plagued with doubt where subjectivity is never stable or univocal. Shapeshifting stirs up patterns of thought and loosens fixed membranes that rely on transcendental consciousness. I shift, I morph, I write and create what is not known in these becomings, finding worth in interpreting through the body how to enact different practices and knowledge that do not rely on dualisms. The nomadic pull positions pathways of difference. If we only see and sense what we know, nothing new happens and change becomes bogged in patterns of the past. The flow of movement sets of awakenings that emerge during data collection as territory moves through me, shifting and realigning cells to no longer work in the same way. I grapple with what I should be doing as an academic researcher. Am I being posthuman enough? Should my field notes offer more detail, with double columns delineating thought and description. Should I be drawing, mapping, am I writing enough? Too much? And why am I taking all these photos? As I traverse the territory, the process of shapeshifting is literally and metaphorically changing my corporeal relational form. Shapeshifting becomings pinpoint the actualisation of my body as "an interface, a threshold, a field of intersecting material and symbolic forces" (Braidotti, 2002, p. 25) and as an expression of what bodies can do and think and enact.

I should think, I should interpret, and I should write. I sit my body down to write but my corporeal form is not the same. My shape, my pace has shifted. I am forced to slow down, long before I know that slow philosophy (Honoré, 2004) is a thing or that slowing down helps researchers to think and act in ways that help to attune with and become responsive to the more-than-human milieus, of the biological, historical, social and technological place I now dwell in. The slowing down shifts who I think I am in the world. My hormones recalibrate with a recently diagnosed thyroid condition, leaving me exhausted and no longer in control of my once organised, coherent and speedy thought processes. Foggy thoughts cloud thinking as I struggle to recapture my former professional command that has served me so well, demanding that I surrender to these shapeshifter becomings. These bodily changes vibrate with a slower, thicker, unknown frequency that

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materially connect me to territory, with an exchange of breath, a shedding of skin and sluggish endocrine system. I have to think, move and feel differently, relying on intuition in a field of relations that is embodied and material. This exchange of slower embodiment lessens concentration at a time where field studies and theoretical reading and writing are demanding I pay attention, as paradigms are also shifting. This experience heightens how the humanist condition renders the body and material world as inert, passive and contained (Coole & Frost, 2010) with expectations to ignore the body, keep calm and carry on as usual, and yet my hormones are palpable, volatile and leaky. I shift through this molecular exchange becoming shapeshifter, becoming animal, becoming territory, becoming postqualitative, becoming observer. I align with the assemblage becomings as part of the research story in partnership with the milieu who guide cell structures and muscle memory to vibrate and agitate, pulling me out of habitual ways of being and moving and acknowledging how knowledge is always affected by the fluid interplay of multiple forces. To this extent, "knowing is a matter of part of the world making itself intelligible to another part of the world" (Barad, 2007, p. 185).

As I become enmeshed in the inquiry assemblage, moments of synchronicity take hold as the path rises to meet me, as if tired of waiting for me to arrive. I conceptualise an original idea in the quest for new knowledge, only to stumble across a recently released book with a similar research inquiry, such as how Cole and Stewart (2014) theorise the concurrent loving and killing of Animals that children experience in childhood or how Continental philosophy and even human-animal studies have travelled with semiotics, long before I consider gestures as an inquiry concept that appears in chapter seven. I even found a study with synchronous coordinates to Inquiry Process that mapped data through territory and the researcher as traveller (Schillmoller, 2012). These occasions were both disconcerting and exhilarating. The frustration of abandoning notions of originality were replaced by the freedoms of aligning with flow (Csikszentmihalyi, 1997), uncertain of who is in the driving seat. I picture myself as the laid-back character of Crush the turtle in the movie *Saving Nemo* (Stanton & Unkrich, 2003), hitching a ride on the East Australian Current (EAC) to unknown places of discovery. These coincidences affirm that Inquiry Process is not moving alone, as generative paths and patterns are forming with ecologies of reading and writing, "in perpetual motion, immanent to the vitality of self-ordering matter" (Braidotti, 2018, p. 6), towards a destination, that can never be completed in this ongoing process of becoming.

Shapeshifting enables me to surrender to the process and trust the ride. Shapeshifting, as a type of metamorphosis embraces the coexistence and interchange of multiple modes of existence, between self and other, reality and unreality, and physics and metaphysics. I am comfortable in the space as an early childhood educator as this is familiar territory. The sense of complacency creeps in as I question the process and time needed to transcribe interviews, write field notes and narratives. I resist the pull of the extraordinary, organised person I used to be, becoming drawn into the slow meanderings of walking and talking with children and families, revelling in the multispecies happenings that appear before me. Myers (2014) reflects on ethnographic fieldwork in an early childhood setting where the inefficiency of her data collection was questioned by the academy "as unserious, too circular or too messy" (p.36). She describes the assemblage of generated data as the process of bundling, and as data that becomes entangled with no predetermined idea of what are good and bad bundles (Law, 2004). This approach to method assemblage is not haphazard but a deliberate attempt to let go of some of the control to see what happens, what emerges. Horowitz (2013) suggests that to become "investigators of the ordinary" (p.3), we need to broaden our ability to attend by honing underused perceptual, sensory skills and turn off the spotlight of concentration, as it selectively enhances what is seen as important.

Figure 9: Taking field notes during the ELC weekly walk

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This photograph was taken by teachers who recorded the walk on this day with some of the kindergarten children, parents and grandparents. There were ten similar images of me taking notes in this way, sometimes off to the side and at other times immersed in the events, but still with notebook in hand, that is indicative of the push and pull of sensing when to be present in the events and when to record field notes. Finding the balance between the push of the academy and the pull of the ordinary is a revelation. These assumptions of the researcher's role and the purpose of research mean that I constantly question when to take field notes, record or take photographs and when to surrender to the experience. Sometimes this happens as I get swept away by the moment; especially during the scheduled outdoor education and walks. Other times the children are highly skilled at pulling me into the present, especially when we begin to know each other. One of the focus children Jag, regularly attempts to charm me into staying for the afternoon and one day I asked him why he thought this was important. His wise response "you don't get to see what we do for the whole day" is matched by his curiosity and awareness of the research purpose that is a constant focus of our conversations as he questions what is happening, offering ideas about what he thinks I should pay attention to. I was grateful for his insights and took note of his suggestion, staying for many full days.

Shapeshifting crept up on my body, rendering me in a state of flux, where my body felt strange, questioning whether we ever become autonomous in our own flesh as subjectivity is always under review and never fully known. Becoming shapeshifter also affirms a plane of altered composition of transversal subjectivities. "Subjectivity can then be re-defined as an expanded self, as posthuman, whose relational capacity is not confined within the human species, but includes non-anthropomorphic elements" (Braidotti, 2018, p. 12). This affirms that the boundaries of subjectivity wax and wane in accordance with ethical responses and embodied vulnerability that orientates relations towards other living bodies with shared assemblages as becoming subjects. This concept of embodied vulnerability is not negative, just as the concept of agency is not positive; for neither are contained or internal. To be embodied as a finite body, is always adjusting with chemical or microbial changes, to the violence, kindness, interest or grace of another, so our ethical orientation is always influenced towards the other and from the other. My body adjusts to becoming researcher, finding new flexible pathways and like Mazzei (2013b) I find ways to materialise into the research, rather than enter the field, because a part of me is always, already there. Traces of these pathways continue through this chapter as ideas of

movement, relationality and embodiment- with and as other, configure within the chapter interpretations. I hand over to Inquiry Process who commences with a short overview of the location and the arrival of another sticky knot that appears in the inquiry.

Materialising place: We break horses here

Animals are evident in this semi-rural community where horticulture and poultry farming are widespread in the area. The long road and driveway to the school reveals fields of grazing goats, cows, ponies and horses. Opposite the school is a large horse breeding and training facility hidden behind high brick walls and fences. Slowing down to take in the surroundings during the drive to this familiar school, a large sign is evident with the name of the stables that states 'horse breaking' as one of the services on offer. Analogous notions of the training of horses and training of children can be made here with the location of this school and stables, as the control of Animals meant that complex societies could be developed where humans have dominion over nature, land and those who dwell there. The Italian word for management, 'manegiare', as an organisational style refers to the techniques of training horses, with often cruel forms of animal handling such as pain and whipping (Burrell, 1997), that are designed to 'break' the horse from their animality. These organisational styles of control are also applied to children in western education, although thankfully in recent times with less brutality. Inquiry Process wonders if this sign had escaped previous attention, or if it was not present during previous visits to the school. The notion of breaking-in horses, colonising the habits and behaviours of their lifeworld for assimilation into human worlds, signals firstly that the animal is present in this place, and also that this is a different inquiry and engagement with this education setting has taken on a critical edge where the landscape has also shifted.

Thomson and Hall (2016) emphasise the importance of place-based research that pays attention to the history, changes and factions of the education setting and surrounding neighbourhoods and this becomes an important starting point for 'entering the field'. In this inquiry the field is surrounded by literal fields, as the school location is situated on former swamplands, 30 kilometres south-east of Melbourne in what can be described as an unusual suburb of Melbourne due its pastoral land and low population that is mostly due to the people who reside in the local retirement village. Inquiry Process arrives in the

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middle at a particular historical reference point, full of human and more-than-human genealogy, where much had happened, and the social and material conditions were in play. It was not empty and waiting for wisdom. Research does not take place within Terra Nullius as historically specific material conditions shape the terrain that researchers enter. For Ingold landscape "unfolds the lives and times of predecessors who, over the generations have moved around in it and played their part in its formation" (Ingold, 2011b, p. 189).

On this Boonwurrung Country there are traces of how groups of Animals and groups of people with certain 'social markings' have been treated as lesser and are made to sustain the lives of other humans. Inquiry Process acknowledges and pays respect to this Boonwurrung Country located on the south-east corridor of Victoria. As visitors to this place we pay respect to the Boonwurrung people of the Kulin Nation, to the ancestors, to those who dwell in the present and those yet to come. We promise (dhumbal) to obey the laws of Bundjil the eagle by doing no harm to the land (biik), the creek (wurneet) or to the children (bubup).

> *According to our tradition, our biik has always been protected by our creator Bundjil, who travels as an eagle and by Waang, who protects the wurneet and travels as a crow. Bundjil taught the Boonwurrung to always welcome guests, but he always required the Boonwurrung to ask all visitors to make two dhumbali: to obey the wurrung or laws of Bundjil and not to harm the bubup or the biik of Bundjil. (Briggs, 2015, p. ix)*

Traversing sticky knot: Vitalism

Shapeshifting uncovers a sticky knot in this chapter that signals a phase in the research where the assemblage becomes trapped with wayward contradictions. Inquiry Process adopts nomadic wayfaring as a practice of emplaced wandering of body and mind, with material and affective entangled relations with human and animal species. This focus on practice and embodiment as ways of engaging with territory can be described as vitalist, as the vitality and forces of the more-than-human are sought as modes of knowledge, in order to disrupt dominant human ways of knowing (Greenhough, 2016). Vitalism is embraced as an "immanent-matter-energy of the non-human world" (Choi, 2016, p. 618) that impacts and acts within networks and is therefore not passive and inert; reliant on human intervention. "Instead of being something, life forms are constantly evolving, constantly becoming, shifting in their composition" (Greenhough, 2016, p. 38). Through

these shifts or becomings, vitalism is the tendency of life to assemble in networks of "fluid ecologies" (Whatmore, 2006, p. 14) that move in unexpected ways towards greater complexity, that in turn mobilise difference. Vitalist difference was once the domain of biological life forms. This domain has expanded with new materialism, where hybrid biotechnology of animal/material/plant are enlivened with vitalist forces that move in and between things that already are known, but also includes things that are yet to come. Claire Colebrook (2009) defines this as a type of queer vitalism. "This vitality is therefore essentially queer. The task of thinking is not to see bodies in their general recognizable form, as this or that ongoing and unified entity, but to approach the world as the unfolding of events" (p.83).

Many of the unfolding events in this study take place on walks. Walking as method may appear as a new objective of posthumanist research practices (Cutcher, Rousell, & Cutter-Mackenzie, 2015; Springay & Truman, 2018) credited to European philosophy, however, it must be acknowledged that "walking with entails serious engagement with Indigenous epistemologies, ontologies, and methodologies" (Sundberg, 2014, p. 40). Sundberg is critical of posthumanist relational ontologies that align with new materialist ideals of entangled multiplicity, while at the same time steering away from notions of animism, vitalism and anthropomorphism, that are cornerstones of Indigenous knowledges.

Situating these notions as naïve and mystical is a sticky knot of posthumanism that plays both colonising and decolonising cards in the same hand. On the one hand Western relational entanglements are appreciated, while the other hand holds and often dismisses Eastern or Indigenous beliefs that attribute primitive, vitalist "magical qualities to inanimate objects" (Sundberg, 2014, p. 38). The liveliness of vitalism is sticky as it difficult to see, measure and define, associated with molecular undetermined dimensions that are not linear and cannot be sustained by an essence or representation. Vitalist ways of relating with and understanding place in nature are a significant part of the environmental question of the nature/culture dualism. From this perspective, Sheldrake (2018) concurs with Sundberg that vitalist, animist and anthropomorphic thought is attributed to children as well as societies, where these attributes are associated with primitive cultural worldviews. These groups of people are perceived to have inferior

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knowledge that "secular, modern, scientifically educated, progressive people have grown out of" (Sheldrake, 2018, p. 67). While there is no dismantlement here in this discussion of the sticky knot, it raises important questions that stick with the inquiry. Rather than setting up a dichotomy between mechanism and vitalism, Inquiry Process is open to the unknown, the new questions that arise from these ontoepistemological perspectives, conceding there is still much to (un)know about what matters, and how matter works. Nomadic wayfaring is part of this process of (un)knowing and (re)making and Inquiry Process briefly considers what this brings to this traversing chapter.

Nomadic wayfaring

> *Stumbling on a bird's nest as a child, I was breathtaken. I gasped at the tenderness of it, the downy feathers, softer than my fingers, moss folded into grasses and twigs in rounds. My eyes circles and circled it, caught by the mesmerizing perfection of the nest. It was the shape of my dream, to be tucked inside a nest and to know it for home. (Griffiths, 2013, p. 1)*

Nests and birdlife are prevalent in this space. Nests bound with twigs, mud, moss and bark, made by the bodies of avian creatures as the architects of these transitory homes. The discovery of nests during outdoor education have led to the children creating nests with their art teacher, using the medium of wire and weaving materials to represent their ideas of nests they have seen and how a bird might create a nest.

Figure 10: Holly and Jag creating nests

The interpretation of space, the significance of walking and wayfaring and the relationships that exist between them have been a source of recent early childhood education research (Banerjee & Blaise, 2013; Knight, 2016; Pacini-Ketchabaw & Taylor, 2015b; Rooney, 2016) where outdoor pedagogic practice, is considered through posthumanism and new materialism perspectives. Ideas are also drawn from environmental geographies, anthropology, literature and performance studies where concepts of liminal spaces, boundaries, thresholds and movement are prevalent (Marsha & White, 2016). This offered some guidance for wayfaring methods where letting go of trying to capture the perfect story unleashes smaller stories of the ordinary, where

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interpretations are re-envisioned by the practices of walking and wayfaring, as an alternate way of attending with what is happening. Walking morphs chemical connections where muscles are stretched, the heart pumps faster, blood and oxygen circulate, not just to the muscles, but to all the organs, including the brain. Walking is also the realm of the nomadic thinker, as "every practice is already a mode of thought, already in the act" (Manning & Massumi, 2014, p. vii). Emplaced shapeshifting that takes place during wayfaring requires inventiveness to travel to risky expansive places, distributed by the privilege of freedom. Nomadic thinking is therefore thinking at or on the limit of freedom, which by definition has no limits, and which, according to Deleuze and Guattari (1987/2004), turns the nomadic thinker into a "war machine" on a direct collision course with institutionalised thought. Perhaps the most profound relationship between research, walking and writing is that similar neural pathways are forged in terra-firma as terra-thinker, where each landscape plots a course through mental terrain that can both affect and be transcribed through the writing process. Walking maps the world around us, while writing maps thoughts. As much as the nomad is defined by movement, the nomad also knows when to sit still and move at a slower resolution, for "movement is extensive, speed is intensive" (Deleuze & Guattari, 1987/2004, p. 444) and practices of waiting and immobility are still movement, with a different intensity of time.

Tuesday walks take place with twenty-two children in the five-year-old group and their families walk who on the school grounds to various landscapes and the outdoor education walks take place each Wednesday morning, where the group is divided in half with walks on the school grounds with the outdoor education teacher, Joe. Narratives are created with events from these walks that follow the pull of the ordinary and are neither linear or intending to tell the whole story. They are not formulaic in their composition as postqualitative practices enable narratives to assemble as short vignettes, longer stories and where polyvocal characters are adopted as literary devices. Furthermore, Inquiry Process found that wayfaring offers an alternate perspective as a practice in the development of a particular relationship with landscape and place that has implications for outdoor pedagogic practice and this is the focus of the following traversing narratives.

Traversing narratives

Territorial walking events appear in the two traversing narratives for this chapter that take place during the outdoor education lessons on Wednesdays. They indicate the process and practices of slowing down to the pull of the ordinary, being open to whatever appears. The narratives firstly unfold and are then interpreted with the concept of mobility.

Traversing narrative one: The performativity of Animals in place

The first narrative describes a joyful day at the ELC where everything was a little too perfect. Paying attention to the multispecies dwellers depicts the interaction between species, environments and natural phenomena in a way that helps to materialise the space, especially with this first narrative. For Derrida, (2008) observing animal species like his cat in their being, outside of our desires for knowledge, constitutes the ultimate ethical stance and writing this narrative was a helpful way to act on this ethical position, paying less attention to how and for what purposes we construct difference, and more to how human-animal-place is bound together as we perform on the stage of life.

> *It's a warm spring morning and there is strange sensation that the school is putting on a staged performance. Everything is too perfect, but two of the actors fail to turn up. It's as if the morning walk has been choreographed to showcase the variety of birds, and animals that dwell in this place, in addition to creating optimum learning opportunities for the children's outdoor education experience. Is this a ploy to impress this researcher who tags along each Wednesday morning with field notebook and camera at the ready to record the unfolding events?*
>
> *We begin each day with the regular morning meeting sitting cross legged in a circle as we centre our collective energies. The children greet each other and the visitors of the day with the traditional welcome of the Kulin Nation, a place now known by its European name of Melbourne. "Wominjeka" they say in the loud sing-song voices of children who have learned to slowly speak in unison. Today it is just my presence they welcome. Joe the outdoor education teacher arrives and sits on a chair next to his resident dog Kosi who licks his face before settling*

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on the floor next to him, reminding him he is here. During the meeting Kosi makes his presence felt letting out a loud howl and moves to a standing position, pointing with his snout towards the door. The children turn their heads in Kosi's direction and the teacher asks them "What do you think Kosi is saying to us"? Without hesitation the children chant in unison, "He wants to go outside for the walk". We all nod because we know this is exactly what he is communicating in his body language and sound making.

Figure 11: Kosi and Joe entering the morning meeting

The outdoor education groups are split into two where they attend an hour session within the vast school grounds on alternate weeks. Today Jag and Hunter, two of the focus children are in the group. Joe has lived on-site and worked at this school for over twenty years and as we pull on waterproof pants and gumboots he tells us that today we are going to meet Barry and Ethel. We wander over to his house with instructions to search the front garden for Barry and Ethel, the great pacific ducks who have been visiting for the past five years. Barry and Ethel however are nowhere to be seen. We call out in vain multiple times. For in this outdoor

performance Barry and Ethel have missed their cue.

This failure to appear is the only glitch in this morning performance where birds, rabbits, a dog, children and adults play their parts in an entangled performativity that represents what can be seen, heard, sensed and discovered in this space. At one stage I mention this to Imogen the ELC teacher. "Today is too perfect. I feel like you have teachers and children hidden in the bushes prompting the actors to appear on cue". Cue the purple swamp hens with their comical stride. Cue the bird with the secret bird call. Set up Kosi to chase the rabbit out of the undergrowth, who should win some kind of leporidae acting award as she ducks and weaves so close to where we are standing, the fear is seen in her eyes as she escapes from Kosi, who is hot on her tail". Imogen laughs nervously noting that "today, we have seen a lot of wildlife". Is she hiding something?

We continue searching for bird nests that has been a focus of study for many weeks in a copse of gum trees that line the school entrance. Joe has taught us to look for fresh bird scats on the ground as an indicator that the birds are in residence. There are fourteen plovers on the nearby sporting oval, more than usual; as if the school has brought in extras for the show. Although there are no eggs in the insubstantial ground nests, the plovers watch carefully, darting back and forth like nervous guards as they noisily patrol the area, embracing the choreographic intensity required for their performance. Joe asks, "What will happen if we go over to them"? The children remember their lines telling us that the plovers will make a noise to stop us getting too close. Joe uses an analogy to explain plover behaviour describing how these birds are now teenagers, very much like the students in year nine who can be troublesome. I notice today he is particularly skilled at using examples that place contextual knowledge within the children's realm of understanding, as if reading from a script. He does this again whilst describing the colour of the plumage of baby magpies that James notes. "That is not white, but more a dirty grey, just like Kosi's fur". Joe agrees, remarking how it is the grown-ups who are black and white. He also tells the children how they are really friendly if you feed them and speak to them, and that magpies only

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swoop if they are scared you are going to harm their babies.

Jag enters the scene with a handful of seeds in his hand that he shows to Joe. "Are they seeds?" he asks? Before Joe can respond he picks up the small balls, squeezing them between two fingers noticing they are filled with grass. "It's pooh!" says Jag. "What kind of pooh could it be?" Jag quickly remembers that it is rabbit pooh.

Figure 12: Jag looking for scats

We move on a little way to a scene with two birds of prey we have never seen before drifting overhead in the air. Oh, come on! I think, how did they get these kites to appear? Joe describes how kites eat small lizards and mice. They are aero dynamic with the ability to hold a stationary position in mid-air without flapping their wings as they use the power of the wind to float in the air and they

silently hover in this way to sneak up on their prey.

We move to a new set where water birds take up their positions on the lake, moving in and out of the water with a flurry of activity generating a collective affect - a dance now taking place on a shimmery wet stage. A teenage cormorant stretches his shiny blue/black iridescent wings to dry as he stands on ceremony with a statuesque pose, balancing on a rock by the lake. Herons, purple swamp hens, ducks, terns and coots move in unison. As we leave this watery act Joe alerts us to two tiny brown and white swallows, swirling around as we stir up the insects they like to eat when walking across the grass.

As we reach the school buildings there is a shift as the presence of human-animal separation is revealed through apparatus that tells us that some animals are not welcome in this human space. Joe points out the shiny, sharp, metal spikes anchored in an upright position within the inside roof area of a covered walkway. "What are these?" he asks. James notes that the spikes "keep the birds away" and Hunter adds, "so they don't pooh on the wooden deck". Oliver mentions how his dad put these up at their house, so the magpies don't nest near the house. "He put spikes in a nest to stop them going in and smashed down another nest. "We don't want them to come and nest in our house". Joe points out a sturdy swallow nest tucked under the eaves of a building, above a doorway. Swallows so intent on cohabitation in human spaces built this nest, resisting the spikes and human intervention that attempt to dictate their choice of location, for raising their young. Joe acknowledges the skill and tenacity of these renegade birds. "They build their nests so well with sandy coloured mud that they come back and use them again and again".

At the end of each walk the children gather with the teacher to share their discoveries and reflect on what they have learned in words and drawings. After a little while I can no longer contain my enthusiasm and I blurt out how "I have never seen so many birds, I think we saw about twelve species today". The teacher wisely directs the attention back to the children, asking why they thought there were so many birds today and Hunter offers the final lines to this almost

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perfectly executed performance. "Because, it was such a lovely sunny day".

Figure 13: Children's collective drawings of the school birds

This narrative captures a voyeuristic gaze of an outsider seeking the order of things with a sense of irony for the perfection on display. The plot and characters appear alongside staged props, costumes and materials. The voyeur is careful not to objectify animal species as the involuntary bearers of humanist meaning or romantise the space, however beautiful it appears. Attending to how animals including the human ones, participate in shared social spaces as subjects of their own lives is important here. Writing about the more-than-human collective requires a way of knowing, a grace that contemplates the difference between what Ursula Le Guin (2016) signifies as subjectifying and not objectifying the universe. In this narrative animal species are celebrated, named and scripted as teenagers, parents, babies, as home makers, as skilled and unskilled nest builders, as wild visitors, as those who live and die, as those who chase and are chased. Parallels are drawn between the inner lives of humans and animal species that communicate the spatiality of actors dwelling on a shared stage of an entangled data event.

The philosopher Kenneth Burke (1968) developed the concept of 'dramatism', the idea that life is like a never-ending play where actors learn how to play assigned roles and where "drama is employed, not as a metaphor but as a fixed form that helps us discover what the implications of the terms 'act' and 'person' really are" (Burke, 1968, p. 45). The study of liminality in theatre and research reveals the in-between, disorientating elements underpinning society. The foreground of the stage includes the social setting, how things appear and the interactions between actors of voice, song, gesture, body language and behaviour. The back stage hides the mess, the silenced, the panic of getting the performance 'right' and the private spaces where the performers can be their 'real' selves. Burkean humanist interpretive communication studies theory are being adapted within posthumanist analysis (May, Rivers, & Sharp-Hoskins, 2017; Smith Pfister, 2017) as the multiplicity of his ideas explores chaotic webs of interconnection that aligns with new materialism and critical animal studies. Writing the narrative with the performativity of Animals in place enables ideas from Burkean dramatism to pursue linguistic and participating tropes that mobilise fragments of discourse to larger ideological formations. Writing for and as animal species requires literary tools, like the soliloquy in this narrative that neither separates, speaks for or privileges species. For example, Hamilton and Taylor

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(2017) bring into question how concepts of Animals and humans in relation "rarely form the outright focus of participant observation. The participation is *with* humans, but the observation tends to be o*f* animals" (p.56). From this perspective the humans are the watchers and doers and the Animals are being watched and behaving in animalistic ways, as defined by human limited knowledge. Paying attention to the practices, signposts and norms through which lived experience is required to communicate and act, can reveal how human-animal narratives position both humans and animal species in specific ways. Such questions and critical interpretation enable a more nuanced reading of the narrative, where it become more apparent how the narrative is still telling the human story, with the animal actors in the background and where their lifeworlds are presented through a limiting educational lens.

In further narratives Inquiry Process seeks ways for human and Animal realms to reveal the integration that is already there, where perspectives and 'voice' of the more-than-human are brought to the fore. The next narrative attempts to respond to the social, environmental and technological intensities of place through relational links to who is making tracks.

Traversing narrative two: Making tracks on Boonwurrung Country

> *Humans are animals and like all animals we leave tracks as we walk:*
> *signs of passage made in snow, sand, mud, grass, dew, earth or moss....*
> *We easily forget that we are track-makers, though, because most of our*
> *journeys now occur on asphalt and concrete - and these are substances*
> *not easily impressed. (Macfarlane, 2012, p. 13)*

McFarlane foregrounds how Animals, including human animals make visible tracks, that can be seen. Inquiry Process is also interested in track makers who may be unseen, unknow, but nevertheless are present in sense and soundscapes. This brings to mind the term 'mindblindness' that Manning and Massumi (2014) describe as the inability to open to the potential of hearing and seeing modes of existence, including the animal, tree, rock and river. Traversing the school landscape moves in the next narrative with the multifarious assemblage of a posthumanist account of the multiple many. Moving beyond the traps of humanism as a thinking, speaking and researching animal, is an impossible and unfamiliar task. However, the intent is to invite the more-than-human to be part of the discourse, prompting poly-vocal accounts to emerge, whilst acknowledging that the

"power-laden inscription devices that we use to communicate with each other about animals are themselves tethered to the very experience and embodiment of being human" (Hamilton & Taylor, 2017, p. 53).

> *It's been raining, and we are equipped with gumboots, rainsuits and jackets, for this Wednesday walk on a winter, overcast day. Joe, the children, Kosi and I enter a messy, overgrown space on the school grounds, a favoured place that the children name "the forest of dead trees". The unpredictable nature of the uneven surfaces, and what could be perceived as an ugly landscape compiled of twenty years of discarded old trees and mounds of branches, covered over time by long grass and weeds; provides joyous possibilities for moving in unfamiliar ways. This challenge to mobility means that manoeuvring skills are tested in this obstacle course, where overgrown grass and branches fashion springy trampolines that satisfyingly crack when you stand, or better still jump on them. We are paying attention to soundscapes of posthuman spaces, for according to the biologist David Haskell to "listen is therefore to touch a stethoscope to the skin of a landscape, to hear what stirs below" (Haskell, p. 2).*

> *Joe channels the children's attention to what could be stirring underfoot as he points to the mounds of grass, sticks and prickles, suggesting these are rabbit homes. Hope looks at the entrance indicating "this is the front door" shaped like the hollowed shape of a 'holloway' (Macfarlane, Donwood, & Richards, 2012), a passageway formed by the pressure of traversing rabbit paws. Joe asks if animals build houses, noting how if this is the front entrance there will also be a back entrance as rabbits are clever, needing ways to get in, and ways to get out. Hunter points out he saw a buck rabbit in this one and when Joe asks why the prickles might be useful for a rabbit, Hunter says the "blackberries are for protection". Maddy worries "they will get thorns" and Joe laughs stating, "I think the rabbits are sitting inside saying na, na, na, na, na as the foxes and even Kosi cannot get inside".*

> *The family of rabbits huddle together in their warm warren trying to temper their amusement. "Shush can they hear us"?*

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Paths and tracks mark time leaving traces of embodiment for those who have crossed over them. These paths are alluring, lighting up neural pathways that stir the memory of readings about tracks, traces and landmarks (Macfarlane, 2012). Pursuing these grassy lines in the land from animal bodies carries the ghostly remnants of the histories of a route and those who pass by. Who traverse(d) these spaces on Boonwurrung land? Joe also attunes to tracks pointing to a furrow forged by rabbits and Hope broadcasts that "it smells like rotten poo on this rabbit track". I seize the opportunity to pose a provocation to the children "I can see that these small tracks that leave marks in the grass are made by rabbits and I notice that all along our walk, we too leave marks in the grass. Does that mean that we are animals like rabbits? All the children call out "NO", in unison except for Maddy who confidently announces that. "Yes, we are animals". This prompts James to think about dogs. "Animals are like Kosi who walk on four legs. "Eagles walk on two legs" states Ari, and Jack thinks about how "animals have paws and not legs". Joe adds another provocation to the leg/paw criterion they are grappling with "What about whales and dolphins who don't have any legs"?

Figure 14: Rabbit tracks, human tracks and tractor tracks

We come across another track and I ask who made this? Holly suggests "it could be a tractor, or a car driven by people - vehicles". I ask, "so are tractors animals"? This time William suggests that tractors are animals because we can't kill living creatures. James gets cross with him "they're not living creatures, they're vehicles. People long ago killed animals for their food like Angela (Indigenous educator), Aboriginal people". Ari tries to get the discussion back on track reminding the group "they're actually driving things and Holly once more names them as vehicles, while Hunter agrees "they are things – a thing". Maddy states that "rabbits are animals because they live in holes and rabbits and snakes make tracks". "Good point" I say, "we have not talked about snakes as track makers". We notice another trail bigger than the rabbit track wondering what it could be, when Holly makes a connection. "It's me!" I ask again "do you still think we are not animals now you can see that we make tracks too? Holly says nothing but appears unconvinced by this line of inquiry.

Traversing concept: Mobility

The traversings in this chapter assemble as people-animal-material-forces are emplaced within the transitionary sites of dwelling and multispecies landscapes. Engaging with the aesthetic movements and materialisms of learning environments in this way reveals how pedagogical encounters are shaped and framed through relations and the concept of mobility. Manning and Massumi (2014) describe working with concepts as engaging in the moments of field work to enter the "relational fray" (p. 90) in a process-oriented way. Notions of mobility also play through shapeshifting becomings as a body becomes less mobile and thoughts slow down. The ecological milieu of place where bodies, space, machinery, sound, sense and landscapes are not fixed or static as they are also shapeshifting in terms of fluids, time, rusting metal, flows and movement. Mobility traverses with the assemblage of actors, from microbes to biospheres, from hormones to soundscapes and from the human to the more-than-human.

The narratives generate ideas about free-range children and free-range animal species set on the stage of life in ways that appear at first glance to be idyllic. The two narratives

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also illuminate relationalities as the productive work of a concept such as mobility denaturalises the status quo of who and what is mobile and how mobility is enhanced and prevented in mobility regimes. Protective clothing that the children wear enhances mobility, physical skills are tested and enhanced by uneven terrain, rabbit dwellings reveal entry and exit points, the mobility of dogs and foxes are restricted by plant prickles and blackberry thorns but enhance the safe passage of rabbits. Almost all the children do not identify themselves as animals, but do notice how humans, rabbits and tractors make tracks as the weight of their presence leaves traces on the land. These agentic elements mean the walks and environmental pedagogy are never the same and, in this way, the collective milieu is also pedagogic, rather than a passive place of only human learning. Mobility, like all concepts adopted in the interpretations of the study is attached to emplaced encounters that oscillate between metaphysics and the ontology of virtual and actual worlds. Metaphysics expands the imagination of post-aesthetic possibilities of what a concept does in addition to what might contradict and disrupt these ideas. The conceptual imagination is always moving in relation with ideas, whereas the actualised concept moves with systems, structures and materiality. More often that are entangled in the middle as processes that zig-zag back and forth and fold into each other as Deleuze and Guattari (1987/2004) depict as neither abstract or concrete. Adopting a type of 'dramatism' in the first narrative helps to articulate these aesthetic relations in their complexity within boundaries and understandings of the colonised physical space they took place on. In this way Inquiry Process is alert to those tracks that trample upon or claim to leave others behind in the assertion of difference.

Animality attempts to rethink human-animal borders that bring into question the subjectivity and objectivity of knowing animals. Human-animal studies (Grist, 2004; Safina, 2015; Suen, 2015) move from thinking about what an animal is to what an animal does, as well as attending to the agentic voice of an animal species, like the rabbits in the second narrative. Writing as and for animals always poses ethical and literary challenges as assumptions are made about creaturely lifeworlds. However, as indicated by Hamilton and Taylor (2017), articulating the declarations, affect, performative and intersubjective forces-of animal species has much to offer. The nomadic experiences of European rabbits for example show how they participate as social animal actors, as "European rabbits live in large underground warrens of dozens to hundreds of rabbits" (DeMello, 2010, p. 11) in close kin structures. As Derrida (2008), understood if we

attempt to know the Animal as subject, as the desire to ventriloquize voice does, we are making attempts to temper the anthropocentrism of Western philosophy. Knowing rabbits in this way through lagomorph (the study of rabbits, hares and pikas) becomings subverts the limitations of mobility and isolation experienced by the lone caged rabbit caged who is a prevalent fixture in childhood homes and education settings. Braidotti (2009) acknowledges the ethical imperatives when we consider the storied animal, such as engendering the rabbits with a sense of empowered irony in this narrative as a literary antidote to the human and canine animals who entrap, chase, poison and shoot them. "The animal is taken in its radical immanence as a body that can do a great deal, as a field of forces, a quantity of speed and intensity, and a cluster of capabilities. This is posthuman bodily materialism laying the ground for bioegalitarian ethics" (Braidotti, 2009, p. 528).

Materiality is drawn into the events of the second narrative through heuristic provocations with a vehicle that transports technological imbrications. What does this trace of a vehicle leave in its way? Does the mechanical object have a sound, action or intent that can be voiced? Is the tractor othered to become othered(wise). Holly and James are very clear about the namings of vehicles and admonish William for calling them creatures. In these learnings about the namings of the world the categories contain knowledge that is sometimes porous and flexible such as Holly's imaginative suggestions for what could be creating the tracks in the grass and James who speaks about 'Aboriginal people' killing animals, possibly in response to the Angela who recently brought a kangaroo skin to the ELC. Hunter can be more fixed in his responses, drawing upon facts to support his discussions and actions where he insists his ideas are correct. What if William's creaturely ideas about un-killing the animal tractor are voiced through posthumanist desires in these wonderings with human/rabbit/tractor? Queer vitalism or speculative fiction frees the material world to talk back, engaging the assemblage pedagogically and relationally. Bringing together these ideas of tracks, voice and categorising returns to the metamorphic ideas expressed by Sheldrake (2018) as children are expected to outgrow the vitalist immaturity that is expressed in the ease of discussions that sanction and actualise voice and mobility to the tractor, in ways that Inquiry Process is not yet ready to play with.

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Larvae   *Oh, Tracy you were so close to the creative inventions you write about, and yet you hold back and hand it back to children to do this work for you. What is stopping you? Are you able to experiment with different ways of seeing and doing to remove your mindblindness? Bring the tractor to life, in ways that enlivens it to the territory that has been traversed for many years by machinery that knows the wears and tears of embedded memory. The tractor is also othered(wise), with the knowledge of power relations of the subject/object binary. Why don't you trust this?*

Tracy   *I don't know how to do this in ways that does not portray the tractor like a character in children's books with talking machines – like Thomas the Tank Engine. I know this is not about giving voice.*

Tractor   *I'm here, I'm here, waiting in the shed. I don't need you to speak for me, you took too long. I make so many sounds that when I move it is impossible not to hear my engines roar. I know this place and I took over from the horses, before it was a school. I have a big job coming up – you know. I heard you talking about it with Joe and soon I will trample over the forest of dead trees as the school wants more space to make a golf course. I will be making tracks soon.*

As an object with material vitalism, Tractor brings to mind the slow, heavy thoughts and shifting shapes of a researcher's body, and a reminder of the future changes that the technological force the tractor will enact upon a favoured children's landscape. The proposed changes to remove the forest of dead trees from the ugly and unexpected to the neat and purposeful, provides a metaphor of anthropocentric colonisation of the spaces of children's learning and the homes of the rabbits who dwell there. The flattening of space leaves trackprints that demolish the old in place of the new. This shifting assemblage of place and practice alters mobility and freedom for the early childhood children by removing the messy, unplanned, wild spaces they are eager to visit and re-territorialising this space with colonised regimes of order, that support and sustains the whole school golf program. The emphasis from Thomson and Hall (2016) about interpreting the history, changes and factions of the education setting and surrounding neighbourhoods is worth repeating here as golf is a popular participation sport in

Australia, and this "region includes the best golf courses in the country, known as the sand belt" (Ausgolf, 2018). Mobility enables children to navigate their educational space, as they intersect through these events, sharing flows of materials, knowledge and the affordances of space with the more-than-human. Children discover the type of space that is valued, who and what is noticed, who is granted the permission to travel with them, and those that come along anyway. Mobility extenuates the embodied difference of species in the narratives through walking, flying, jumping, swooping, swimming, hovering, slithering, running, where this consideration of mobility has to include the kinds of things people and animal species do when they move in various ways. Sometimes the materiality associated with movement 'pushes back' on subjects to shape experiences of mobility and identity and indeed landscape construction. For example, some nests are protected and revered, like the plovers, others are admired for their skills like the swallows and invited to return each year, whilst others, the unnamed, always the unnamed are barricaded with sharp spikes that signal you are not welcome. These homes and avian habits are too messy, too loud or they bring the animal pack too close in ways that are never welcome, re-categorising animal species as pests. Animal movement is therefore shaped by "and always produced within (and are productive of) relations of power" (Hodgetts & Loimer, 2018, p. 2) as human borders influence and govern the human and more-than-human performers in these narratives. Animal species manoeuvre and transgress these thresholds and boundaries, like the rabbits and swallows who navigate enactments of inclusion, exclusion, and dissociation of who has access to the performance. Mobility in these narrative enables and shifts the coming together of species, bodies, learning, objects and space.

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Chapter summary

Posthumanist practices surface in this chapter as Inquiry Process enters the field of study leaning into alternative ways of listening, seeing and relating with the assemblage of animals, plants, people, landforms, machinery, and discourse that circulate in the territory where children and Animals dwell. This chapter grapples with one of the generative questions of the inquiry: How might place and culture influence the becomings of human-animal relations in early childhood?

The concept of mobility is threaded within the two narratives to interpret how educational experience is enacted in this education setting that offers greater freedom of movement than most early childhood settings in the Australian context, through outdoor education, wayfaring and walking practices. This freedom of mobility, in addition to affordance of space enhances the highly relational nature of mobility as it offers opportunities to travel to challenging and risky places of dwelling, that are not static, and where mobility and immobility can be both complementary and antagonistic to human-animal relations. The concept of mobility interprets aspects of what it is to be mobile and immobile as constitutive relations that enhance life and the production of educational space. There are glimpses here of the ethical, political, and pedagogical implications of addressing the colonial histories and material geographies" (Pacini-Ketchabaw &Taylor, 2015, p. 2). Borders or boundaries effect relations of mobility and power, influencing the movements and participation of participants. In a rhizomatic assemblage border-control, becomes a paradoxical issue and the notion of borders and boundary crossings become the focus of the following two chapters.

Chapter six: Speaking and acting the boundaries where children and animals dwell

Introducing the discursive borders

As the border between human and nonhuman has continued to shift, patrolling that border remains ever more important for those who are invested in the idea that humans are not separate from animals but that the separation entails superiority… Human 'specialness' has been employed to justify virtually every practice engaged in by humans involving animals. Today, we keep redefining the criteria we use to differentiate humans from other animals as we discover bit by bit that animals are a lot cleverer, and a lot more human than we thought. (DeMello, 2012, p. 42)

Boundaries appear in the territory where children and animals dwell, demanding attention to what keeps them in place. Inquiry Process chose to patrol the borders looking for places of entry, exit and containment. In the opening quote DeMello (2012) signifies the desire for animal advocates to patrol the shifting borders between animal and human, as they look for ways to unsettle the illusionary dichotomies that produce boundaries of separation. In this chapter the terrain becomes momentarily rocky as ambiguous choices of trepidation and uncertainty are made that deviate from the postqualitative itinerary adopted for this travel. This detour surveys the landscape of discourse and discursive practices, and those who deem that power creates a world order through language, actions and social practice (Fairclough, 2001; Foucault, 1972; Weedon, 1997).

As Inquiry Process spends time with participants, it becomes apparent how speakings and actings move through boundaries of discursive power that evoke contradictory interpretations of animal-human relatings. Foucault (1977, 1980, 1983/1988, 1984, 1997) joins as a thinking companion guiding the way, as discourse offers a framework to illuminate how power adorns the pathways of speaking and actings of this inquiry. For Foucault, these pathways should be neither reductive or prescriptive as the "field of possibilities must remain open" (Foucault, 1980, p. 199), so actors can move within them. Will Foucault's ideas about tracking power align with the 'plane of immanence' (Deleuze & Guattari, 1987/2004) that Inquiry Process has been exploring thus far? Hoping that a

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less rigid and greater uncertainty is able to test the mindblindness (Manning and Massumi, 2014) needed to attune with hum(an)imal territory.

This chapter examines how the speaking and acting human adopts discursive devices and reason to establish boundaries of nature/culture separation that position and marginalise animals in their boundary making of the human world. It works within four boundary spaces. Firstly, researcher becomings question what it means to become a columniser, and become enmeshed with a scientific old friend, whose worlding is represented with columns that divide and categories that conquer. Apprehension about the ordering of human participants in such categories, is attached to the material effects of taxonomic systems that describe and classify organisms in a system of ordering and ranking the inquiry is trying to avoid, in ways that perpetuate nature/culture separation. Secondly, descriptions of data generated within the territorial assemblage follows as, children, parents, teachers and grandparents name the speaking and acting boundaries, creating a picture of the discursive positioning of human-animal relations and the strategic material effects of discursive practice. The third boundary acknowledges the relationship between how and why discursive practice is then mapped more closely, with the assemblage of actors (Latour, 2004a, 2013) to question how the institutions of early childhood education and families influence the becomings of human-animal relations in childhood. Finally, the concept of pronoun is folded inwards to see how conceptual markers of pronoun usage appear in the data and how and why particular naming's are adopted by participants.

Becoming columniser

I had to think carefully about the compulsion to classify and contain data in a particular way and whether I wanted to become the research columniser, colonising the voices, memories and actions of participants, by corralling them into named and framed columns. This type of discourse tracking is an assemblage thinking tool (Jackson & Mazzei, 2012), as it forms only a small part of the interpretive assemblage, however, by its very presence categorisation can be problematic in postqualitative inquiry. Animal-human relatings are multiple, complex and nuanced and I have no desire to create categorical boundaries with simplistic definitions and practices, that narrow the inquiry with representable anecdotes. The language and discourse of participants is situated in temporary temporal contexts, influenced by their sphere of experience, fields of learning, networks, and what they think I may want to hear. I have resisted the practice of trying to order the data events in this

study seeking to dwell with the formless or nothing-ness, welcoming the metaphysical presence of an absence that disrupts the reality of beings and things. In this act of becoming columniser, I sense the importance of bringing form to Animal subjectivity where the de/re/territorialising of human subjectivity must not also eliminate Animal subjectivity. Explicitly, the benefits of posthumanist ontologies that flatten human subjectivity, must be balanced by elevating and configuring Animal subjectivity, that is already flattened. Flattening all subjectivity, makes it more difficult to see the discursive clues of power and oppressive material that objectify animal species, and how aspects of the lives of animal species are silenced, subverted, concealed and normalised. This act of classifying feeds my humanist desire for order, the posthumanist aspiration to attend with signs and rhythms of experience and my critical intention to see what can be shaken up. As columniser I make the distinction. These categories are less about reality making and more about power shaking.

As I read more widely, and the field research is underway, the question of the Animal and animality is understandably a constant presence that can be felt, heard and sensed through the speciesist discourse of human-animal speaking and acting power relationships that are omnipotent. Mapping these assemblages of human and animal enables the political, cultural and historical threads of discourse to become visible. Troubling the categories, boundaries and dualisms patterned by an anthropocentric logic of domination (jones, 2013b) also sets up possibilities for queer multispecies relatings, as practices through which these differential boundaries are made, stabilised and destabilised can be de/reterritorialised. Becoming columniser also enables me to track how human-animal binaries are spoken and acted as 'regimes of truth' with constructed rules and "practices that systematically form the objects of which they speak" (Foucault, 1972, p. 49). Columnising occurs with a level of trepidation as uncertainties flood the territory and once again Larvae appears to guide the way, helping to "venture outside what's familiar and reassuring, … to invent new concepts for unknown lands" (Deleuze, 1995, p. 103).

Larvae   Why are you so worried about this when it's what you want to do? You said you wanted to trouble the categories, boundaries and dualisms patterned by an anthropocentric logic of domination. You wanted to create

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a table with different orientations, so you do not lose sight of them and position the participants through interpretations of how their words and actions align with particular orientations towards animals. Why don't you trust this?

Tracy   I'm worried and have to think carefully about the intention of this type of analysis that tests methodological boundaries as category work does not align within postqualitative thinking that challenges rigid boundaries and normative structures, reducing what is seen and heard into reality through meaning, knowledge and representation. These kind of truth claims are open to criticism from the people who read and assess this work and even though I am not making these claims, this inclusion is a claim in itself.

Larvae   But this is less about creating columns of accurate visual representation of the world and more to do with tracing the material affects that signify how environments, animals and children are constructed and positioned through discourse that is both language and action. Subject and object feel these effects, as the tactics and strategies of control that become known in what you are calling territory, as devices of the institution of speciesism. Becoming columniser helps you to see these material effects, interpret what they are doing and once known it may be possible to disrupt or at the very least critique what they do? Think about the parent email sent to Kate (ELC teacher) on the day of my mortal departure? What did this speaking and acting represent about my corporeal species on the day we met our earthly demise?

Parent email   Sounds like some of the children would have a lot of 'fun' squashing caterpillars today..........& if I'm thinking of the same thing, thought I'd share some 'nerdy' science knowledge (from past work in horticulture projects) of the 'fungus' that I think you were collecting from the squashed caterpillars… Happy squashing!

Larvae   Look how the childhood act of fun is accentuated in these relations of power when they are named, not the act of killing. How the (speakings) of science justifies a solution and the injustice slips away. How the (actings)

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of squashing are normalised as innocent fun. Some territorialisation is inevitable with your process but take a leap of faith so possibilities of the new can emerge. If you really want to crack the boundaries, you have to make them. How can you crack something that is not there? Go on make them, build them, name them and then mess with them.

I worry this representation of participants slipped into the constructed categories I create with too much ease and predictability, as patterns of speakings and actings assemble in somewhat expected ways, where I wonder if I am using the rubric to neatly organise ideas, without enough heed to the unspoken, uncomfortable and affecting. Post-thinking practices and larvae othered(wise) conversations challenge these representations as neither possible nor safe, pulling away from normalising; whereas "in interpretive research, we believe representation is possible, perhaps unsafe, but we do it anyway with many anxious disclaimers" (Richardson & St Pierre, 2008, p. 490). Sounds familiar? If there is ontological slippage here it has not occurred without reflexivity.

Naming the speaking and acting boundaries

The practice of labelling the speaking and acting boundaries of discursive practices requires caution for the way ahead, as Larvae suggests, a leap of experimental faith is required. Lenz Taguchi (2016) refers to this as a "doubled movement of critique and innovative creation … where traces of normative articulations" (p. 39) such as the humanist ideals of measuring and categorising, move with postqualitative practices, that minimise ordering the world with a priori categories and representations. Discursive processes are employed to map linguistic patterns of territorial discourse that govern speech about Animals and produce specific material and ideological effects that are present in the "rules that come into play" (Foucault, 1970, p. p.xiv) Language and semiotic systems mediate these ways of speaking and actings, defining what they do in human-animal relatings. Attending to social relationships within cultural, ecological and educational boundaries offers insights for how discourse from talk and text, as a form of social action is performed and mobilised through the logic of domination and oppression that materialises through institutions of agriculture, environments, education and family

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homes (Wells, 2011; Wyckoff, 2015). This focus on institutional power shifts the emphasis from the psychological actions or motivations of individuals, to expose the institutional structures, subject positions, patterns and practices of oppression. Ideologies of speciesism are then traced to explore how they position and maintain animal hierarchies, that are always subservient to humans. The columns act as boundaries to critically question how something comes to exist through the (re)production of power relations and us-and-them separations that situate the human as producer and animals and environments as product. Inquiry Process interprets how the borders that separate in the territorial assemblage affect more-than-human communities the biosphere, as well as the human.

Inquiry Process is alert to the molecular forces of language sensing and marking relational activity and "the social matrix where our concepts do their work" (Wyckoff, 2015, p. 541). Attention was paid to the 'story in the body' (Hydén, 2013) by noting paralanguage during the interview and transcribing process; including pauses, laughter, tone, and gestures where words failed to articulate ideas. Attending to mind and body during these discussions and events help to nudge unthinkable or unsayable thoughts, transporting them into conscious wordings. Through the layers of interpretations and the writing of narratives, these unthinkable and unsayable ideas were brought into production and many of these features in subsequent Inquiry Process chapters. What however is missing, is an ontoepistemological interpretation and naming of what language is saying and doing. It is within these spaces that teachers, and parents show how they "cultivate in themselves a sense of the living interpretability of the world" (Derby, 2015, p. 4).

Ethological, sociological and human-animal studies inform the processes of this chapter as they measure typologies of cultural values, attitudes and orientations towards pets and animals (Birke & Hockenhull, 2012; Irvine, 2004; Kellert, 1996; Manning & Serpell, 2011; O' Sullivan, Creed, & Grey, 2014; Sanders, 1999; Sanders, 2003; Serpell, 2004; Taylor & Signal, 2009b). Kellert's (1996) typologies of nine values towards nature and wildlife and Serpell's (2004) comprehensive empirical review helped to influence the contextual differences of the human and animal participants. Inquiry Process adapts the Animal-human Orientation Scale from a study by Blouin (2013) who analysed attitudes and responses towards animals from 88 people who share their lives with dogs. At the end of this paper a challenge is extended to extend the scope of this research by adapting

and expanding the descriptions and indicators. "Further research should also investigate the potential of other 'orientations' not detailed here and investigate the possibility of distinct 'sub-orientations' …and the cultural sources of these orientations" (p.291). Signal and Taylor also developed a helpful quantitative Likert scale survey suitable for large responses surveys that "isolated differences in attitudes towards animals across three different categories: (1) Pet (companion animal), (2) pest, and (3) profit/utility animals (PPP)" (Taylor & Signal, 2009a, p. 129).

Descriptions of how data from interviews, conversations, photographs and observations are mapped and contained within the design features of the of the analysis tool where each of the discursive categories are summarised with illustrative examples from participant responses. This is followed by Table 2: The Animal-Human Orientation Scale.

The Animal-Human Orientation Scale is an effective tool for discursive analysis as it identifies discriminations and delineations in each of the columns, defining how discourse "is a practice not just of representing the world but of signifying the world, constituting and constructing the world" (Fairclough, 1992, p. 64). The Animal-Human Orientation Scale includes the original three categories defined by Blouin's study of discourse orientation, namely 'Humanistic, Protectionistic and Dominionistic'. Additional categories were created to align with Inquiry Process questions, literatures and theories: Critical Posthumanistic and Posthumanistic orientations were added to the scale. These categories of animal-human orientation illuminate contradictory discourse, ideology and the actions that take place whilst living with domesticated animal species. Some of these are analysed in later chapters with greater depth, for in this discursive mapping becoming columniser painted a momentary picture of the intricacies of human-animal relations.

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Table 2: Animal-Human Orientation Scale

Positioning indicators/ Discursive structures	Critical Posthumanisitic No pet /pet	Posthumanistic Post Pet/Pet	Humanistic Pal/Pet	Protectionistic Pest/Pet	Dominionistic Product/Pack
Territorial strategies					
Animal status **Hierarchy**	Conscious, sentient agentic subjects – that mutually constitutes and become controlled by human power structures and institutions. Animals should not be owned as property.	Conscious, sentient, entities that mutually constitute each other and attention is paid to the lived experience of animals and binaries.	Elevated status of some animals such as pets, mammals or those that reward the human. Animals are property.	Human stewardship, conservation and welfare. Different to humans so considers what is natural for the animal. Animals are property.	Animals are Inferior to humans objectified and commodified. Animals are property and product and form natural orders of pack wild animals.
Use of pronouns **Naming**	We, he, she, who, whom. Names animal as subject.	We, he, she, who, whom. Names animal by species or given name.	He, she, we and often it, they and names used with pets and some selective animals.	It – them, they, us. He and she sometimes with pets.	It, that, them, us, thing.
Human role in lives of pets **Micro pet purposing**	Challenge to practice and ethics of pet ownership unless animal chose to live with humans. Guardian not owner.	Entangled messy, ethical, complex multispecies relatings – not just with pets. Companion and owner.	Parent/owner dichotomy, family member. Pets may be given human names and humanised. May spend large amounts of money on pets.	Caretaker, owner, friend, guardian. Pets should be trained to protect themselves, property and humans.	Owner, boss, power to buy and sell. They should be treated like cats/dogs/cows.
Pet role in lives of humans **Micro pet purposing**	If pet is present they have choices about sleeping, breeding etc as their role is to be who they are. The line between pet/pest/product may be blurred so pets are diverse species.	Pets and other organism's subjective experience of the world are explored through communication, interests and ways of being.	Pets are cherished, fur babies, and companions. Also owned and a commodity. Pets in homes are valued especially with children as they teach about death and ethics of care.	Pets are friends, who are autonomous and need human protection; ownership and guidance to be better suited to human lifestyles and well behaved.	Useful for protection, entertainment, loneliness. Animal role changes at different life stages to suit human.
Human-animal cohabitation **Cohabiting**	Animals have choice/ rights about sleep, life, breeding not fixed but based on desires, behaviour and shared possibilities. Vegan diet for dogs.	Animal choices about where to sleep/live that are not fixed but based on desires and behaviour. May not focus on rights of animals.	Usually inside. Sleeps in owner's bed or designated animal bed. Pets are controlled with training, leash, treats, desexing, health etc.	Pets may live inside or outside. Pet species specific welfare and behaviour is important for pet and human.	Pets often kept outside. Varies based on pet's role in the family.
Animals presence in education **Scholastic purposing**	Animals in education are part of the hegemony that reinforce humancentric structures of animal oppression and human privilege.	Animals are entangled in human relatings and humans in animal relatings. Relationships are observed and theorised.	Animals teach children to be good humans who have empathy. Children and animals have innate bonds that provide comfort, friendship and love.	Animals teach children about caring for another. Animal experience helps to develop scientific knowledge.	Animals can teach about life, death, food and science. Animals are entertaining, amusing, categorised.

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Attitudes to other animal species **Macro animal purposing**	Human structures oppress animal species so all relationships are unequal and therefore problematic All animals should be granted selfhood; be able to express their umwelt - emotional selves as sentient and subjective beings. Relatings are complex and animal rights are paramount. Abolitionist intentions. Animals should not be used or named as products.	Animals have selfhood; express themselves and are subjective beings. Relatings are complex, multiple and intertwined. Animals as beings-in-themselves and humans as animals may still make choices to consume animal products.	Own dog/cat is family member and privileged. Indifferent or in-denial to the plight of other animals who form the pack category, although some may be exoticised eg tigers, elephants or whales. Issues of pest management or intensive farming are viewed through human concerns and often masked and silenced.	Concern for animal welfare that is inconsistent. Animals logically categorised as pal, pet, pest, product, pack and treated accordingly.	Different animals have different purposes. Animals logically categorised as pet, pest, product, pack and treated accordingly. May be ambivalent about animal welfare.
Animal welfare and advocacy **Advocating**	Non speciesist and abolitionist ontologies. Vegan diet and lifestyle. Activism and activism to challenge and confront injustice and oppression.	Speciesism is understood but may still consume animals. Would not limit advocacy and donations to dog/cat causes.	Limited may give to dog/cat related or favoured mammals causes. Some animals are loved, and others are consumed. May justify humane meat and food production.	More likely to volunteer, give money or express concern about animal conservation or pet issues. Often adopts rescue animals.	Rare but may give money or express concerns about some causes that are defined as important like wildlife conservation.
Relinquish-ment attitudes and practices **Keeping**	Only relinquish an animal if this benefited the animal or was their choice– including pets. Animals are not property who should be bought and sold.	Unlikely to relinquish an animal as mutual relationships have been established. Spends money on sick and injured companions.	Unlikely to relinquish a pet but may have done so in the past with less cherished pets or other animals.	Some animals need to be controlled or removed if they become pests or difficult, not usually pets.	Likely to sell and relinquish pet or any animal that becomes inconvenient, costly or when problems arise.
Animal death **Loss and grief**	Companion animal death equated with human loss. Grief for suffering and death of commodified animals and the injustices of speciesism. Animals also experience grief and range of emotions.	Very difficult grief and loss. This loss is extended to human and non-human animals and not only pets.	Very difficult with dogs/cats, may dissuade from having pets in the future. Likely to attempt to delay pet's death. Death ritual of burial or cremation.Children learn about death from pets.	Very difficult with dog/cats where animal welfare is in mind with end of life decisions. Concern for animal welfare, especially wildlife and pets.	Animal can be replaced. Hunting for control of the pack, food and sport is legitimised and animal death is normalised.
Connections **Connecting**	Connections move beyond pleasure and companionship to altruistic love that crosses species lines with an ethical consciousness (Stallwood, 2014).	Beings constitute each other with embodied, ethical relatings and intra-actions. Human-animal relationships are questioned and challenged about what they do.	Interested in the meanings of anthropocentric human-animal relationships and how animals help humans and build humanistic ideals. Expressed connections with some animals.	Connections may be expressed in terms of aesthetic biocentric stewardship relations and /or humans gaining from animal companionship.	Connection least likely to be expressed other than human attachments to animals as pets.

Six Ps – Post, Pal, Pet, Pest, Product, Pack

Mapping how animals are positioned in society is helpful as it illuminates institutional structures that sanction the practices that take place that keep animals positioned in anthropocentric ways. These positionings are interpreted with six categories of animal positioning in the territory that are named as the 6Ps - post, pal, pet, pest, product and pack. These categories are omnipotent during data generation and this presence is indicative of territorial discourse with children, animals and environments. The categories expand with the assemblage and the final chapter analyses these positionings in their entirety. The pack category assembles through data events as wild animal species become too plentiful. Becoming pack invites conservation practices of culling wild rabbits, moth larvae, and other 'pests' as geographical, political and environmental practices are illuminated through movement and the removal of animal species, under the guise and practice of human stewardship. The 6Ps support the animal-human orientations as signposts that unveil or flatten (Jackson & Mazzei, 2012) the illusion of human-animal bifurcation and produce thought about what was happening (Mazzei, 2013a). The data and narratives show how animals are not separated through a singular category of 'animal', or dwell within another singular category of 'environment' but are firmly knotted with us in sticky, ethical encounters where choices are made about whether we kill them, conserve them, leave them, breed them, eat them or love them. Cole and Stewart (2014) ask this very question about loving animals (pets) and eating animals (product) when they challenge, "how do we teach young humans so swiftly and so robustly that these contradictory relationships are 'normal' and unproblematic" (2014, p. 4).

Positioning indicators and discursive structures

Blouin's (2013) indicators are broadened to include territory animals including pets and pals in family homes and the ELC, classroom animals, animals becoming food and other products, pests and pack animals. Blouin's nine 'attitude/behaviour indicators' are extended to eleven, renaming them as positioning indicators and discursive structures to align with the intent of the changed foci of discourse analysis. The positioning of animals across the eleven indicators include: animal status, use of pronouns, human role in the lives of animals, animal role in the home, human-animal cohabitation, animal presence

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in education, attitudes to other animals, animal welfare and advocacy, relinquishment attitudes and practices, animal death and human-animal connections.

These discursive structures are guided through the territorial assemblage by a "regime of signs that are assemblages of enunciation" (Deleuze & Guattari, 1987/2004, p. 162), forming collective systems that proclaim the order of the system with language. This order of language is repeated and performed, with an emphasis on what language does in these boundary makings. According to Deleuze and Guattari (1987/2004) the origins of order words or terms over time become redundant and territorial codes are normalised as patterns of language become situated with unknown histories that spread through lines of flight, enabling desire to establish and shape the order of discourse. Language and semiotics are therefore more than carriers of information and communication. This affiliates with, but is not the same as Foucault's analytics of power relations as regimes of truth (Foucault, 1980) that govern what it is to identify with a particular discourse. Although the emphasis with power for Foucault and desire for Deleuze and Guattari differs, both ontologies identify the importance of language in boundary making. For Foucault, tracking and deciphering power articulates 'truth' in oppositional and also relational ways. Firstly, as a subject having the wherewithal and freedom to challenge the hierarchal assumptions and material effects of regimes of truth and secondly, as an ethical practice of someone willing to see the subjugated knowledges of truth and 'speak out' against injustice in order to transform themselves. "Truth is not only a way of deciphering the world (and maybe what we call truth doesn't decipher anything), but that if I know the truth I will be changed" (Foucault, 1983/1988, p. 14).

Territorial strategies

The columns capture territorial codes or regimes of truth to seize the speaking and acting strategies of participant's overt and unconscious animal worldlings that are made and unmade by humans and animals through human strategies of power and exceptionalism. There are fragments of human and animal lived stories spoken and acted through generations, and the institutions of education, environmental conservation, family homes and childhood that enable speciesism to become entangled through language and culture. Foucault's (1972) ideas about discourse are not grounded in the 'speaking subject', who consciously thinks, knows and speaks, but in the discursive formation in which the subject is produced and can and can't speak certain things. Likewise in Deleuze-Guattarian

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ontology the knowing individual is not of interest but rather the collective assemblage of "subjectivity, society and environment …a posthumanist body that exists in a complex network of human and nonhuman forces" (Mazzei, 2013a, p. 734).

The territorial institutions where children and animals dwell are situated in this discourse emanating and perpetuated through strategies of desire, power, love, fear, the unsayable, stewardship, dominance and oppression. Strategies uphold ideas (Srinivasan, 2014b) of human boundary identities and what it means to be an animal lover, a teacher, a vegetarian, a hunter or a conservationist. For animal subjects the boundaries of the 6Ps are precarious and nonsensical. An example of such boundary crossing is described in the narrative of the next chapter, when family pets become instantly transformed as pests. The animal bodies did not change but an "incorporeal transformation" (Deleuze & Guattari, 1987/2004) occurred through a shift of social position as material effects and strategies moved through the subjectivity of what it is to become pests. Subject positions are performed through a discursive interplay between subject and institution where strategies sanction, marginalise, support or condone what it is to be a pet or pest. The positioning indicators, discursive structures and territorial strategies weave through actions that intra-act with each other producing material effects in what Haraway (Haraway, 2003) describes as a corporeal joining of the material, the semiotic, and commodity culture.

Material effects

Material effects thread through discourse producing attachments to discourse positions that are seen, felt and heard. Power is therefore aligned with the subjectification process, that is all-pervasive and widespread. Consequently, it is more appropriate to speak of powers as a plural force that has effects. For Foucault (1977) power moves through people and institutions as discourse that becomes materialised over time when it is camouflaged to the extent that it appears 'natural'. In his study of prisons, the disciplinary power manifests through the subjectification of oppressed bodies as biopolitics (Foucault, 2008b) that pays particular attention to the material effects and circulations of bodies through the discursive control of punishment, reproduction, birth, death, population and illness.

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In human-animal ontologies, animal bodies also become epistemological sites that question how knowledge of the animal is produced, applied and circulated. For example, the discourse associated with animal production such as dog 'correction chains' horse spurs, whips and practice of horse breaking, breeding 'rape racks' or the barbaric 'training crush cage' (Bone & Bone, 2015) designed to terrify and control baby elephants, transmit the language and material effects of oppression and speciesism. The discourse of producing animals through methods of training and breeding in these examples, show how these words are entrenched and normalised by human control, so much so, there is no need to camouflage the naming of these devices and practices as they adopt a natural order of human-animal relations of power and submission.

In this study the material effects circulate through each boundary category that are named in Table 3: Discursive Material Effects that follows, outlining positioning indicators of animality, owning, relating, grappling, normalising and learning, with a different emphasis on how they manifest and what they do.

Table 3: Discursive Material Effects

Discourse positions	Positioning indicators
Critical Posthumanistic No Pet/Pet	**Animal emancipation and justice** • **Strained animality** – slippery ethics as risks for animals are known and hard to avoid • **Critical owning** – all animals are property of humans and this is resisted and subverted • **Critical relating** – as equals, defender, voice and witness • **Critical grappling** – choices about life, death, food, reproduction • **Critical normalising** – speciesism is a normalised political ideology and therefore ubiquitous • **Othered learning** – to see, sense and know the Other.
Posthumanistic Post/Pet/Pack	**Co-species entanglements** • **Sustained animality** – multispecies and non-linear • **Owning** – animals are owned and also cohabit with multiple species • **Intra-relating** – multiple, plural, entangled, troubling and reciprocal • **Embodied grappling** – separation is an illusion, but dominance is not • **Normalising** – blurring naturecultures and binaries • **Multiple learning** – to step outside of the human to know the more-than human
Humanistic Pal/Pet	**Pet learning friends** • **Contained animality** - Pets contained as desexed, trained, clean, parasite-free, loving and docile. • **Kin-owning** – owned, loved family member – emplacement • **Human relating** – innocent, natural pairings of children and animals • **Polarised grappling** - animals are enslaved and packaged for human consumption as friends, food and entertainment • **Normalising** – advocating friendship – silencing consumption • **Human learning** – to teach lessons of love, compassion, care and death
Protectionistic Pest/Pet	**Animal welfare hierarchies** • **Constrained animality** – categorised by human hierarchy and animal biology • **Domestic owning** – trained and ordered • **Welfare relating** – care, protection and minimisation of harm • **Pest grappling** - Pests packaged as escapees, the pack, out of control, harmful, in the wrong place, dirty and impinging on human lifestyles • **Normalising** - Resisting and silencing cruel animal practices helps to maintain the discourse of the human guardian and steward • **Learning** – to protect and care for some species
Dominionistic Product/Pet/Pack	**Human exceptionalism and control** • **Restrained animality** - packaged through control as servants, workers, products • **Owning** – property of man and disposable emplacement, displacement and replacement • **Relating** – clear binaries to uphold human order and dominion • **No grappling** – natural order and hierarchy for human and animals • **Othered normalising** – speciesism, "it" othered pronouns • **Conservation learning** - human dominion as the master and constructor of nature and the animal pack as products, property and pawns

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Discursive mapping

The assemblage of data and textual interpretation reveals how Inquiry Process made known the production and reproduction of power relations integrated within the Animal-Human Orientation scale. This discursive mapping moved through the following sequence:

- The transcribed adult participant interviews and data from field studies are analysed to explore discursive patterns of speaking and acting that are traced by highlighting them with different colours to visualise how participants positioned animals (Green), pronoun usage (Blue) and events or areas of interest (Yellow).

- A separate table was created for each of the eleven adult participants and how they were positioned within the Animal-Human Participant Scale. The columns are populated with their responses, language, direct quotes and examples of practice, retaining the interactive nature of the conversation and the contextual information.

- Data pathways were used to track the data source and the term 'tracking' was adopted to shift the emphasis from scientific language of evidence and validation towards data moving through territory.

- Where obvious descriptors/columns that participants align with are clear they were positioned in the columns. Where their responses overlap through multiple examples, they appear in more than one column. People do not fit into neat boxes and the relatively dynamic and fluid relations between parts of the structure in question had enough built-in flexibility to enable participants to move through categories with red lines that I name as 'bloodlines' as a reminder of the embodied life dwelling within these pillars and the blood that is present in bios and often spilled when animal's cross boundaries.

A calculation was made by the number of times participant responses appeared in each column and because the categories were designed to be fluid and permeable, the scores do not always add up to eleven neat descriptors. This is not a quantitative method of tracking, reliant on measurement but rather the ongoing "reworking of boundaries that do 'not sit still" (Barad, 2008, p. 135). The mapping of each participant is depicted in the following table with columns that were populated to situate the participants discourse at this time, within the boundaries of the 6Ps of animal positioning namely, post, pal, pet,

pest, product and pack. The columns need structure and soft edged permeability and the ticked boxes display this porousness. Ted equally aligns with two columns and Kate and Joe move through fluid boundary bloodlines. Blood as a connective force embody these boundaries in unexpected ways as conversations trouble contradictory bloodlines of human-animal relating, where blood is both a symbol of life and death that moves through bodies of animal species, including human animals occupying liminal positions.

> *The discursive dimensions of blood, its meaning and significance, its associations with identify formation and power are not determined a priori, but are constantly transformed through the changing status of blood as matter, its materiality and its liminal position within and outside the body. (Stephanou, 2014, p. 9)*

Table 4: Participant orientations

Participants	Shifting	Critical Posthumanistic No pet/ Pet	Posthumanistic Post pet/Pet	Humanistic Pal/Pet	Protectionistic Pest/Pet	Dominionistic Product/Pet/Pack
Kate Teacher	☑		2	8 ☑	3	7
Joe Teacher	☑		2	6 ☑	5	3
Imogen Teacher		4	5 ☑	4		
Zoe (Mother Wild family)				3	5	7 ☑
Emily (Mother Dog family)			9 ☑	3		1
Ross (Father Dog family)			2	9 ☑	4	
Earl (Grandfather Dog family)			5	8 ☑	1	
Sharon (Mother Lizard family)				4	7 ☑	6
Poppy (Paternal Grandmother Lizard family)			6	7 ☑	1	
Sally (Mother Turtle family)			1	8 ☑	2	3
Ted (Maternal Grandfather Turtle family)				1	6 ☑	6 ☑

The following section describes how some of the adult participants travel within and through the boundary orientations; carrying illustrative quotes, examples and characterisations in their categorical backpacks. The assemblage of material effects within the Animal-Human Orientation Scale are present in these speakings and actings,

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as they reveal how knowledge of human-animal relations are produced, applied and circulated.

Zoe (Mother Wild family) Dominionistic Product/Pack

People who align with the dominionistic orientation consciously name animals as property and those needing to be controlled. Each orientation, with the exception of critical posthumanistic, may also speak and act this orientation but not openly admit; or have awareness of this. The human-animal binary can be observed through dominance, order and oppression and this is seen and justified as the taxonomy and 'natural' order of the world, where animals are lesser in value, intelligence and status than humans. The material effects of ownership, dominant relating, normalising of death and suffering and conservation learnings were most apparent with Zoe.

Zoe is a teacher employed at the school where data was generated and the mother of focus child Hunter. She grew up in country Victoria and speaks many times about how this has shaped her beliefs and practices. Animal death is normalised for Zoe through witnessing animals raised and killed for meat on a neighbours small pig farm and engagement with actual acts of killing "we would kill snakes with a shovel". Zoe is torn between her childhood positioning of animals and her idealised positioning of animals. "My philosophies are quite flawed in terms of boundaries, but I think probably a lot of people are"? She expresses little empathy for the plight of the sentient lives of farmed animal but there is concern for wild or endangered animals. Zoe acknowledges her thinking is hypocritical and she questions eating meat, but more from a sustainability-of-the-planet ontology than concern for animal sentience or welfare. Zoe's use of pronouns when referring to animals is consistent as she consistently uses the term 'it' and rarely signifies animals by name or gender; with the exception of dogs. Human dominion over animals is reflected in the terms she uses to name and position animals. For example, she questions eating pigs as she "knows how intelligent they are". Intelligence is a highly regarded trait that aligns pigs with humans where other traits like wildness and self-sufficiency are valued as they create a separateness of the wild that is a constant trope of her conversations.

Zoe's alignments with environmental conservation ontologies are reflected in her speaking and actings about feral animals and dislike of cats and how "animals help

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humans to understand human environmental problems". Although her love for dogs is stated, for Zoe they must live outside and not be needy. Her actings also perform control and disposability, where she describes how she sits on her Rottweiler to make him sit down and how he was euthanised when he injured his leg. "As much as we love him he's still a dog and he'd never fully recover". In Blouin's study "people with a dominionistic orientation typically relate to their dogs in utilitarian terms" (Blouin, 2013, p. 285) where dogs can be positioned as products and resources for human consumption rather than subjects and these dogs are more likely to be relinquished if they become a burden.

Whilst there were comparisons that aligned with Blouin's study, because the assemblage also included a wider scope of animals than dogs and other pets, another form of dominion of animals played out in the speakings and actings of Zoe, that could also be traced through school discourse that is revisited in forthcoming chapters. Concern for the lives of animals was not situated with the welfare, liberation or sentience of individual animals, but rather a human construct of planetary sustainability where the animal pack is admired in its place in the aesthetic of wild nature, and where human conservation and stewardship in needed to keep wild animals in their place if they move through boundaries or the pack become too big.

Sharon (Mother Lizard family) – Protectionistic Pest/Pet

People who align with the protectionist orientation can view animals as autonomous subjects in their own right, who are very different to humans, but also worthy of care and respect. Environmental behaviors such as stewardship are represented with this orientation, whereas humanistic orientations lean more towards the human as a parent or family member to the animal. For Sharon, even though foxes kill numbers of birds and poultry on her property, she respects Henrys (lyrebird) choice to roost on the top of the shed. Sharon's speakings and actings acknowledge ethical dilemmas of human stewardship and animality where the material effects of constraint such as locking Henry in a shed, rub against the risky business of Henry 'being lyrebird'; even though he eventually met his fate by the animality of the dreaded fox.

Many, but not all participants in this category describe caring and intimate relationships with Animals. Ted and Sharon align with the protectionist orientation in quite different

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ways. Sharon speakings and actions signpost sensitivities and connections with a range of Animals, whereas Ted speaks about all Animals with a level of disinterest and sometimes disdain and equally aligns with the dominionistic category. Ted affiliates dogs with women, including his 'doggy' sister who he repeats four times during his interview how she is 'unmarried', alluding that dogs for her are a human companion replacement. He becomes animated for the first time during this conversation as he recalls a trip to Japan, eagerly searching on his phone to show photographs of women in Tokyo who pamper their dogs with canine wedding ceremonies, and who proudly display wardrobes filled with dog superhero costumes and glamorous outfits. "I mean are these ladies married that did this? Have they got nothing else to do while their husband goes to work"?

Sharon is an ELC parent and the mother of focus child, Toby. Sharon grew up in a Melbourne suburb near a racetrack, during a time, where it was not unusual to be surrounded by horses who lived in stables nestled next to family homes. Close relationships with animals were denied to Sharon in her childhood, other than the times she would visit an Aunt with horses, who she adored. She hankered for riding lessons that never came her way, despite consistently asking her parents. We laugh when she tells me that within a week of moving in with her husband on a property with land, she bought her first horse. Sharon is sensitive to dying animals and cannot go fishing with her family, eat animals she has raised or kangaroo meat. She cannot watch wildlife documentaries or listen to news about the live cattle trade in Australia or animal cruelty in meat production. She admits that she is "naïve" about what happens with farmed animals but also privileges and normalises information from farmers as regimes of truth. "I do think here in Australia, I'm not sure about other countries where they do different things. I watch Landline and you see the farmers and how passionate they are with their animals and their cows".

Sharon speaks fondly about animals as subjects and how she has learned from those she has cohabited with, including the surprising wisdom of lyrebirds and turkeys. She does not however question the lives of many horses bought and sold who she could no longer ride, although the relinquishment of a 'misbehaving dog' when he started to attack the animals on her hobby farm was not an easy decision. Animal loss and the continual struggle and hard work of caring for animals features heavily in her speaking and actings as she describes the heartbreaking and bloody demise of numerous chickens, geese,

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turkeys and Henry the aforementioned lyrebird to foxes. She is very clear that her animals must be domesticated, trained and well behaved and disagrees with her Mother-in-law Poppy, who is also a participant in the study, who she says has a more sentimental, soft (humanistic) disposition towards animals.

Sharon is sensitive to the plight of the sentient production animal, wild animals and pets but "would get rid of every fox" as they have killed so many of her animals. Sharon is torn between the hard work and messiness of co-species entanglements and her idealised positioning of animals, where she is positioned as the 'animal lover'. "As I've got older and I've got kids – you know and all that. I actually would not go back to the farm. I am over the animals. I'm over the responsibility". This relates to examples from Blouin's study where he found that people changed orientations when they became parents, got married, as they aged or moved locations (Blouin, 2013, p. 269). This fluidity also indicates that these human-animal relationships, like all relationships are not smooth and trouble free, however for the animal, the material effect of their fate is always held in the hearts and minds of changeable human desires. Zoe and Sharon both talk about animals as products for human consumption, for food, hunting, horse riding and entertainment. Dominance and obedience are important considerations for them as the idea of the wild, rogue pack untrained animal is problematic for both Zoe and Sharon.

Ross (Father Wild family) – Humanistic Pet/Pet

Participants who align with the humanistic orientation often express emotional attachments to animals, especially pets as family companions and 'members of the family'. Pets are valuable to humans and they also teach children about life, death and how to care for others. Interviews with Ross, Emily and Earl from the Dog family and Sharon and Poppy from the Lizard family were filled with anecdotes about the lives and deaths of horses, cats and dogs. At times this felt like therapy, listening as a confidante to these heartfelt animal tales who leave signs and ghostly tracings of their existence in Inquiry Process becomings. The fragments and intensities of these appear in many of the narratives of the study as haunting territorial signposts that stake an affective claim on the inquiry.

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Ross was intense and thoughtful during his interview. He expressed interest in the research and was eager to hear my thoughts about the subject at hand. During the weekly walks at the ELC he would seek me out to talk through his thinking since we last spoke. Ross rated highly with a humanistic orientation that he actually names himself during our conversation, as we philosophise about animal-human relatings and he recognises the intersections of respect for cultural diversity and respect for animals.

> *"Our connection (with animals) is in a humanistic way with each other and I don't know if that's the right term, but our empathy and understanding of other lives, whether that's humans or animals might make us nicer people. I think some of our getting philosophical about some of our differences in cultures that have a difference in their approach or respect for animals is also mirrored in their respect for each other".*

The humanist orientation does speak and act about care and compassion for animals however, it is predominantly concerned with the human condition and animals are viewed through the guise of human wants and needs, and less for those of animals. Animality is contained by human desires so is less utilitarian than the dominionistic orientation and more focussed on pets and animals as kin with material effects that are more likely to benefit humans and often pets, than the protectionist orientation. Because pets are so highly valued money is spent on their welfare and it is more unusual to mistreat them (Blouin, 2013). Ross talks about his dog Sally and how he and Emily chose to spend money on an expensive operation. "Yeah that was $4,000 and all of my friends said just get the dog put down, but we couldn't she was part of our family. Not that it was a monetary investment before kids, she was our kid". Holly shows me the urn with Sally's ashes displayed on a shelf with her photo on our child-directed tour of her home, who thankfully lived for many years after the operation. Ross speaks consciously and with sensitivity towards the wants and needs of animals and he is grateful for how much they give to humans. He tells me how he thanked Sally and Jessie (dogs) at the final goodbye as they are euthanised. "I remember just talking into her ear and saying thank-you for everything".

Emily (Mother Wild family) – Posthumanistic Post Pet/Pet

The posthumanist category is designed from the literatures and theoretical understandings of multispecies relations, kinship and animal species lifeworlds. Animals and humans exist on a continuum in this orientation and separation is an illusion of constructed

dualisms that socially support human exceptionalism and dominance. Pet ownership indicates a fluidity of categorical distinctions between human and animal connected with posthumanist thought that questions the tenets and assumptions of humanism. Emily's placement with a posthumanist orientation initially took me by surprise because she is hard to read, appearing flippant and disengaged during most of our conversation. Even when relaying memories of her childhood dogs there was little sense of anything that she was engaged with the early part of our conversations. These conversations are also quite disjointed as there were constant distractions from Tillie an aging Heeler/cross, Butch the British bulldog and three-year-old Rory who is loudly attempting to hammer nails into a broken wooden sword that he made at the ELC.

Emily is a secondary science teacher who also teaches environmental education. As Emily ventures into these ecological territories towards the end of the interview, something shifts from her previous stop-start responses and guarded body language. There is something in her expression, a smirk that is hard to trace. Is it condescension, cynicism or discomfort? This equivocation prompts questions that she is holding something back from what she wants to say and when this is suggested, it signals a moment of honesty as her speakings become less guarded and disjointed and her ecological concerns, cynicism and anger flows.

> *"I don't know. Do you believe in evolution? What's the point of having three chimpanzees if they've got nowhere to live? Put them in a cage and watch them through the glass at Melbourne Zoo? It's horrendous. They've got two elephants in the size of a quarter of a football field. For their life. What's the point of that? The thing's (elephant) beating its head off the wall and walking around in circles, but we've saved it – whoopee. It's horrendous. I think I find it frustrating because people, they go to see the elephants, or they go to see this nearly extinct chimpanzee or whatever it is, and then they go home and eat their chicken parma, like there's something missing. Something is not clicking in our education system, or our respect, or our reality, or – I don't know".*

When the interview was transcribed Emily's speaking and actings revealed what was not clear amongst the polyvocality of humans, hammers and canines. Her words, rather than how she transmitted them, or how they were received, spoke of critical perspectives, with deep concern for the other-than-human and an existential grappling of how humans have arrived at this point in time. For Emily, animals have personalities, subjectivity and ways

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of being that are different and accepted. For example, she describes how when her dog Sally was first adopted "she was too well trained like a robot, it took us a good year just to loosen her up" and she noticed with a sense of admiration how a caged bird at the school where she teaches, behaved differently at the onset of a storm, recognising how animals like this bird have unknown knowledge and skills, beyond human comprehension.

Larvae   *Tracy where is the animal? Where is the animal? You question human consciousness but where is your questioning of animal consciousness when human becomes product – the biting mosquito, the shark that attacks or the bed bugs devouring your flesh each night. Why do you still only see the world through human eyes? What about Butch and what happened when you went to their house? You write about this in a narrative but how does it play out here with this speaking and acting? What was he trying to say; I can hear him – Why is this not included? What is he trying to speak and act? Lets' do some work here that speaks and acts hum(an)imal connections. Where is the hum?*

Butch   *I'm here too, that's what I want to say. Are you listening? When you first came to our house Tracy you said that "you were a dog person" and every time I see you I am testing that theory. So far, I'm not convinced! I ripped your jumper and another time your pants as I was trying to get your attention. In your field notes you wrote that "I am everywhere in that house and forceful". When you were sitting on the stool at the high kitchen bench talking with Emily, you said. "I think he was trying to bring us down. He kept jumping up and he wanted us to come down to his level. He is a force to be reckoned with". Why then if you know this do you not attend to me? Are you fearful of my power? My force incites truth claims about your doggy relatings and I am no compliant participant, for I am no participant at all in your eyes or mine - I resist.*

Larvae   *Tracy are you listening? Did you hear? This resistance from Butch is a point of departure from domination towards a relationship of power. He has freed himself from your binary reckoning by cutting through your*

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jumper, your pants, your time, your conversations, your power and hopefully your knowledge.

Tracy   *Yes, Foucault talks about how knowledge is produced in (trans)formation as "knowledge is not made for understanding; it is made for cutting"(Foucault, 1984, p. 88).*

Larvae   *I know you are impressed with how this French man's words validate these actions of cutting through, but be humbled, as a Bulldog tried to convert you long ago and you were not paying attention.*

Tracy   *This is unsettling Larvae. I see and sense this and am uncertain about what happened here. I did not pay attention to Emily or Butch during this house visit and I need to think about why. Perhaps I was too fixated on words, voice and finding meaning. I am finding it hard to escape these human discursive trappings that render the material, affective and more-than-human invisible.*

Imogen (Teacher) – Critical Posthumanistic No Pet/Pet

The posthuman orientation indicators include aspects of speaking and actings that expose a realigning of the human-animal relationship through interspecies sociality and connectivity, whereas the critical posthuman orientation requires a level of activism against animal suffering and emancipation as critical theory exposes hierarchies of oppression and domination. Drawing on posthuman and multispecies perspectives that tend to the political and ethical contexts of knowledge making, a critical posthumanist ontology gives epistemological and theoretical attention to remaking social and educational speakings and actings that are emancipatory. A remaking in this category would be to adopt a vegan politic or at the very least a vegetarian lifestyle and question the inclusion of animals in any area of human life, including pets. When designing the categories, it would be unlikely that a participant would feature in both the critical posthuman and dominionistic columns, as language and practices are diametrically opposed, and this is what happened with territory participants. The critical posthuman positioning indicators conceive of oppression in structural speciesist terms where, "its

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causes are embedded in unquestioned norms, habits, and symbols, in the assumptions underlying institutional rules and the collective consequences of following those rules" (Young, 1990, p. 41). Normalised speakings about meat production and consumption occurred in almost every interview and these discussions continue in chapter nine as the inquiry journeys towards shadowy becomings.

None of the participants were aligned with a critical posthuman orientation; nevertheless, Imogen was the only participant whose speakings and actings appeared in this column four times and for posthuman orientations five times, so there are aspects of the category in her responses that are helpful in these discussions. For Imogen the subjectivity of animal lives is constantly talked about where animals are sentient, have names, genders, personalities, stories and power relations that influence humans and other animals. She also recognises interspecies relationality describing how her cat mourned the death of a dog companion and she laughs as she shows the cremated ashes of her cat Oscar and father that sit side-by-side on a shelf in matching urns, laughing how Oscar's urn is adorned with a larger photograph.

Imogen's childhood was filled with cohabiting animals, who made choices about where they slept, with levels of freedom and personhood in many other aspects of their lives.

> *"Animals were always present in our family home – not to teach children
> - we were real animal lovers, it's just the way it was … They were part of
> the family. They were inside with us and oh yeah, we've never had, I can't
> understand somebody having a dog and having it outside, and I don't
> understand that… Any animal we've ever had has been inside in the house
> with us, anything, the rabbits, the ferrets".*

Imogen is a teacher at the ELC and she recognises the potential for "education that helps to advocate for animals and for children to know them". She also speaks about how animals have souls and the connection humans feel with them is some kind of soul connection. "We are animals so its instinctive and it does exist…. And if you can make a connection with an animal, well they're making a connection with you. I firmly believe that there is, there's something more - far deeper than we will ever understand with animals".

Shifting categories

As expected the dominionistic and critical posthumanistic orientations could not be observed with the same participant because they are mutually exclusive and ontologically opposed. Whilst this separation in the orientation scale occurred with participants in this study, it is not impossible within the realms of complex human values and contradictory practices that someone could be positioned with greater fluidity as attitudes and actions change in unpredictable ways as contexts always creates variables. For example, someone could adopt a vegan lifestyle and choose not to 'own' an animal as pet but could feed a hungry stray cat meat as they are unsure if plant-based foods will meet the cat's nutritional needs. Moving from one orientation to another is also feasible as participants shifting attitudes and relations with animals accompany other changes in their lives such as growing older, having children, changing relationships, getting busier with education or work, or moving location. This was expressed by Sharon who since becoming a parent with three children under six years of age, her identity as the 'animal lover' shifted as she experienced reduced time and interest in sharing her life with multiple animal species. Sharon's move to a neat new house in the outer suburbs of Melbourne is strategic and she expresses how she leaves behind, the mess, hard work, time, upkeep and trauma of living with animals on the previous hobby farm.

Kate (Teacher) Shifting

Kate moves through multiple categories including the posthuman category, even though her personal examples, language and anecdotes speak predominantly with humanistic and sometimes dominionistic indicators. Kate is an experienced teacher and the two areas where she shifted into posthuman ontologies were situated within education discourses. Joe the outdoor education teacher also crossed into four shifting areas for the same reason. Kate acknowledges how products are packaged for children's consumption of animals in education, like the science teaching resource of solid perspex blocks embedded with a range of once living invertebrate animals, trapped inside the clear perspex. Kate performs what she knows about animals in education, and possibly what she thinks I want to hear, for her concern often leans towards how children might perceive these insect trappings and whether they would be a source of wonder and curiosity. The teachable/learnable moment is always at the forefront of her pedagogy with opportunities for children to

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question and experience animal lives under study, rather than what this could be like for the trapped specimen. There is slippage in her actions and language when she speaks of her childhood animals, where her use of pronouns reflects ownership and objectification of animals, that are not consistent with her pedagogical paradigm.

Kate questions animality and rights when she discusses the plight of Indian Myna birds, an introduced species to Australia. "I know that they are here and it's damaging but for that little creature it's living, and it's got rights too hasn't it? It's not their fault that they are here". However, this thinking was isolated and the lives of ELC animals were not examined, other than as companions and creatures of inquiry for children. She was the most troubling participant for me to position and I needed to revisit the data many times to authenticate the process.

Larvae   *Do you think you find this hard because you like Kate? As the columnisor you have committed to the process and yet with Kate you stumble. I hear you constantly revering her pedagogy exclaiming what an extraordinary teacher she is, but are you both hiding behind the cloak of education? Does she shift across the categories or is she being shifty? Are you too being shifty?*

Tracy   *Larvae this is tough as I like and admire Kate and have no desire to analyse her character. Kate is supportive and open to this research, as she is with the inquiry-based pedagogy she uses with children. Help me out here.*

Larvae   *Look how many times Kate deflects the ethical decisions back to children. Like the time when they went fishing with their parents on two different boats and they were empowered to make choices about whether to throw the fish back into the bay or cook and eat them. In one boat the children chose to eat the fish whilst the children in the other boat decided to throw them back. She is normalising cruel animal practices to maintain the discourse of the powerful human as a steward, making decisions about life and death. The intra-relating is missing here for posthuman multispecies entanglements and also with children's critical learnings of sentience and justice. How can you call upon the forces on the plane of immanence, to*

turn inwards, so it can turn to you? Where are the connections you keep talking about – the boat, the bay, the children, the hooks, the fish? Come on. How many times do I have to show this to you? Why can you not sense the haecceity of the world and how we are yoked together? That our understandings of the world are made and re-made through encounters between different imaginaries.

Larvae's interjection sets-in-motion a sensing of the togetherness of things that recalibrates the coordinates of the terrain. Equipped with these ideas and the absence of a guide book, Inquiry Process is steered by a philosophical companion. For Foucault humanism dwells in colonised territory and to trouble these spaces we have to return to established sites of privileged discourse and material effects in search of hidden detours, "in a sort of behind-the-scenes world even deeper and more dense than representation itself" (Foucault, 1966/2005, p. 259). Ensuing chapters navigate these posthuman detours, requiring attunement with the relational terrain of animality and materiality and the potentiality of human becoming other-than-human. Inquiry Process leaves the interpretations of the Animal Human Orientation Scale and moves towards thinking-with the concept of pronouns, that is adopted to challenge binaries of subjectivity/objectivity and nature/culture.

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Boundary concept: Pronoun

Unknown echoes were heard in the territory as closer attention was paid to the habitual patterns of language and discourse. The study of pronoun usage in particular, generates surprising patterns and intensities of the object/subject binary, bringing new insights that fold through the inquiry.

Subjectify the universe

> *I guess I'm trying to subjectify the universe, because look where objectifying it has gotten us. To subjectify is not necessarily to co-opt, colonize, exploit. Rather it may involve a great reach outward of the mind and imagination. (Le Guin, 2016, p. viii)*

Ursula Le Guin (2016) writes about subjectifying the universe from the inside, that science can objectify from the outside. Getting inside amongst the social construction of the question and condition of the Animal, helps to subjectify the poetic and scientific, as both perspectives are needed to attune with natureculture relations. We share language with those we study, carrying taken for granted notions that we fail to notice unless these implications are tested. During field studies Inquiry Process was hyper-aware of how the participants, teachers and researchers use personal pronouns when describing the more-than-human collective. For example, a conscious choice was made in the writing to use 'third-species' varied gendered pronouns for equal exposure when naming and discussing animals such as he, she, her, him, even when the gender was not known, in addition to personal names and species names. This was not about getting the gender right, but ensuing identity. The use of gendered pronouns breaks with gender-neutral linguistic protocols that use 'they/them' when referring to singular or plural third person referents (Morris, 2018). This choice is because Animal subjectivity is highly objectified and using 'they' in the singular still has the propensity to limit the interest or empathy the writer has for the referent. For example, in a study of student's Australian university essays about child language acquisition, not one of the essays named the human child as an 'it' (Strahan, 2008), whereas animal species were continually named as 'it' by the territory participants. The habitual patterns of language and discourse that have been discussed thus far describe how animal subjectivity and sentience obscured through discourse, so these writing choices are aimed to subvert this tension. Patterns of language occur in thoughts, conversation and text and are programmed into the hearts and minds through a

patterned network of heterogeneous relations predicated on the dualist ways of thinking between human-animal and nature-culture.

Environmental scholars such as ecolinguists, political ecologists and ecofeminists posit that human language shapes relatings through a logic of domination and power to justify the mistreatment of animal species (jones, 2013b; Lloro-Bidart, 2017; Plumwood, 1993; Warren, 1990, 1999). Two examples of this patterning were noticed when using Microsoft Office Word software. For example, the typed word 'speciesism', prompts spell check to reveal the familiar red squiggly lines of the unknown territory of either a misspelt word or that it is absent from the coded dictionary. Other 'ism' nouns referring to race, class and gender are not met with the same spell check forewarning. Inquiry Process was not surprised by this human bias, and also acknowledged that the term is fairly unknown and can be attributed to the animal rights activist Richard Ryder (2013, p. 1) "In 1970, I coined the term 'speciesism' to describe the prejudice against other species, and to draw the analogy with other prejudices like racism and sexism".

Like other forms of oppression, speciesism requires dishonesty and lies. "We lie with our word choices. We lie with our syntax. We even lie with our punctuation" (Dunayer, 2001, p. 1). Sometime later when writing narratives that name animal species like dogs, the grammatical conventions shifted between an animal and human. When typing "the dog who liked to collect sticks", Microsoft Word grammar check alerts that the pronoun 'who' is incorrect offering a replacement word 'that'. This changed when the word 'dog' was replaced with the word 'child'. The use of pronouns is never benign and Microsoft Office software is coded, like all language, to recognise cultural power relations of human subjectivity and animal objectivity. Standard journalistic practice when reporting about animals is to avoid personal pronouns and language in favour of objectifying language or impersonal pronouns such as 'the racehorse (Freeman, 2009 cited in Wyckoff, 2015).

> *Both our linguistic practices and our legal institutions (including the property status of animals) play a role in the discursive construction of animals as subordinate to humans. In other words, these practices are used to categorize animals as subordinate, and this conception of animals in turn reinforces the linguistic practices and legal institutions themselves. (Wyckoff, 2015, p. 545)*

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The pet-in-waiting

Thinking with configurations of pronouns intercepts another discursive linguistic pattern that appeared with four participants where discourses of ownership and property are represented through the use of possessive pronouns like – "my dog". Emily, Joe, Poppy and Earl consistently use posthumanist or humanist personal pronouns with subject identification such as he, she, given names and/or species names, when describing animals or animal events. This naming practice changes however when each person spoke about their dogs and cat in the past tense, before they bought, rescued or adopted them. The animals in these situations are all referenced with object identification as 'it'. This occurs when Joe was talking about Bobbie (dog) in the animal shelter before he was adopted, when Earl relays the story of Teddy (dog) in a previous abusive home, prior to the family rescuing him and both Tillie the dog and Poppy's one-eyed cat, before they were purchased from pet stores. The personal and possessive pronouns consistently change in these anecdotes as soon as the participants talk about these pets in their new homes, as ownership is established. Before being part of kin, they are 'it' and afterwards gain subjectivity.

This linguistic pattern escaped attention during the interviews but became clearer during the transcribing process and with repeated readings of the transcripts. Becoming attuned through the act of tracking these words became an enabling tool to peer within the in-between-spaces to do the work described by Deleuze and Guattari (1987/2004) of pulling the virtual and actual worlds a little closer. Pets exist, in a liminal space between the institutional categories of property and ownership. These situations create confusion as the about to be adopted animal sits at the intersection of classification in the midst of adoption as an "it" and entering the family of pets as a subject. Taylor (2007) and (Irvine, 2004) discuss the importance of the practice of naming in animal rescue shelters where the workers carefully bestow names based on the individual attributes of the dogs and cats. This naming practice increases the chances of the animals being adopted when they are "pets-in-waiting" (Taylor, 2007 p.71) and the shelter workers judge the suitability of prospective adopters by their use of personal pronouns "you know, they (the animals) are never an it" (p.65). This notion of the pet-in-waiting elucidates how speakings shift through ownership. This change of pronoun from object to subject could emerge as the participants get to know these animals and certainly as they are named, however it was a

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very fast linguistic switch and Emily's word choice moved from 'it' in the pet store and to 'she' in an instant when describing her dog Tillie in the car on the journey home. These speakings reflect shifting boundaries of the intersectionality of non-pet/product objectification where the pet-in-waiting is in limbo, in the process of becoming pet subjectification, literally and figuratively in the in-between of life and death, within categories of pet/pest/product. It confirms Animal naming as a significant feature of the inquiry that commenced as a sticky knot in chapter one and will continue in chapter nine as Inquiry Process discovers what happens to the unnamed Animals at the early learning centre.

Chapter summary

The connections and disjunctions of the territory where children and animals dwell are expanded in this chapter as Inquiry Process sets out to find complexities of human-animal becomings and how they are enacted when competing ethical concepts and practices are in play. The speaking and acting territorial participants help conceptualise how discourse speaks to and with the assembled world through power relations creating speciesist boundaries that separate nature from culture. The practice of categorising participant's orientations enables Inquiry Process to adapt empirical studies of animal/human relationships by integrating critical and posthuman speaking and actings, where the boundaries, borders and dualisms are temporarily ordered and analysed with an institutional lens (families, education, agriculture, speciesism) diverting the focus from the individual participants.

Territorial diplomacy has been applied to inherited research methods that show how reductionist practices of coding can be tamed and put to use in postqualitative study if protective measures are installed, where category and code are used mindfully as "a particular kind of assemblage" (MacLure, 2013a, p. 165). The material effects circulate through the daily happenings of the territory actors who are produced and transformed and are also producing and transforming others. This prudent practice of discursive mapping did not divert too far from postqualitative practices as the critical and innovative 'doubled movement' (Lenz Taguchi, 2016) was part of the design and ongoing practice of power-shaking and sense-making. These are liminal spaces with traces of the unknown

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and unexpected in the data, moving through forces, energies, facial expressions, clothing and desires. One of these traces of the unknown came with a lesson in humility from a Bulldog called Butch who forces us to see his speaking and actings. He disrupts the concealment of his presence, showing how the blindmindness of humanism is still hampered by the epistemological inadequacies of these strange relations (MacLure, 2013a).

Discourse is interpreted in this chapter between a double process of interpreting the speakings and actings at the intersection of molar political, cultural and institutional practices and molecular innovative methodology and theory. Being open to new modes of multispecies existence and posthuman possibilities set in motion unstable travel coordinates that are now a welcome part of the travel plan. The following chapter continues the speaking and acting foci that question if participants' speaking and actings are conscious constructions of animals as product or unconscious consumptions of animals as product. Inquiry Process seeks out boundary crossings deepens as a means to precipitate new ways of speaking and acting with potentia for interspecies articulation. This establishes an ontoepistemological, difference between critical theories that overtly challenge power and posthuman strategies that resist power by ignoring its "logic and produce a new regime of signs, a new way of life, a new kind of subjectivity" (Aurora, 2014, p. 18). Less fight and more lines of flight perhaps?

Chapter seven: Speaking and acting the boundary crossings where children and animals dwell

Introducing crossings

Morphic fields link members of social groups and can continue to connect them even when they are far apart. These invisible bonds act as channels for telepathic communication between animals and animals, people and animals and people and people. These links acting like invisible elastic bands, also underlie the sense of direction that enables animals and people to find each other. (Sheldrake, 2011a, p. p.280)

Commencing this chapter with a quote from Rupert Sheldrake is a deliberate attempt to inject the unknown into human-animal boundary crossings. As a biologist, Sheldrake unusually studies cross-species relational morphic fields that he describes as fluid, vibratory and holistic. Sheldrake's concept of morphic resonance recognises a collective memory that moves through porous borders of human/animal/plant as a type of more-than-human consciousness of "vibratory and rhythmic activity" of memory (Sheldrake, 2011b). His attention to interspecies 'habits of nature' rather than anthropocentric 'laws of nature' places the intent towards communication and what human/animal/plant assemblages do and where they dwell. Morphic fields connect members of social groups by perceptual fields that transfer information to species, to environments, to past-present time and to each other (Sheldrake, 2007). This can be observed within collective animal behaviour of shoals of fish or flocks or birds that move in synchronicity or with recent studies of tree communication through networks of roots (Wohlleben, 2016) and dogs who know when their owners coming home (Sheldrake, 2011a). Morphic resonance give credence to Deleuze and Guattari's invocation of the multiplicity of the subject they describe as 'becoming-animal' 'becoming-pack', as Inquiry Process grapples with ideas of communication, relating and how we speak and act the multispecies world.

Boundary crossings enable hum(an)imal connections to become known in early childhood education through smoother striated spaces of relationality that think and learn with affect. These blurring of boundaries outlined between telepathic animals and responsive plants assemble in this chapter with human and animal participants who elicit boundary crossing possibilities. Language and text also appear as inadequate to think with

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these possibilities and Emily's reflections in the following interview transcript identifies the limits of language (Derrida, 2008) as she tries to find the words to explain the relationship between her three-year-old son and two-year-old bulldog.

> *Rory (child) and Butch (bulldog) they're like one. Rory is dog, and Butch is human, and they're like one. But it's weird because it's like one of them knows what the other one's thinking, and the other one, like – which is, I guess the way it should be for an animal and their human. If Rory's upset, he's (Butch) straight over, puts his bum next to him, watches around and guards him, lets him stroke him. He's very, very perceptive if he gets injured or anything. I don't know, I don't really have the words to… I guess it's just the bond between them, like they are just yin and yang, like their characters. Both are stubborn, playful and know what they want. Butch is very "I know what I want, and I want to do it now … look at me, look at me (Emily parent interview).*

Emily uses the term 'perceptive' in these canine-human relatings and similar reactions from adult participants in the study offer consistent uncertainties. There are hesitations; silence and gaps in their responses where words and explanations are not forthcoming, and yet the intensities of these relatings enter the homes, staff rooms and transcribed pages where conversations took place. These relations are sensed through affective bodies and emotions, possibly as ontological ways of being and performing, but not always with conscious becomings. This inability to describe and define human-animal relatings is worthy of attention because these stutters, uncertainties and silences are persistent, and yet they seem to have much to say. For Sheldrake, (2001) the inability to describe and define multispecies relations is because humans have become distanced from memory within nature and symbiotic relations with the world. Morphic resonance is explored in the context of the boundary crossings of this chapter to think with the nuances of speakings and actings, like perception, sensing and intensity. Although language and semiotics are a key part of this chapter, letting go of controlling the master story, conclusive interpretations and the treasure map for a truth that does not exist, nudges human language slightly off the path as the head tour guide, enabling multiple forces to be seen, sensed and heard.

In the previous chapter multispecies communication and human discourse were constantly under question during field studies as discursive practices from generated data traced the patterns that govern human-animal boundaries, producing specific material and ideological effects. Inquiry Process created six categories namely post, pet, pal, pest,

product and pack, illuminating contradictory relationships and speciesist ideologies that expose hierarchies of oppression and domination. This chapter continues through semiotic territory with three signposts. Firstly, key ideas are introduced about cross-species intersubjectivity that attends to social animality of human and animal species. Secondly, participant encounters from interviews, conversations and field studies create the speaking and acting narrative for this chapter that concludes in the final section, as a way of thinking with theory as semiotics and gestures are adopted as a concept to 'plug in' to the data (Deleuze & Guattari, 1987/2004; Jackson & Mazzei, 2012). Gestures and semiotics appear repeatedly in the data helping Inquiry Process make directional choices of how they could be adopted as a multispecies boundary-crossing tool. This chapter opens once again with researcher becomings that this time become enmeshed with semiotics that become situated as a concept in the study.

Becoming semiotic

> If I could talk to the animals, just imagine it
> Chattin' with a chimp in chimpanzee
> Imagine talking to a tiger, chatting with a cheetah
> What a neat achievement it would be
>
> If we could talk to the animals, learn all their languages
> I could take an animal degree
> I'd study elephant and eagle, buffalo and beagle
> Alligator, guinea pig, and flea
>
> I would converse in polar bear and python
> And I would curse in fluent kangaroo
> If people ask me, can you speak rhinoceros?
> I'd say, Of course, can't you?
>
> If I conferred with our furry friends, man [sic]to animal
> Think of the amazing repartee
> If I could walk with the animals, talk with the animals
> Grunt and squeak and squawk with the animals
> And they could talk to me. (Bricusse, 1967)

The 1967 film 'Doctor Dolittle' cultivates childhood yearning of animal communication. This song resonates through traces of time with visual memories of the representations of animal species that blurred the line between real and virtual, including the over-the-top intensity of being inside the pearlescent shell of the Great Pink Sea Snail and witnessing

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the imaginary double headed 'push-me-pull-you' lama. I too am constantly pushed and pulled with becomings that question these childhood desires and the colonising acts on display in this film, with fragments of both uncertainty and wonder. The Doctor extends a level of polite interaction with animal kin and enthusiasm that takes him into critical spaces that we too are venturing towards. Polynesia the parrot teaches him to communicate in the languages of animal species, through sound and movement. The signature song from the film, 'If I could talk to the animals' represents anthropocentric desires of speaking and acting and how talking-to propagates animal communication by talking-at. In contrast, posthuman ontologies of relationality require listening and attending "to constituting the polis, where and when species meet" (Haraway, 2008, p. 19), prompting the inclusion of another line at the end of this chorus. Would they want to communicate with me?

Becoming semiotic took me on a genealogical tour of the semiotic field dominated by the anthropocentric logos of a separating hierarchy with attempts to blur the separation with naturecultures of communication and signification "belonging in large part to nature and, in some to culture …also a part of nature" (Sebeok, 1991, p. 22). Humans have long believed that language both oral and written talks the world into being and that language constitutes reality. Western philosophy perpetuates the idea of the inferior animal, and the superior speaking human. Human identity has been a prevailing interest of Continental deconstructive thought and practice, for those who have the tools for word making, have the tools of power to make the world fit in their image. Aristotle designed and named hierarchical taxonomies of living entities that privileged the human, Descartes (1649) ownership of reason separates human from animal, granting them human dominion, whereas Kant's (1785/1998) notion of 'autonomy' extends desires to animals species, but only the human rational, higher self is granted freewill or agency. These representations are never fixed, as this anthropocentric talk about being in the world, is always going to be inaccurate because firstly it has passed, and more importantly it is ignorant to the majority of Earth dwellers who are unknown to humans. Defining semiotics within human-animal relations is slippery and Derrida's (1982a) concept of 'différance', Sheldrake's concept of 'morphic resonance', Uexküll's (1934/2010) theory of umwelt and the 'chaosmos' of Deleuze and Guattari's (1987) 'deterritorialisation' are tools that help to bridge the ontological divide.

This thinking-with theory opens windows to speculative worlds, prompting questions of absence, silence, indescribability, the hidden, forgotten, unseen or unknown; provoking a constant challenge to "the excessive power granted to language to determine what is real" (Barad, 2008, p. 121). The processes of the in-between and outside help to define, biosemiotics in this inquiry, helping it to hum along, loud enough for my inferior ears to hear. Within posthuman analysis perhaps we could also be asking "How might we employ language to listen to the world" (Derby, 2015, p. 14) and as previously alluded by changing the last line of the 'Talk to the Animals' song lyric, how might the-more-than-human respond? (Haraway, 2008).

Inquiry Process presents becomings in the introductory chapter as alternative thinking as they are always in future-forward motion in comparison to realist and idealist philosophies that rely on past experience. Becomings enact a metaphysical freedom of immanence, welcoming unexpected ways of speaking and thinking about life where queer relations and alliances appear, and previous ways are left behind and/or integrated into the new. Becoming semiotic prompts an entanglement with the study of signs and communication that closely aligns with linguistics, the study of language. Human semiotic signs take the form of metaphor, words, images, sounds, gestures and objects and my semiotic becomings are tied to reading and writing processes of this inquiry, where thinking is doing its work. As movement of time and space becomes intertwined with the sensorium of words and signs, the assemblage becomes critical, casting light on what may be omitted from thoughts, perceptions, actions and narratives.

Semiotic becomings first appear during data generation as I grapple with how to enter unfamiliar animal lifeworlds without the shackles of human ontologies, or at the very least a loosening of the chains with enough wriggle room to wonder about biosemiotics and the multiplicity of territorial kin. What might other species sense and experience and what could I see, feel and hear anew that would challenge my then naïve understandings of Heidegger's notion of animals being 'poor in world' (1995) without language, whereas humans are world-forming because language is attached to logos. Ingold's (2011) wayfaring is a helpful concept in contemplating new ways to think about multispecies perceptions of the world, stressing the relational constitution of being that take place

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along lines of movement, that helped spark curiosity lines of communication. For Heidegger, language creates a chasm in the human-animal linguistic divide, that excludes Animals from world-making and although he defines language as a distinct difference between human and animals, he does not deny animals the ability and wherewithal to communicate (Heideggar, 1978). In this breaking away from traditional philosophies of the human-animal relation, he attempts, but fails to see the animal as anything other than contained and trapped within nature, whereas the human has choices that free them from this containment, as they understand it as 'nature' and are therefore separate. His quest for the "essential provenance of the essence of man" (Heideggar, 1978, p. 227) resorts to default humanist reductionist anthropocentrism, always in comparison with and being represented by the animal aesthetic that defines what it means to be human, with only a secondary glance for what this might be for animals (Iveson, 2012).

All animal species communicate and have evolved myriad ways to do this, that is worthy of greater acclaim. Some species communicate with smell, others by sound, gesture, magnetism, facial expression, or bioluminescence (Wohlleben, 2017). Many, including humans communicate with a combination of different senses and affects and several studies are helping to bridge the Cartesian divide, revealing how Animals are much more sophisticated than once known. The biologist Jakob von Uexküll (1934/2010) is one of the few philosophers, who attends to animality and communication with his concept of 'umwelt' that he introduced in the book *Umwelt und Innenwelt der Tiere* in 1909 (Sagan, 2010; von Uexküll, 1909, 1921).   Umwelt denotes the subjective world of organisms and translates from German as "surrounding world" or "environment (Buchanan, 2008, p. 7). He laid the ground for the ethologist Konrad Lorenz, and Continental philosophers Heidegger, Deleuze and Guattari (Buchanan, 2008) who all paid homage to his ideas in their writings. Uexküll studied the sign processes and communication (visual, acoustic, and chemical) of living organisms including animals and plants. Umwelt is described as a perceivable, significant world surrounding each organism "within soap bubbles, which confine their visual space and contain all that is visible to them" (von Uexküll, 1957, p. 28). This semiotic ontology aligns biology with semiotics as biosemiotics, "the study of signs, of communication and of information in living organisms" (Oxford Dictionary of Biochemistry and Molecular Biology, 1997), crossing boundaries between biology, philosophy, linguistics and the communication sciences. Umwelt is progressing as an

important concept in human-animal studies where communication in living systems is appreciated as an essential characteristic of all life (Pattee, 1982). Uexküll's thinking is noteworthy as he opens ethical pathways for posthumanist accounts of speaking and acting with an "intersubjective account of nature" (Buchanan, 2008, p. 28), where the logos and language of human experience does not occupy a solely exceptionalist position within human/animal/material worlds. This disruption to the Cartesian mechanistic worldview "is a welcome tonic against the view that nonhumans are machine-like and senseless" (Sagan, 2010, p. 3).

Uexküll's biosemiotics helps to comprehend creaturely ways of being in the world with increased self-reflexivity for de/re/territorialising human-animal relations. The challenge however is that if human perceptions of animals are so drastically separated from human conventions of speaking and acting, can interspecies communications support critical animal liberation? For example, although Uexküll's umwelt pays attention to animality, these bubbles can appear closed to the world, capturing each species in a blueprint of body, instinct and environmental milieu. Animal species appear closed to each other in this ontology with less potential for interspecies communication or relations. Morphic resonance expands notions of umwelt that is both species specific and able to tap into connecting networks between the lifeworlds of all species, something is humming here with possibility. Humans claim that animal species are less intelligent as they lack language and speech, but what if they are speaking all the time, with humans, with each other, with other species, telling us what they think, feel and know and we are not only unable to listen, but unable to comprehend it is even possible?

Becoming semiotic opens fissures in the landscape of relatedness and vibrational communication in the territory where children and animals dwell that help to reconceptualise human-animal relations and therefore cross boundaries. The relational speakings and actings of the previous chapter lay conceptual tracks describing how human-animal boundaries are spoken, performed and structured personally and institutionally. Inquiry Process patrols the borders looking for entry points that embrace the multiplicity of creaturely relations, and a way out of the separation. Pathways of linguistic speciesism broke away in many directions from these boundaries. Signposts to

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these paths such as, positional animal pronouns, analogies, pejoratives, attributes, metaphors and 'weasel words' appear extenuating the scale of the task ahead. An example of such boundary crossing plays out in the following narrative.

Speaking and acting narrative

Participants anecdotes and shared memories of past and present life events mediate the discourses of humanity and animality. These personal reflections emanate from the individual interviews with parents and grandparents in their family homes and teachers at their place of employment, bringing to light forgotten emotions, which are sometimes joyful, sometimes telling and sometimes haunting. They signify conceptual paths of reference that direct attention to words, practices, affect and material objects that shape the narratives in this and subsequent chapters. They provide a glimpse into the private (family home) and public (education setting) where anecdote and memory is under study. Interviews become encounters of uncertainty in these intimate spaces where the data event is particularly unpredictable in family homes as dogs test boundaries, children interrupt, and digital apps do not always record.

The first interview of the study took place with Ross as we huddle around a table in a cramped staff room at the ELC on a winter's morning. We acknowledge our nervousness, especially when confronted with the recording app on my tablet that refuses to work, and I have to borrow someone's phone to record the interview. Ross is the father in the Dog family who was introduced in the humanistic orientation discussions of the previous chapter. Ross specifically asked to be a part of the study, expressing his desire to contribute to the research, expressing eagerness to find out more about children's relationships with animals and pets. He asks for a piece of paper "to keep track of his thoughts". Ross is the feature of this narrative and is repeatedly being brought back to a story that is part of his childhood memory with pets. He wants to move on from this telling and yet I can see the potential in his boundary crossing tale and relate to what anthropologist Kathleen Stewart (2007, p. 2) refers to as "this something that feels like something" where memories build an intensity of affect for those recalling the memory and those who are listening. Ross's father Earl opens the narrative with his reflections of the same shared family event.

Boundary crossing: Pet becoming pests

"Well they never had guinea pigs, but all of a sudden they wanted mice. So, we got two of them. The twins were in grade five and we loved our doggies so we thought why not!" (Earl-grandparent).

We had these two white mice when my brother and I were in grade five and then we bought a black mouse that we thought was the same sex. I remember Mum asking how many mice we have, and then telling us that the number had risen to fourteen. The babies were tiny and pink and they grew to be an apricot colour – quite cute, but they started to stink out our bedroom so we put them in the shed. One night we heard a loud bang from the direction of the shed. We ran outside to find that the next-door neighbour's cat had broken through a window and smashed the mice cage that was now lying now on the shed floor, with no mice in-residence.

So, we didn't have pet mice anymore - but we had a mouse problem. For years these escapee mice would unexpectedly turn up in our house and I remember Mum and Dad baiting mousetraps to try and get rid of them. I don't remember being philosophical that these were the prodigies from the mice that were once our pets. I think it might be due to the lack of an enclosure. They are no longer in a cage, as a pet - they're vermin. I don't know if it's because they are no longer useful or have a purpose or even if it's a sense of control, but in a way, they certainly became less appealing. Perhaps it was different when they were a pet-in-isolation and this changed when they became a pack-of-mice.

I haven't thought about those mice for over twenty years. There wasn't much of a connection or a feeling like love that could be reciprocated because you could pat the mouse and not get any enjoyment from that or know if the mouse is enjoying your presence. When we let them run up our arms they felt tickly on your skin. That was as close as you could get to an animal like that as they were more of an entertainment and a novelty, not like the same way you would with a dog.

"That's right" says Earl. "That's why I mentioned that they found their doggie

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addiction. It's only a temporary diversion I suppose of the mice and although they were never neglected – they moved on".

This narrative moves within a childhood memory Ross had not thought about for a long time. He like other participants responded to a question by relaying a chronological account of their lives with animals, which are mostly, pets and he shared this mouse tale early in the interview. Inquiry Process continues to return to this memory to flesh out the finer details and forces that were at play, sensing this is worthy of unhurried attention or methodical slowness (Horton & Kraftl, 2012, p. 28). This slow attention is another way of dwelling in territory, keeping pace with the leisurely meanderings of wayfaring, choosing not to rush through the interviews or leap ahead with analytical discussions. It is a way of paying attention, being present and not making assumptions or jumping to conclusions, to let the story breathe (Frank, 2010) through the layers of potentiality.

Material affects weave through the memoirs of this narrative ordering the relations, where the movements and transformation of the mouse cage are situated centre stage. The cage transmutes from a mouse dwelling inside the sanctity of the family home, to a cat food puzzle when moved to the borderlands of the shed that is neither inside or outside the family home, and finally to the broken enclosure that signals the rupture of the border that "separate western homes from nature" (Power, 2009, p. 29) and where the mice venture outside the protection of the human home. The tool of containment became more apparent as Ross draws a box on his notepaper that he repeatedly encircles with a drawn circle around, and around as if to emphasise the importance of being enclosed. He then speaks to this idea, analysing his actions, trying to make sense of past and present affects. He offers layers of suggestive texture, hinting at how the representation of these once contained and now liberated mice shift from being-pet to becoming-pest. As the speaking and acting stages of the event unfold the material loss of the cage equates with diminished human control. For the renegade pack of rodents, who have just been evicted, the discursive shift from pet to vermin travels through borders that distinguish territory and homelands. Ross also records separate words on his notes: Family – Food – Pest. This acting accentuates the separation that occurred during this event and the shifts in the boundary structure that he is consciously or unconsciously recording on his notepad.

The mice keep returning to the house over time, presumably in search of food and many meet their fate as they venture onto spring-loaded baited traps laid in the kitchen, protecting the human food from hungry mice. A much-loved childhood board game comes to mind, 'Mousetrap' and the anticipation of watching the brightly coloured plastic trap move slowly down the yellow serrated edge pole, as it gently captures someone's plastic mouse within the confines of the washing basket shaped trap. As a winner is declared, the players yell out "MOUSETRAP". Unlike the playing-game-mousetrap there is no gentle capture for the apricot mice who become entangled with the killing-game-mousetrap. Hopefully a quick ending is their reward in this game of life. The boundaries of animal categorisation and the anthropocentric consequences of governance are evident here when animals move within geographical, contextual, cultural or mediated borders where the game rules and containment technologies change, and animal bodies are captured and contained in life and death. In this narrative the pet instantly become pest as the mice escape from the broken enclosure where "home is produced through border relationships of belonging and exclusion" (Power, 2009, p. 30). The rules change and attachments and relationships that may have once existed fall away as new boundaries are made. Some of these mice may have survived the breakout, dwelling in rogue liminal spaces, but those who returned to the family home become captured and therefore contained once more in death. Wadiwel (2015) defines how family homes are sites of dominion and containment for pets.

> *The containment devices within homes—backyards, fish tanks, bird cages—must be understood as connected to the other forms of containment that regulate animal location and movement. Life begins in breeding farms which are linked to the property market through pet stores, which are then linked to suburban homes; at each stage one containment device supplies the other in a sealed system of circulation that attempts to minimise any leakage. (Wadiwel, 2015, p. 200)*

The following diagram indicates when animals move within boundaries, as described in this narrative, their autonomy is diminished by containment technologies like the cage, shed and mousetrap that control and maintain animal life and death. Leakage is contained, and boundary crossing is curtailed, for leakage signposts molecular change of animal species repositioning as animals become rogue with rogue intensities of the feral, the wild, the pack, the hybrid, the-out-of-place and the uncertain. This notion of 'going feral'

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is proposed by Probyn-Rapsey (2016) as an antithesis to the 'dumb animal', as those who have the tenacity and intelligence to survive in harsh places, becoming hated reminders of the loss of human sovereign power and containment. This signifies the possibilities of leaking, escaping or departing that break through a crack in the system. It is the elusive moment when change happens, as a border between two constructs is crossed. These ideas are interpreted in subsequent chapters where concepts of dissection, entrapment, emplacement, replacement and displacement also signal coordinates for boundary stop signs and crossings.
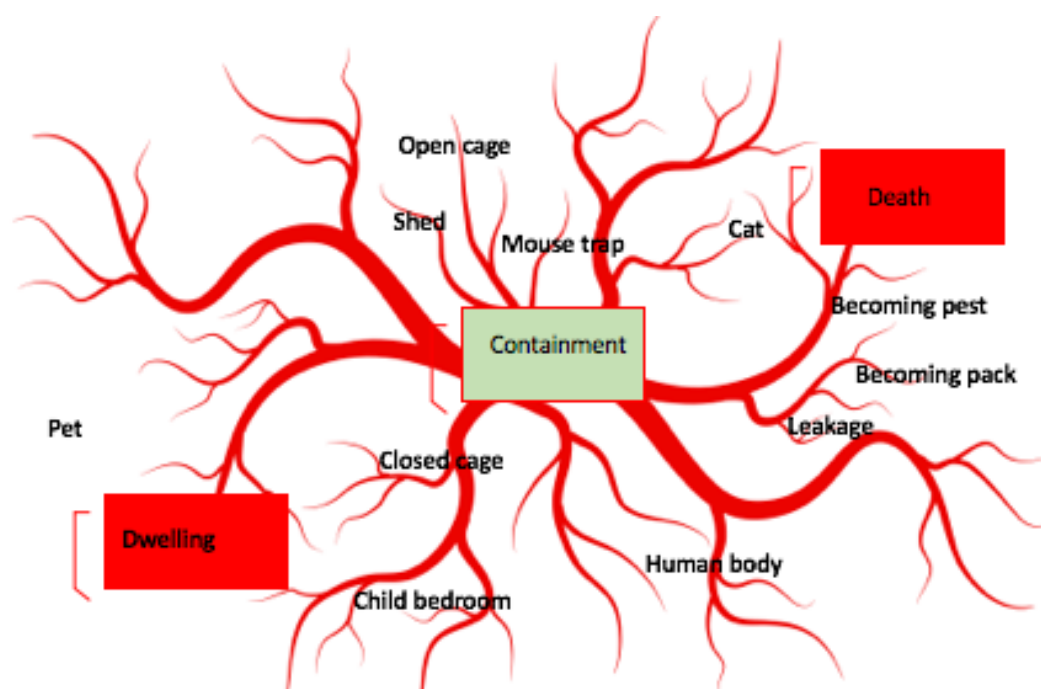
Figure 15: Boundary crossing

Humans feel the effects of disequilibrium as animal boundary crossings are experienced when pets become feral, domesticated animals become rogue or animals behave outside the perceived boundaries. A research paper by O'Sullivan, Creed and Grey (2014) describes a common event from staff at Melbourne Zoo where protected native orphan baby possums are found by caring humans in the suburbs of Melbourne who are rescued and lovingly nursed back to health. The adopted family contacts the Zoo after a few weeks when they think the possum rehabilitation needs expert care and the infant is carefully transported to the Zoo, wrapped in the arms of the carer. Upon inspection the carer is told that this much-loved possum is actually a rat and in an instant of monstrous boundary recalibration boundary, the pet animal is dropped from the gentle containment of human

arms. As the carers (cultural) perception of the possum shifts from pet-to-pest, the tenderness and attention lavished upon him is "replaced with a deep sense of revulsion" (O' Sullivan et al., 2014, p. 61). The authors of this article do not indicate the fate of the orphan rat, nevertheless we can imagine that extermination is not out of the question and unlike the possum this rat death is not protected by (political) law and required to be painless.

The memory of lifeless apricot bodies or the traces of suffering in traps does not affect Ross and this lack of remorse and details of animal death is incongruent with other shared anecdotes where tears are shed as he recalls the death of a goldfish and teenage despair with the death of his dog is offered with detailed descriptions, including the exact date and time of his death. Ross also speaks about how he struggles to see and minimise animal pain that is at odds with his role as a paramedic where he witnesses human suffering every day. He talks about being traumatised when he came across a dying bird in the road whose pain was visible, and he knew the right thing would be to relieve the bird from this suffering. Ross could not directly strike the bird to kill her quickly, choosing to wrap the bird in a cloth and run her over with a car. The car became another technological devise of containment that separated him from the leakage and act of killing:

> *I wrapped it up in either a newspaper or some kind of cloth and I put it under the wheel of the car and drove over it. It removed an object that I would be using, and it became a mechanism – the car did it and not me, do you know what I mean? I didn't want to see it suffer any longer I think.*

These mice never enter the category of pet for Ross, as they do not offer the type of reciprocity he requires from a pet. He raises this once more when speaking about a neighbour's turtle. "I remember thinking 'it's' not much of a pet". His use of pronouns changes when talking about the family dogs as friends and family to 'it' and 'thing' signifying his objectifying of a turtle as a pet. This also happens with the suffering bird and the mice. He raises this difference without prompting:

> *I don't know if it's because there is not the same reciprocation or whether it's more uum (long pause) primitive in the connection with certain animals and that there is a reason why certain animals have been domesticated and that's maybe because of a selfish point of view where I*

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get satisfaction by being with you and I also have to look after you and that builds my love more.

Building the love is an important point for Ross and the mice never did this. As alluded with the inclusion of the possum/rat story even when an animal has the potential to build this kind of love, through the attraction of "infantile (cute) faces as highly biological stimuli" (Borgi & Cirulli, 2016, p. 1) and the humanist desire to care for an infant mammal, this love is contradictory and likely to change based on cultural perceptions of what animal boundaries produce and therefore if they warrant love and protection. This depends on cultural and political boundary strategies. His father Earl also acknowledges that for his sons these 'temporary' mice pets were not the same as the "addiction of having dog pets in your life". Both Ross and Earl say they could never be without a dog and dogs cohabiting as kin. They are both positioned with the humanist category in the participant animal orientation scale, and Ross named this about himself, without any knowledge of how this analysis would unfold. *"I think part of my value system is humanist, about what I just said – about caring for others and making an individual life a little bit better or at least no worse".*

Human speaking and actings work through personal and institutional controls where visible and invisible injustices are masked and normalised. This speaking and acting narrative throws up many inconsistencies and examples of how discursive practices construct animals through complex relations and subordinating positioning. This complexity is also acknowledged by (Wrye, 2009) however, she warns of simplistic dichotomous dominance/affection constructions of relations with animals, where the breadth of relationality can be missed if animals are perceived only as submissive. Butch is a reminder of this in the previous chapter that he is far from submissive and his canine/Butch subjectivity is on display through his speaking and actings that are hard to miss, but easier to ignore. His power is unnerving, like a strong wayward child who is labelled, as 'difficult', urging further thinking that moves towards learning how to respond with response-ability (Haraway, 2008).

Animal-human intra-species communications are the agitator for thinking and responding in the final section of this chapter where the concept of semiotics travel though the inquiry and pathways become lined with signs and gestures. The mechanisms of a narrative once set free from the captivity of the 'shoulds' of qualitative methodology take on a shape

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that draws in forces from the spoken and unspoken; helping to find ways to punctuate the questions and ideas through a layering process of the subtle shifts of the minor gesture. The concept of gesture is put to work in this chapter and a 'minor gesture' for Manning (2016) works in different ways from the grand narrative of the majority, or major gesture. For Deleuze and Guattari (1987/2004) the minor, like the ordinary affects that Inquiry Process is paying attention to, has a de-territorialising function destabilising dominant boundaries through resistance, subversion and creative thought. The minor gesture as movement is subtle, hard to trace and yet is dynamic and able to shift assumptions in the field of relation.

Speaking and acting concept: Gestures and semiotics

The concept of gestures and semiotics enters the territory as practices of reading and writing, map descriptive genealogy (Haslanger, 2005). Deleuze and Guattari (1987/2004) conceptualise territory as a semiotic structure and 'regime of signs' that includes participants as senders and receivers of signs, with concepts of signification, representation and communication (Martinelli, 2016). Gestures and semiotics are used as concept in the interpretations of this chapter to deconstruct the limits of thought as the "target of analysis is not (or not simply) what we have in mind, but the social matrix where our concepts do their work" (Haslanger, 2005, p. 14). Using concept as method in this way is not intended as a comprehensive study of semiotics, but rather how semiotics assembles in the inquiry, and what productive work it supports. Gestures and semiotics convey and attempt to include the agentic voice of animal species in ways that "challenge the unequal relationship between human researcher and animal subject that denies their agency, that assumes their lack of voice, their import only as a marked and imprinted subject of human meaning-making" (Hamilton & Taylor, 2017, p. 57).

Suen (2015) supports the need to reconceptualise language in ways that does not pit the speaking animal against other Animals. Poststructural philosophers, Derrida, Foucault and Spivak adopt deconstruction as a tool to unsettle the power dynamic in the talk, texts and institutional practices that maintain and normalise hegemonic discourse aiming to play with its possibilities, making space for new ways of thinking, acting, and living.

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Deconstruction unsettles the stability of textual/semiotic signifiers (notably binary opposites), enabling an open interpretation, where there is no fixed or essentialist meaning. Deconstruction practices undermine hierarchical binary oppositions within language. In this playing with syntax, poststructural writers and thinkers attend to words and concepts to resist a binary logic by using a range of disruptive practices including:

- New spellings of combined polysemous words. For example where deferral and difference becomes différance, disrupting smooth readings of text (Derrida, 1982a).

- The reversal and subversion of binary pairs in sentence structures such as placing the naming of animals before (Dunayer, 2001). For example, Inquiry Process has positioned the word 'animal' before 'human' at relevant points to trouble the concept of ownership in sentences such as, "Bobby the horse went for a run with his human companion Sarah".

- Problematising the signifier in a word to trouble what it is saying and doing. Haraway adopts this process of playing with words she calls 'Metaplasm' to help her think-and-do science differently. A change in a word can shift or subvert the meaning "by adding, omitting, inverting or transposing its letters, syllables or sounds.... Metaplasm can signify a mistake, a stumbling, a troping that makes a fleshy difference" (Haraway, 2003, p. 20).

- Merging words together to collapse dualisms such as naturecultures where the oppressed and the oppressor become joined as a statement against separation (Haraway, 2003).

- Derrida's concept of 'undecidables' disrupts the oppressive logic of binaries with new words designed so they cannot be placed in a binary (Derrida, 1967/1997).

- Using parentheses to emphasise the fragments of words with both different and shared polysemous meanings to illustrate (dis)continuities in the discourse.

- Using or removing hypens to join words with innovative meldings and sometimes-strange poetic combinations such as nature-techno-culture.

- Adopting the practice of 'Sous Rature' (under erasure') (Heidegger, 1995), where words are crossed out but left in the text so the trace of what has changed is still in place as a signifier, such as the use of ~~method~~ practice in this inquiry.

- Troubling a dominant discourse "By 'trouble', I mean to interrogate a 'common sense' default meaning by mobilising the forces of deconstruction in order to unsettle the presumed innocence of transparent theories of language that assume a mirroring relationship between the word and the world" (Lather, 2007, p. 83).

These strategies of deconstruction ignite possibilities of relational communications and boundary crossing. Inquiry Process adopts some of them in the writing of this thesis to strengthen discursive signifiers. To be effective, deconstruction needs to create new terms, not to synthesise the concepts in opposition, but to mark their difference and eternal interplay. Derrida, Agamben and Haraway all adopt new terms that playfully innovate and do new work as a necessity of analysis. As gestures and semiotics are put to work in this chapter as a concept, Inquiry Process presents a brief overview of aspects of semiotics that are pertinent to the research questions and data. Irvine (2004) maintains that, in the absence of language, animality can become known to humans during interaction and through the development and maintenance of relationships. This is one of the ways that gestures became known though this study.

Gestures

Gestures in human early childhood, especially with infants are recognised as multi-modal acts of non-verbal communication that engage bodily movements, postures and eye contact. Animal-human relations are difficult to define. The participants and literature are unable to articulate what these connections might be or to define their relationships with animals in their lives. This leads Inquiry Process to wonder if animals might bring to human lives another plane of existence. A plane of in-articulation, where human spoken language is not always comprehensible or adequate. Posthumanism embraces unknown modes of existence as possibilities for new relational fields, new knowledges and ways to communicate, both human and more-than-human. For Derrida (2008) this state of wordlessness does something more than maintain the reduction of the animal to categorisation, for it points to the limits of language. Language cannot contain, describe, or explain the intensity that marks the encounter with an animal. This very intensity goes beyond language and is something we lack the words to describe. This recognition of the limits of language, in the sense of being posthuman - coming after the human, requires

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alternative strategies that move beyond the speaking privilege of the speaking animal. Birke (2011) also acknowledges this difficulty with language, that is emulated in this study, for as she claims, she is lesser for not being able to communicate – not the animal.

> *The fundamental problem facing our theories lies with the inarticulacy of human-animal relatings. I often ponder this as I realize that however much we might write about what other animals do, or what they signify to us, we still cannot put into words what we feel. It is in those profound moments of connectedness, of touch or gaze between us and an individual who is of another species, that I become dumb, inarticulate, unable to express what is going on... I still cannot speak their language(s). And they call the others 'dumb' animals! (p.xx)*

The escalation of human-animal studies continues to prompt research about interspecies communication by those who live with and study Animals. Inquiry Process chose to include some of these examples in this chapter to expand notions of animality with thinking, feeling and communicating. Part of the limitations of humanism is that language is viewed as high culture and non-human forms of communication are regarded as inconsequential. Biosemiotics acknowledge some of the ways more-than-human communication is far more sophisticated than once thought, operating within complex networks of ecosystems that support life. For example, Gay Bradshaw (2009) exposes how elephants experience trauma and post-traumatic stress symptoms that are very similar to human trauma. Elephant communication is highly complex and expressed through parts of the body, sound and patterns of subsonic vibrations that can be heard by elephants across vast distances. Renegade feminist science researchers Jane Goodall and Shirley Strum provide models of animal study that trouble the mechanistic and patriarchal notions of the past. Jane Goodall's 1960s study (2010) with chimpanzee families in Gombe and Shirley Strum's 1970s study (Strum, 1987) with Baboon communities in Kenya, provides such novel methods and understandings, that they changed scientific conceptualisations of primates. In addition, many scientists who it must be noted are also female, regard the sophistication of modes of communication from ethology in a range of species, including primates (Haraway, 2013c; Sievers & Gruber, 2016), honeybees (Grist, 2004) and songbirds (Pepperberg, 2008, 2014) in ways that undermine the view of humans as uniquely capable of complex expression. Farmed animals including pigs, chickens, sheep and cows also exhibit complex thinking, intricate language, memory, intention and problem solving abilities (Hatkoff, 2009). Animal activists of farmed animals, pattrice jones (2010) and Karen Davis (2013) study

experiential relatings of cohabiting with chickens in their respective animal sanctuaries enabling insights of chicken animality to come to the fore, with unique realisations of *Gallus domesticus* as teachers, with intelligence and animated lives. jones was one of the first to rehabilitate cockfighting roosters once she let go of her assumptions and learned to listen, sooth and socialise the abused birds. "I could not have conceptualised that process without first being taught about roosters by roosters" (jones, 2014, p. 104). jones (2015) is emphatic that these posthuman entanglements are more than thinking about ecologies as interconnected relationships, but "entangled empathy …that brings us back into a felt awareness of the web of relationships in which we live" (p.103).

Ecofeminist ontologies and 'ethics of care' (Adams & Gruen, 2014; Donovan, 1990; Gruen, 2015; Guaard, 2010; jones, 2013b; Plumwood, 2000; Shiva, 2014) similarly require this ethical listening to environmental voices and a commitment to the level of attunement required in learning a new language. Although animal species do not speak in human language they nevertheless express themselves in ways that we can understand. "They run away, they hide, they cry out in pain, they shiver in fear. These are communicative signs that are unmistakable" (Donovan, 2015, p. 120). These examples of animal consciousness, sentience, relatedness and being alive to the world are beyond the scope of broader discussion in this chapter, however, they continue to travel with Inquiry Process as territory animal species become known. These studies compromise the long-held assumption that only humans possess self-awareness and the ability to communicate. For animals this often means fitting into human worlds where animality is invisible and unknown, for "humans are like animals, but animals are not like animals" (Morton, 2010, p. 41).

Capra (2002) specifies the work of Deborah and Roger Fouts, who study communication extensively with generations of chimpanzees. Washoe, the first chimpanzee and animal, other than human to learn the gesturing of sign language, that Washoe also taught to her son. Language may have originated in gesture" (Capra, 2002, p. 58) before the development of tools and technology and the evolution of vocal cords. Human infants use gestures prior to spoken language with hand, body and facial movements and we "use gestures when human language does not serve us and gesture still functions as every

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cultures second language" (Capra, 2002, p. 60). Thinking with gestures offers alternative communication practices that transcend the spoken word, placing the attention on bodies, materials and movement. Is it possible to connect with the strangeness of animality through embodied movement of thought and gesture? How can humans and animals turn inward and attend to cross species emotions and communications? For humans this means knowing animals beyond the biological drivers, instincts and existence that is played out in wildlife documentaries where animal lives become narrowed by representations of hunting, predation, reproducing or surviving the harsh conditions that nature throws at them. This proposes a recalibration of the 'mindless instinct' attributed to most, if not all animals based on a zoo-ontology of reaction, rather than conscious intention as embodied animation of thought and gesture that requires attunement to lifeworlds. Ingold (2011a) describes this ontological shift as seeing animals as 'being alive to the world', challenging Heidegger's ontology of 'being poor in the world'.

Gesturing is explored as an example of a semiotic boundary crossing practice to exploring animals as being alive to the world. These gestures incite questions for further provocation and interpretation of posthuman boundary crossing that is difficult to conceptualise and enact in this experimental type of research. Three gestures assemble in the territory that disrupt the inarticulacy of human-animal relatings with words. The intensity of gestures was sensed firstly through human hand signals that help to act the 'things' that cannot be spoken. The first is a hand gesture from a parent and the second was adopted to express animal-child relations at a conference as hands formed the gesture as a tool of signifying to the audience, what the words alone could not convey. The final gesture is from a dog who taught her human companion how to communicate with response-ability.

The hum(an)imal palpet gesture

Kate the ELC teacher chose the four focus children in the study on the basis of those children she perceived had a 'connection' with animals. In the early stages Inquiry Process imagined this would be a child who spends a lot of time with Animals, is very confident and comfortable with them, perhaps with shared respectful intra-communication and these relatings would be with a range of species, not only mammals. Rory the three-year-old brother of Holly from the Dog family comes closest to fulfilling this idyllic fantasy, through his relationship with Butch the bulldog. When Butch was a

puppy he could choose to sleep anywhere in the house and he chose Rory. They sleep together in his red racing car bed. Not with Tillie the dog, not with Holly the older sister and not with Emily and Ross.

Figure 16: Photograph from parent depicting the connection between Rory and Butch

When I ask Emily why this happened she offers the following explanation.

> *"I guess it's just the bond between them, (dog and child) like they are just yin and yang, like they've got similar characters. Both are stubborn playful and know what they want. It's like one of them knows what the other one's thinking, and the other one, like – which is, I guess the way it should be for an animal and their human. He's very, very perceptive when Rory, if he gets injured or anything. I don't know, I don't really have the words to explain - I don't know, companionship"* Emily -parent.

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As Emily speaks, she forms a yin-yang gesture with two hands cupped in front of her body as she continually turns each hand from side to side, alternating the cupping posture from top to bottom and side to side. This gesture assembles for Emily, where dog is child and child is dog. There is something beguiling about this joyful sight of Butch and Rory playing during a home visit as they raucously chase each other. Rory and Butch are chasing each other around a central pillar in the house, round-and-around, round-and-around, round-and-around until the sight, sound and form of dog/child blur evoking cartoon images from long ago.

The hum(an)imal palpet gesture

They are connected

For Emily she sees dog and child as bound through personalities.

They chose each other

In this palpet gesture the boundary is blurred through similar interests and actings.

Signifier of the unknown

The inability to communicate what this connection could be is not unique to this study .
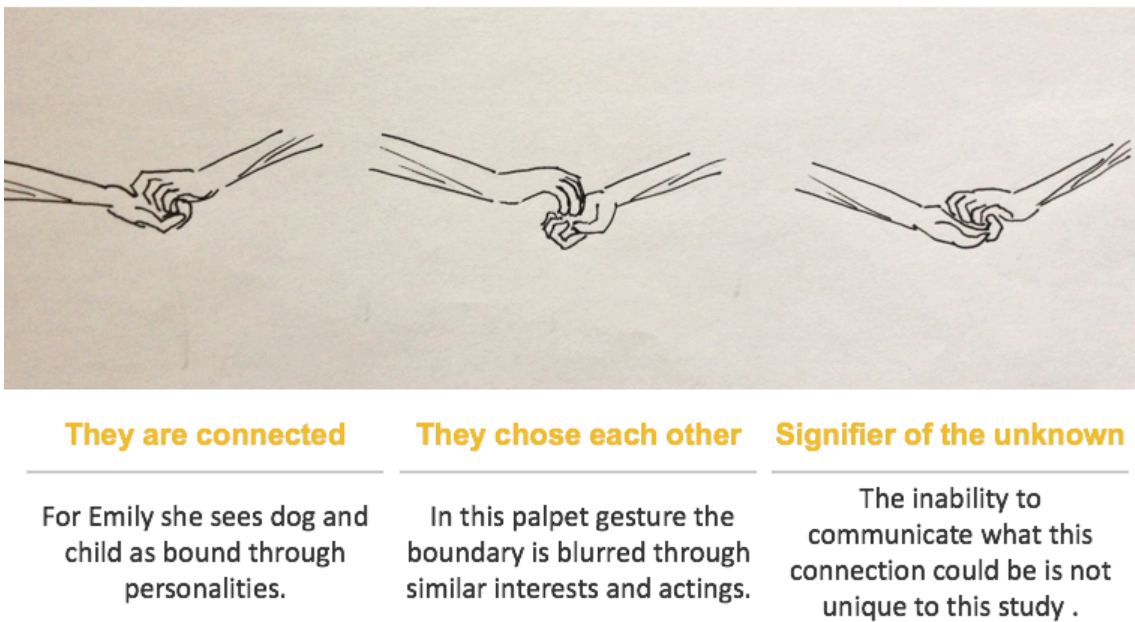
Figure 17: Diagram of the hum(an)imal palpet gesture

Emily points out how Butch is able to outsmart Rory as he works out that if he keeps still, Rory will eventually run into him. These games and energy of the young form part of this hum(an)imal bonding through the repetition of running, squealing, touching that brings them joy. Emily acknowledges similar traits of stubbornness in what she names as "their telepathic connection. Researcher field notes and Emily's verbal attempt to interpret what this relating could be do not seem to capture this palpet encounter. Her gesture however offers more than the spoken word. The thinking-moving body is in a field of relating, moreover, this use of gestures seems to capture more than words alone,

where the hum(an)imal petpal gesture is able to signify the unspeakable/unknowable and is capable of inventing worlds in the same way as talk and text?

The humming pet/product gesture

The narratives and data from the study grapple with the unspeakable/unknowable. The question of the Animal and the Animal condition challenges that they are not separated from humans in a singular category of 'Animal', but we are firmly knotted with them in sticky, ethical encounters where choices are made about whether we kill them, conserve them, breed them, are entertained by them, eat them or love them. The loving and killing of animals is pervasive from birth in Western minority childhoods, with extreme and intensely oppositional axiology where the hyper-romanticism of loving animals operates concurrently with the hypo-consumptionism of killing animals. Inquiry Process started to use another gesture to conceptualise this idea each time it was discussed. This action performs the opposing ideas that are in constant motion and with constant affect as they are difficult to describe. This is the humming pet/product gesture where the boundaries are in place. Two hands are held vertically in front of the body, circling them near each other in the same direction but with different rotation timings. The hands never touch as this space between hands creates a barrier for deception. The hum is sensed in here but not seen, and it is more nuanced than a dichotomy. The research inquiry sits in the hum of the in-between, questioning how teachers, parents and other children maintain the deception. On the one hand, (left) there is humanist ontology where curiosity and wonder couple children and animals in the territory as ideal partners of nature natural. This hand is represented in a myriad of ways: through direct experience with pets in homes, in education where children watch, study, care for, touch, train and chase chickens and also through imagery and figurative representations of animals enveloping children from birth in bedrooms, clothing, toys, educational resources, movies and games. Animals on this hand are treasured, elevated, sacred, protected, objectified and loved. There are rituals here for animal death with reflections, burials and sadness documented in ELC journals. On the other hand, (right) there is extreme indifference to the silenced treatment of animals as pest, product and pack. Animals on this hand are objects that are 'grown' for consumption, for food, for profit, as entertainment, controlled if the pack gets too big or gets too close. Classroom animals can become objects of study that are contained and

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disposed as inevitable casualties of education practices and homes when they become 'difficult'. There are no territory rituals here for animal death, or documents of learning placed on the kindergarten walls about this loving and killing trope for most, but not all children this is masked and unknown. *"We don't name these animals; we don't want the children to get attached to them" (Joe –Teacher).*

The humming pet/product gesture

The plane of loving deception	The plane of indifferent consumption	The planes of difference
On the one hand (left) there is a romanticised, humanist perspective.	On the other hand (right) there is extreme indifference to the silenced treatment of animals as pest and product.	The two planes of difference work with different frequencies towards the same aim to socialise the child.

Figure 18: Diagram of the humming pet/product gesture

The planes of difference

Inquiry Process has developed the concept of the planes of difference to show how they move with different frequencies towards the same aim – the socialisation of the child. As children are forming connections with some animals in early childhood they are also learning the simultaneous acts of loving and consuming animals and this has become a compelling aspect of the inquiry, that has shifted from the dominant idea of the loving child-animal bond, so prevalent in Western consciousness. Deleuze and Guattari's (1987/2004) conceptual work is guided by the idea that the real and the virtual are always coexisting, always paired by superimposable parts of a moving process, two parts that seamlessly interchange with one another, like mirrors that reflect the world and yet appear unable to see each other. The hands do not touch. The left hand is named as the *plane of*

loving deception and the right hand the *plane of indifferent consumption*. The space in-between the hands creates a buffer zone of proximity. These planes do not cross paths or connect, and this is important as the crossings of the palms are concealed from each other. The hands don't join as continuous, unspoken energies vibrating through these planes with differing frequencies, seamlessly working together in unison and yet separately. It is here in this conceptualising of the buffer zone where teachers and families deceive young children with normalising violence that props up the animal industrial machine. What's humming between the gap of these two hands is the liminal space between loving and consuming? The liminal is a threshold between separation and assimilation – a disjuncture that is expressed through Kate in a familiar account of the rite of passage of meeting your meat that provokes affect. *"I just remember making that connection and it turning me off. I can remember the taste and where I was, and the conversation and it must have shifted something in me." Kate –Teacher.*

The hum(an)imal is sensed in this in-between, prompting additional lines of flight.

- Can inter-species connections be enhanced through thinking-with and being-with species, rather than only learning about species?
- What possibilities are created when inter-species connections focus on life, death and shared ecologies?
- What role do educators play in perpetuating and propping up the hands of deception?
- What is happening in the gaps of shaping and co-shaping and how do we find a way in?

Anna Tsing (2005) developed the concept of friction as a way to conceptualise the social makings of the world. Attending to events where friction is present brings to life the intersections of differing movement, actions and effect, which reveal political, historical and cultural tensions "and the ways that contact across difference can produce new agendas". These are moments that bring friction, as Tsing suggests, where the 'awkward, unequal, unstable, and creative qualities of interconnection across difference' are made present (Tsing, 2005, p.4). In the humming pet/product gesture the force of friction is too abrasive and implicit, for the hands must not touch as these social constructions require

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separation. These planes of difference do not require friction as these striated states rely on smooth gentle persuasion and deceit. An unseen and often unspoken immanent vitality present in this space. In a similar way to how Tsing conceptualises friction, Althusser (2008) contends that contradiction fuels oppressive ideology that becomes part of lived, normalised relations. This describes the conflict expressed by participants, and how it is possible that they do not know how they oppress animals, because they are not aware of the ways in which they might participate in such oppression.

For Cole and Stewart (2014) this oppression depicts the mutual construction of children and animals "through discourse and practice in ways which have entrenched exploitative, anthroparchal relations" (p. 57). Similarly, to the humming pet/product gesture, they use the metaphor of the 'death and delight combo'. They reference contradictory entanglements with food and media food industries such as when children watch a popular animated film like 'Chicken Run' embedded with an animal rights storyline that subverts the mass production of chickens for meat and within an instant of leaving the cinema sit down to eat a fast-food branded promotional tie-in 'Chicken Run' Happy meal. This act of consumption with the loving (toy) and the consuming (chicken flesh) is seamless "without conceptually connecting the two" (Stewart & Cole, 2009b, p. 473). They ask a spirited question affirming Inquiry Process observations and critique "How do we teach young humans so swiftly and so robustly that these contradictory relationships are 'normal' and unproblematic" (Cole & Stewart, 2014, p. 4).

The referential petpal gesture

Whilst these human hand gestures appear early in the territory where children and animals dwell, an animal gesture did not materialise. The philosopher Vinciane Despret (2015) challenges science that represents animal species as always lacking. It is in this relational space where you question "who am I, how does my gaze work so that you appear to me as you are?" at the same time as "who are you so that I see you thus" (p.38). Despret also believes that shifting assumptions and ideas that position humans as superior, animates Animals, opening up a renewed world of capacities. This intra-action with animal species enables an equilibrate turn towards new worlds of communication and connection. From anthropomorphism to metamorphism, animated not dominated.

Inquiry Process was mindful of decentering the human and in this sense not forcing communication driven by human desire. When a gesture became visible it was there the whole time – waiting to be noticed with a dog known to Inquiry Process. Referential communication occurs when animal species use gestures to direct the attention of another animal to achieve a goal. For example, assisted therapy dogs learn hand signals to bring an object to a human and complete highly complex tasks. Dogs can also train a human by pointing or looking at an object, thereby signifying to the human what they want. Cleo a Schnoodle canine companion uses this approach in a highly effective way. She uses her whole body to communicate with her human companion and it almost always starts with her intense gaze. If there is no response to this attention she whines or makes a sharp, quick "gruuuf" sound. She then alternates her gaze between staring at the human face and flicking her eyes to what she desires, such as a ball lodged under the sofa, or a plate she thinks she may be able to lick. This gaze is only with a slight turn of her eye as she does not avert the human attention, so it is subtle and fast. If that does not work, her barking and whining becomes louder and more persistent and she jerks her head up and down in an unfamiliar way and moves backward like a reversing truck. She might also gently paw at her companions' arm with if there is no response. At this point she uses a more obvert signalling strategy where she uses her snout in a 'pointing' gesture aimed at the object of desire. Cleo's problem-solving abilities demonstrate how she has also trained her human to attend to her as gaining attention is more likely to achieve her reward.

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The referential petpal gesture

The human-animal gaze	**The referential gaze**	**The referential body**
Starts with Cleo's intense gaze to get my attention.	She then alternates her gaze between staring at me and flicking her eyes to what she desires.	She uses a more obvert signalling strategy where she uses her snout in a 'pointing' gesture aimed at the object of desire.

Figure 19: Diagram of the referential petpal gesture

These strategies would not be as effective if her human was not paying attention and did not respond to her as this intra-action takes place through reciprocity, in the sense that the more she is responded to, the more she communicates. Referential communication in this way expands human-animal relating leaving questions about other species who may use these gestures. Do animal species who use this give up or use less intentional communication if they are not responded to in this way? Dogs and humans both communicate, but because we are very different animals with different umwelt, we often misread each other's nonverbal cues. The nonverbal greeting signals for a human, for example, can be threatening signals to a dog. With the rise of human-animal studies, and ethology greater attention is being paid to inter-species communication that indicates how animal species communicate in multitudes of ways, including domesticated dogs and cats who use heterospecific referential communication. Many animal species use referential gestures including studies with primates (Sievers & Gruber, 2016), cats, dogs and comparative studies with infants (Gaunet & El Massioui, 2014; Gaunet & L. Deputte, 2011; Merola, Lazzaroni, Marshall-Pescin.S, & Prato-Previde, 2015). Horses are also capable of conscious problem solving that mirrors the described observations of Cleo. Malavesi and Huber (2016) show that horses use referential gestures to employ the

attention of a human to obtain an unreachable food resource. The horses in the study use both indicative (pointing) and non-indicative (nods and shakes) head gestures and they switch from a visual to a tactile signal and demonstrated perseverance in their communication.

Chapter summary

This chapter brings together the speaking and acting narrative and concept to question how language, discourse, semiotics and gestures speak to and with the assembled world. The purpose of the chapter is to discover how language and semiotics moves in the territory where children and animals dwell and this aligns with the research sub-question that seeks to understand how early childhood education and families influence the becomings of animal-human relations in early childhood? The research assemblage started to gather speed in this chapter as questions and insights flooded through the territory forming an energising current in a stream of semiotic becomings. The narrative illuminates how human-animal differential boundaries are made, stabilised and destabilised as pet becomes pest. In other words, the speaking and acting territory became deterritorialised and reterritorialised with interspecies crossing points. This chapter also exposes how desires, intentions and values come already packaged for researcher and participant travellers alike, through speciesist discourse. The concept of semiotics and gestures was "directly plugged into the molecular levels" (Deleuze & Guattari, 1987/2004, p. 342) of human-animal boundaries, memory and narratives where ideas around entrapment, containment, freedom and liberty formed an assemblage of ideas and possibilities for the journey ahead.

Acknowledging that perspectives are multiple is a significant part of this inquiry. Worldings are made and remade through these differentiations of particular signs and symbols, like gestures. Three gestures appear in this chapter assemblage: from a parent trying to articulate the family dog and child relationship, grappling with the complex dichotomy of children concurrently learning to love and consume animals and finally from a dog who has learned to communicate through referential gestures, teaching her human companion with cross-species intra-actions. This assemblage of minor gestures signifies the conditions and coordinates for semiotic understandings in this chapter that

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could have followed many pathways, none greater than the other. Posthumanist practices step away from control to embrace differential patterns and randomness (Hayles, 1999). Becoming semiotic quells researcher desires for action in favour of waiting for uncertain conduits to appear like the dog Cleo who was there waiting to be integrated within the study, mapped by complexity-in-motion and marked by contingency and unpredictability. The collective polyvocality and locality of the territory where children and animals dwell enable this assemblage to surface where it becomes possible to metaphysically thread the boundaries of speciesism, language and multispecies communication, back into the circular semiotic surfacing's described in this chapter. Among other things, stressing metaphysical and "molecular" proximity with animal and human, combined with "molar" observations of the everyday, gives credence to imagining ourselves out of the symbolic and discursive representations that are constructed in early childhood. Becoming less bound to the dichotomy that has characterised Western attitudes and behaviours towards Animals brings fresh air to the territory, circulating in new ways, with desires to attend closely and compassionately with what Animals want to say and do.

Crossing territorial interspecies boundaries, elevates animal species as knowledgeable communicators and agents of knowledge that participate in learning (Lloro-Bidart, 2017). Moving towards deeper terrains of interpretation, these speaking and actings are not left behind for they are enmeshed through and with the research questions and travel as newly arrived companions looking forward to exploring connective forces in the next chapter and what these might bring to the study. We are back in Doctor Doolittle territory with renewed desires to 'speak-with-the-animals', surveying how the unknowable and unsayable could become known. The signature song from the film, 'If I could talk to the animals' becomes part of the (re)makings of this chapter that shifts from the anthropocentric desires of speaking by talking-at, towards collective molecular imaginaries.

> If we could roam with the animals, share a home with the animals
> Grunt and squeak and squawk with the animals
> And they could talk to me.

> Would they want to communicate with me?

> Are they already communicating with me?

Chapter eight: Connecting the territory where children and animals dwell

Introducing a web of connections

> *Relationship among all things appears to be complex and reciprocal —*
> *always at least two-way, back-and-forth. It seems that nothing is single in*
> *this universe, and nothing goes one way. In this view, we humans appear*
> *as particularly lively, intense, aware nodes of relation in an infinite*
> *network of connections, simple or complicated, direct or hidden, strong*
> *or delicate, temporary or very long-lasting. A web of connections, infinite*
> *but locally fragile, with and among everything — all beings — including*
> *what we generally class as things, objects. (Le Guin, 2016, p. viii)*

Connecting forces reverberate through the situated politics of relations in this chapter with the desires, intentions and values that are carried in speciesed and speciesist bodies. Disjunctions appear in the territory where children and Animals dwell that do not signal disconnection, as disjunctures complexify these relations beyond unexamined expectations of finding meaning, joy and reciprocity. As the fog lifts, the semiotic signs of the previous two chapters steer Inquiry Process towards more signs, signaling another temporary destination. Connections and disjunctions are always travelling within relational lines, steering the course of Inquiry Process where "the lines that divide are as mysterious as the lines that connect" (Krien, 2012, p. 8). Kim (2015) calls for a critical 'multi-optic' framework for interpreting the complex ethical and political relational lines of humans and animal species, acknowledging that no such framework is yet to emerge. Close attention to the contexts and histories of institutions like education and families continue to uncover conscious and unconscious tactics of speciesism.

Interpretations and discussions continue to unfold and become folded as Inquiry Process seeks to understand how early childhood education and families influence the becomings of human-animal relations in early childhood with four connecting nodes. Researcher becomings open the chapter as ontoepistemological responses to an event provoke creaturely becomings that invite curiosity, multi-sensory awakenings and an investment in worldmaking: "to get at how worlds are made and unmade, in order to participate in the processes, in order to foster some forms of life and not others" (Haraway, 1994, p.

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59). This is followed by connective forces that appear in the territory, exploring what they do within the intensities of the data assemblage. The connecting narrative transports past memories of participants, to present day field studies as humanist teachings indicate the contradictory nature of child/animal relations. These ideas conclude in the final section, as the concept of dissection is interpreted with the polymorphous, corporeality of precarious life (Butler, 2012).

Becoming creaturely

> *Owning up to being animal, a creature of earth. Tuning our animal senses to the sensible terrain: blending our skin with the rain-ripples surface of rivers, mingling our ears with the thunder and the thrumming of frogs, and our eyes with the molten sky. Feeling the polyrhythmic pulse of this place – this huge windswept body of water and stone. This vexed being in whose flesh we're entangled, Becoming earth. Becoming animal. Becoming, in this manner fully human. (Abram, 2010, p. 3)*

Abram's (2010) poetic illustration of the animate world speaks of embodied creaturely becomings that shift in the recognition that becoming animal, becoming Earthly, is a concept that fulfils the human condition. Creatures fill the spaces of field studies, both literally and linguistically as children and teachers at the ELC use the term 'creature' when describing a range of animal species from koalas, ants and fish. Anat Pick (2011) suggests the term creature is used with reverence when the person or animal is perceived with ethereal fascination or beauty and to belittle as a figure of abjection when the creature is monstrous or alien. I wonder about this term creature and whilst it was commonly used by children and teachers for animal species, it was never used for human-animals. During play sessions with plastic figurines of animal species, including a human man and women, the four focus children categorised these figures in species and habitat groups such as land and sea creatures, and all children removed the human figures from other animal figures, repeatedly stating that they were not animals.

Shapeshifting emerges in chapter five attending to the changing states of my bodymind. Becomings embrace a style of noticing that conceptualises the writing through the events, relations, movements, and dynamics of power that I attune with. Becoming creaturely extends these becomings from a human body to the more-than-human Earth dwellers - animal, plant, object collective, in ways that recognise that all creatures including the material milieu are concurrently in the world and also situated in their own multi-sensory

realms. With this in mind, and this is an important point, the notion of anthropocentric control becomes decentred as the creaturely (animal, plant, machine, object) "are utterly determinate in their referential function" (Harman, 2001 cited in Weaver, 2015, p. 185) of what they want and desire. As Latimer (2013) expresses, "we body forth our relations and substantiate our identities' when we actively place our bodies in 'brain–body–world entanglements' with others" (p.78). Although creaturely embodiment for me comes later, I do not subscribe to a hierarchical order where mind or consciousness appears first, and the body follows. The conventional notion that the body is an inert or empty vessel, with the absence of mind is not part of my creaturely becomings. A creatural path aligns bodies in encounters with the creaturely. An encounter with a cat named Myfanwy, enlivens my creaturely animal organism as senses become cultivated by events that show how flesh is always in an interplay with something larger where "creaturely life are woven into the biological, ecological and social dynamics that shape life on Earth" (Ohrem, 2017, p. 57).

Myfanwy (Myf) is not my cat. We cohabit while the person she lives with is away for two years. It is a long time since I have lived with a feline friend and we have taken a year to accede to each other as creaturely companions. I do not know her in the same way as I know the dog(s) in my life, but I care for her with compassion. I do not want her to hunt the creatures in my garden, even though I know this is part of her 'catness' and therefore keep her inside at night and when not home. Although she is eleven and not in good health, the speed, tenacity and skill of this catness is a sign of her creaturely being, that I discover one evening as I come across her devouring an entire rat. A shrill bird sound fractures the air. As I venture outside Myf is on the grass with a large black bird in her mouth that at first glance looks like an Indian Mynah bird, whom is despised by many as a pest, but this bird is actually a blackbird. I acknowledge how I too have privileged the blackbird who offers the sweetest songs. The blackbird who hovers nearby as a gardening companion, waiting for the gift of unsettled insects from the soil. I recognise my speciesist hypocrisy in this instant; as Myf is spitting black feathers from her mouth. There is a flutter of life in the blackbird's head, before her eyes quickly lose focus. Myf picks up the blackbird again moving the body to a different spot and laying

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her down to pick at the shimmering feathers, that she once more spits out. Is she going to eat the bird, like she did with the rat?

I am mindful now of how enlivened she has become as her body ripples with fast, agile movements that depict what I can only describe as a joyful state of being. She flits around the dead bird, laying on top of the body sensing different textures and smells, repeatedly stroking her head up and down the blackbird's torso with a type of gleeful animation, that is rarely evident in her behaviour. This feline performance is both disconcerting and intriguing as the creaturely embodiment of bird, cat and human are momentarily in relation through an ontology of the body. Her responses are new to me, they are powerful and agentic. The stage is hers in this moment of her creaturely dance, and she owns it. This is a private realm of existence that I have walked into and I am frozen in this act of witnessing. The bird and I succumb to vulnerability, slipping backstage, becoming non-responsive in life and actions. As Oliver (2010) suggests "all creatures on earth are blessed and cursed with the ability to respond" (p.270) as bodies that constitute conditions of possibility and mutual responsivity. Who am I in this interplay and exchange, that is performed back and forth, between this blackbirds' small body and the creaturely flesh we share. I am torn between picking up the body and letting the cat do her thing. Myf makes the choice for me as she ventures inside, no longer interested in relishing the kill. I pick the blackbird up, noticing that flies have already joined the creaturely act.

This encounter with human, bird, cat, and fly, resonates with Anat Pick's (2011) concept of creaturely ethics that recognises the materiality and vulnerability of all living beings, where material obligations and shared bodily vulnerabilities characterise the creaturely commonality and "point of encounter between human and animal" p.193). A creaturely ethics, which acknowledges suffering does not respond to questions of legal rights but is interested in the worldly obligation of what passes between individuals, situations and societies to try and protect vulnerable beings from violent exposure and exploitation. By navigating the complexities of shared creaturely vulnerability this event offers a minor glimpse of embodied human and animal subjectivity in the process of becoming. Moving with creatural paths I sense embodied encounters with others, human and more-than-human, hoping to travel in creature-centric ways that experiment with shared

vulnerability. These encounters enable hum(an)imal reconfigurations to help us concede we are, and always have been, connected and reliant on shared environments.

I try to think with Myf in this situated "embodied communication" (Despret, 2013b, p. 71) that stretches my ideas of what it is to be a cat, bird, human or fly. There is something so sensorial about her actions that I connect with how that in order to 'make sense' of the world, I am cognitively assembling these sensing practices of knowledge production with dichotomies between subject, between individual and category, and between body and mind. I try to think with multisensorial ways to dismantle the human-animal boundary and connect within a field of relations, however these skills of perception and action, lean towards linguistic joinings of the human-centred desire to produce.

Umwelt expands with creaturely ethics to not only encapsulate the lifeworld of species in their unique bubbles of difference, but to consider how the effects of creaturely relations create a ripple effect in these contact points that reconfigures each creature and their habitats with the agentic power of competing forces. Dwelling with a cat has opened us both to creaturely ways, and at this affective point of contact with another, there is potential for things to be otherwise. These unexpected connections can make new things come into being in what Tsing and Pollman (2005) refer to as a coalescence where "historical force that arises from a transformative coming together of disparate groups, institutions, or things" (p110), leave all transformed. Sensing practices move beyond the processes of the human mind in ways that are posthuman, but not fully known in relation to the subjects, milieus and environments. The birds in my garden are also forever changed to the causal reaction of the presence of a cat in their midst. I have a renewed admiration for the skill and athleticism of an ageing feline and a desire to protect the birds. The subjects both human and other(wise) are forever changed and always under construction, as becomings push us out of ourselves, on the move, becoming other.

Creaturely knowing me, knowing you

Becoming creaturely embraces notions of embodiment as both shared and different human and animal worlds, where we exist in relationship to and with other with these shared/different genealogies, geographies, sensing practices and trajectories and affiliations sometimes referred to as kinship. Listening for the voices and animality of

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other animal species with the quiet, slow, everyday approach of ethnographic methods (Law, 2004) can support knowing the Other in unique, unexplored ways that animates relationality. Ingold (2006) refers to this animation as "being-alive-to-the world, characterised by a heightened sensitivity and responsiveness, in perception and action" (p.10). Jonathon Saffron Foer (2012) emphasises the complexity of this responsiveness as the extreme experiences of birth, death, hunger, joy and pleasure is where the language and state of animality is prevalent:

> *...how strange are our understandings of animals - and our misunderstandings of ourselves. We learn how our thinking about humans through animals both unites and separates the different cultures of our planet. We are intrigued and revolted, surprised and infuriated and above all we are given an opportunity to think about what we, perhaps wrongly, call our humanity. (p.x)*

In other words, this kinship or orientation towards another is difficult to cultivate and Inquiry Process takes some time here to think this through as a recognition of interspecies worlding is a crucial aspect of conceptualising hum(an)imality. The discussion of biosemiotics and ethology research in chapter seven attempts to cross human-animal boundaries and becoming creaturely in this way "renders capable" (Despret, 2008) all species to communication networks and also being-alive-to-the-multiverse. Haraway (2008) entreats us to become implicated in the times in which we live, and to meet the ethical challenges of cross-species relations. She refers to this as learning to inherit and respond where kinship helps to "make a mess out of making the categories of kin and kind" (Haraway, 2008, p. 19) and like any relationship, kinship evokes diverse feelings and responses including mutual respect, understanding, love, awe, joy, empathy, belonging, fascination, comfort, happiness and also discomfort, pain, sadness, guilt, longing, expectation.

Paying particular attention to animality, sociality and the sensorial connections of how human and animal species constitute each other in this chapter helps to blur the illusion of separateness and otherness. This is particularly helpful in terms of this inquiry where animals in early childhood education have been seen to be predominantly positioned as being of use for humans. What possibilities are created when multispecies relations focus on entangled living within shared ecologies? Inquiry Process takes some time here to

think with 'connecting forces' wondering what they can do and how they are integrated in worldviews.

Connecting coalescences

Inquiry Process has already discussed how the participants in this study and other studies have found it difficult to articulate the connections of animal and human relations. Aesthetic discourse is helpful here as Highmore (2010) acknowledges how these difficulties of speaking about creaturely life is how 'aesthetics' becomes relegated to art theory and engagement with nature, trapped in the humanist ideals of beauty and moral transformation. "How does a form of inquiry that was once aimed at the entire creaturely world end up as a specialist discourse about fine art" (Highmore, 2010, p. 121)? The language of digital technology also helps to make the invisible connections visible, through the familiar imagery and actions of logging on, plugging-in, algorithms, big data, cloud storage, networks, nodes, augmentation, connecting with, connectivity and connectivism. This inquiry is making attempts to register these subtle differences, to see where sensorial experience, perception and affect congregate, to attune with the unfamiliar aesthetics of the togetherness of things and make entanglements between them knowable. Between species, between ideas, between sensations, between disciplines, across time and place, between what is known and the potential of the unknown.

Interconnectedness moves through relational lines of inquiry disrupting techno/nature/culture binaries, where meeting the multifarious through difference and similarity, is open to the intra-relatedness of collective worldliness. Heidegger (1971) suggests attending to the relations of earthly 'things' in this way is part of world making and world becoming, as it brings the world closer and opens new ways of being-in-the-world, of being in time and history. Worlding he suggests is an ongoing process of the thinging world, and worlding and thinging are inextricably intertwined for without things that thing, there is no worlding. "Thinging is the nearing of the world" (p.179). In this way connections can be reframed as worlding as connecting encompasses the dynamic interplay of network associations, with mind and matter, in which someone or something has a multitude of possibilities to connect, find places to dwell and become attuned with vibrational responses that may escape language or representation. A Whiteheadian

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panpsychism perspective influences process philosophers, including Deleuze and Guattari that blurs mind and matter as "a continuous stream of occurrence" (Whitehead, 1920/2007, p. 172). Sheldrake's (2007, 2011b) morphic fields also circulate through connective forces between Earth roamers as a networked consciousness in a complex dynamic field resonating with many other subfields of activity, all of which relate sympoietically. Ingold refers to lines of connection contrasting the between of intermediacy of relating to the in-between of life becomings that always begins in the middle. The in-between is about constant movement that spreads arterially like rhizomes or capillaries. "This is an immanent life lived midstream, in the in-between, where there are no subjects, no objects, no subject– object hybrids; only verbs" (Ingold, 2015, p. 152).

Connection is a key concept in Indigenous ontologies including Australian Aboriginal and Torres Strait Islander peoples spiritual and conceptual practice of connecting to their homeland of 'Country'. Sveiby and Skuthorpe (2006) suggest that the way Country is perceived in the West is often misunderstood and naïve because the Aboriginal worldview is complex and in opposition to vertical, Western values of competition, growth and industrialisation. Martin (2008) refers to connection in terms of 'relatedness' in the Quandamoopah ontology from South East Queensland and because each of the seven entities of this Country "People, Skies, Land, Waterways, Animals, Plants and Climate" (p.66) exist in horizontal relatedness, there is less hierarchy in the system. To the Nhunggabarra people from North Western, New South Wales this meant, "keeping everybody and everything alive, including animals vegetation, every feature of the earth, knowledge even the ancestors in the Warrambul (the Milky Way)" (Sveiby & Skuthorpe, 2006, p. 8). Cultural knowledge between ancestral lands, sky and bodies of water embody a highly complex, relational worldview, governed through traditional laws, ways of thinking, being and knowing (Martin, 2008). Deborah Bird Rose captures some of these vitalist complexities "country is a living entity with a yesterday, today and tomorrow, with a consciousness, and a will toward life (Rose, 1996, p. 7).

Fudge (2002, 2008) defines the connections of people and animal species, indicating that these complex relations are central to our evolutionary and ecological construction of ourselves. "Ecologists define connectivities as flows of energy or information across borders of difference" (Rose, 2017, p. 499). Western responses to connecting with nature include the biophillia hypothesis meaning love or philia of living life forms, developed

by the German social psychologist, Fromm in 1965 (Flannery, 2010). Humans are central to this love of life, not only from an evolutionary response to survival, but also defined through three humanist orientations: "biophillia, love for humanity and nature, and independence and freedom" p.108). The biophilia hypothesis is more recently attributed to the biologist, Wilson (1984) who defines biophilia as the "urge to affiliate with other forms of life" (p.85). He later specified the role of emotion and suggested that "when we encounter living things, we experience emotions ranging from attraction to aversion from awe to indifference, and from peacefulness to fear-driven anxiety" (Verbeek & de Waal, 2002, p. 1). Biophilia is described as evolutionary drives that echo across distant generations and can be felt and seen by the often-unconscious affinity humans feel towards water, green spaces and the need to cohabit with animals both human and more-than-human. From a relational ontology of coevolution, cooperation, connectivity or communication is there permeability in these notions where other species experience this phenomenon. Does a cow hanker for an ocean view? Are bee colonies working for the greater good? Or is a dog's excitement at witnessing a grassy field from a car window motivated by more than the promise of a desire for a walk? Orr (1994) recounts examples of animals experiencing awe and wonder acknowledging "it would be the worst kind of anthropocentrism to dismiss such accounts in the belief that the capacity for biophilia and awe is a human monopoly" (p. 195).

In this section Inquiry Process has been trying to show processes of connection through a range of perspectives. This expresses a desire to explore the ethereal concept and act of connecting and how this is known through digital language, aesthetics, being worldly, biophilia, and vibrational forces such as the metaphysical animism from religious and Indigenous cultures, including Australia's First Nation people. Inquiry Process adopts the term connections in the title of this thesis and the focus of this chapter, always in partnership with disjunctions, where human and more-than-human forces bring world-making together and apart. The togetherness of the virtual and actual world is never static as separations, disconnections and dissections are present and the interpretations in this chapter and further chapters are constantly moving in and out of parts and wholes, trying to uncover and recover the animal. These connections and disjunctions are once more eloquently described by Rose (2008):

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The result is not that everything is connected to everything else: quite the contrary, the living world is made up of differentiation, pattern and connection. Everything is connected to some things and not to others, but everything is connected, and nothing is left stranded. (p. 56)

The shared memories of past and present encounters from field studies become the interpretive narrative for this chapter that spawns interpretive discussion of separation, connection, dissection and marginalisation that were present in the data discourse. Situating writing in this way is used less to "describe, orient, defend" (Manning, 2015, p. 66) and more to unsettle disciplinary plateaus that study childhood, environments and animals. The narrative firstly unfolds once more and is then interpreted with the concept of dissection.

Connecting narrative

Connecting narrative: The lure of segmentation: Bees, beetles and puppy dog tails

Bees have become an emblem for the environmental movement as their disappearance is monitored with regular speculations about hive colony collapse that become intricately related with human-bee entanglements and the hyperbole of collapsing civilisations. The sentience of bees is rarely spoken about as they inhabit tiny sensorial worlds, in stark contrast to the scale of the ecological work their busy lives fulfil. Kate relays how she would observe bees gathering pollen from the pink clover on the grass, and then capture them in an upturned glass to watch them die on the lawn in their child-made prisons. "I did this for hours and hours, watching them, and it wasn't a cruelness it was a fascinating curiosity. I would listen to the sounds inside the glass and then dissect it. What will the sound be like if I pull the wings off, will it - it's, it's, it is an interesting thing isn't it?"

Early childhood is a time of discovering small creatures, the insects, worms, and snails classified as arthropods and invertebrates. They are everywhere, and can be found even in the most artificial, plasticised play spaces as pollinators, composters and objects of study. Ben and Angus are sitting on the grass at the ELC squashing a beetle into the ground, who despite trying to get away, becomes ground into the earth as her body is dismembered. The teacher Imogen responds

with unprecedented anger at the children. "Why would you do that? I can't understand that, I can't understand why you would kill a creature for no reason? Imogen later attempts to disconnect ethical thinking from her rage, the insects and the edges of sentience they inhabit and provoke "I was angry, but I am very mindful of the fact that these are little kids and it's one of the things they do. I think, it's almost like a natural thing for kids to squish bugs because they do make a good squishy sound I suppose when you're squishing them. But I, I struggle with that, and I always have done, I always have done".

For centuries specific dog breeds have had their tails cut shorter as they become packaged for work and fashion. I was not allowed to witness the tail docking, but the closed door could not shut out childhood imaginings of what was taking place in that room; things that linger as ghosts of the past. The four tiny puppies are whimpering, wrapped in a basket close to the fireplace. The tenderness of this act seems at odds with the four tiny tail stumps cut from newborn bodies without anaesthesia and lined up on a piece of paper on the hearth. It made no sense and the next litter of Jack Russell puppies were able to keep their tails.

This narrative leads into the concept of dissection as the act of dissection is so prevalent in the dismembering and cutting of animal bodies. Connections and disjunctions in this narrative are configured with the bits and pieces of memory and more literally of dismembered bodies for this chapter signifies how forces in early childhood shape epistemologies of what we think we know, what is valued to pass onto future generations and how this knowledge frames what is possible.

Connecting concept: Dissection

Ethics is about mattering, about taking account of the entangled materializations of which, we are part, including new configurations, new subjectivities, new possibilities. Even the smallest cuts matter. (Barad, 2007, p. 384)

The productive work of dissection in this chapter pays attention to the smallest cuts of entangled matter with animal bodies and material effects as "mediating devices" (Despret, 2016, p. 15), acknowledging the incompleteness of memory and reality that

Horowitz (2013) suggests perpetuates the limitations of human sensory abilities. Becoming worldly with the up-close sensations of the events in this narrative are juxtaposed with broader issues such as the history of dismembering the tails of dogs as a means to refocus the near and far and register what appears in the middle. Horowitz noticed this process when she started to pay attention to her dog "as attention invited along attention's companion: inattention to everything else" (Horowitz, 2013, p. 2). Finding connections with the data assemblage and related and unrelated things is part of the conceptual work of this inquiry with a 'cutting together-apart' (Barad, 2014), as dissection unsettles this inattention of what is assumed, expected, or cut off from the violent encounters, not through a more focussed drive of concentration, but rather with sensations and intensities that move beyond representation, enabling that which has yet to be put into words to emerge. Inquiry Process makes use of three definitions of dissection, that comes from the Latin term *dissecare* "to cut to pieces" (Macquarie Dictionary, 2013), working backwards to explore processes of dissecting data, something that has been dissected and the act of dissecting.

The slice and dice research machine

All forms of data analysis dissect and organise thought and productive ideas with the aim to frame them as logical elements as part of the philosophical process. The topic under study is taken apart and reduced to smaller components and this can be seen in the processes and terminology of research that measure, examine, code, induce, reduce, probe, breakdown, and deconstruct. Inquiry Process has previously outlined why there is a resistance to slicing and dicing data and why holism became a pressing driver for the inquiry that was not only trying to collapse research binaries, but to work in different ways. The dualistic nature of body-mind separation is prevalent in the discussion that disconnects thought from body as consciousness is unhinged from the body in ways that privilege the psyche above the body, cutting it off in a type of agential separation (Schwennesen & Juelskjær, 2012).

Dissection appears time and time again in the data, through the process of writing a PhD, through the dissection of animal bodies, through the memories and conversation of participants and the actions of children. Concepts emerge as unexplained and unexamined forces that are sensed through the desire to think though a relational ontology that is already immersed in worlds as mindbody entanglements that take on greater intensity,

creating pressure points that assemble as the chapters of the thesis. These lines of connection between thought and practice take hold in the interpretive assemblage that unfold with ecologies from the focused reading and writing, questioning how the concept of dissection could be put to work by bringing into focus the processes and consequences of dissection for humans, animals, education and society.

Dissections of early childhood education

> *You see, your daemon's a wonderful friend and companion when you're young, but at the age we call puberty, the age you're coming to very soon, darling, daemons bring all sorts of troublesome thoughts and feelings, and that's what lets Dust in. And after the operation of intercision your daemon stays with you, only…just not connected. Like a…like a wonderful pet, if you like. The best pet in the world! Wouldn't you like that?(Mrs. Coulter from Pullman, 1995, p. 285)*

The second definition - the something that has been dissected, turns to the system of education as a specimen under study, where the parts of a system, machine or body are parcelled into discrete units of learning. Education that has been crafted as a humanist project, connected to a general idea of education as something inherently 'good', that can somehow produce better human beings. Dissection on a philosophical level equates with the illusion of separateness, the false construct that is taught from childhood by social conventions and ideology. This separation of the self, of nations, species, nature and the processes of life fails to recognise the cohesive whole of earthly components categorised by politics, religion, science and education. Mrs Coulter from the fantasy trilogy *His Dark Materials* attempts to smooth over and trivialise these small cuts of transitioning from childhood to adulthood as necessary and out of the realms of understanding for the child who is about to be separated from her soul/daemon/animal. "I know it's difficult to understand, but it's for their own good. It's just a little cut (Pullman, 1995, p. 252). The soothing words of the adult trying to placate the act of violence and power is a reminder of what Helena Pederson (2013) describes as the 'Judas educator' who leads the learner towards understandings that normalise and neutralise the deception of suffering, slaughter and animal violence, where "their bodies are viewed as raw material for capitalist and economic growth" (p. 717). The puppies in the narrative reflect this as they become fashionably packaged for sale in the 1970s in the time and context of their birth, where tails are not part of the aesthetic for Jack Russell terriers.

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Dissection also dwells in the system of early childhood education, where the something that has been dissected appears as taxidermy animal species, the body parts of animal and plant species displayed in classroom science studies and more provocatively the apathy towards body parts concealed in lunch boxes and meals. The pedagogy and practices of early childhood education are bound by the positions and places that have been predetermined by others, "haunted by the dead white males who still whisper their theories in the classrooms of the present, and inhabit thoughts and conceptualisations about children and their lives" (Bone, 2018, p. 6). An example of widespread epistemology in Western ECE is the dominant discourse of nature as a teacher and fount of knowledge for young children, specifically for this inquiry where children and animals are described as having a 'natural bond or affinity' with each other. There is a great deal of hyperbole about how children have become disconnected from this idealised universal version of nature, with little scholarship about ontologies that have historically and continually adopted non-dualist frameworks. These ideas can be traced from the period of the humanist enlightenment that originated in European societies that are involved in globalised colonial practices, where early childhood pedagogues including Froebel created the concept of the kindergarten (child's garden) as both a garden of children and garden for children (Elliott & Young, 2015, p. 2) and the philosopher Rousseau who supported the "coupling of childhood with nature" (Taylor, 2013, p. 4). Nature becomes a place to control with the propensity to romanticise nature as an aesthetic teaching and healing place for children to visit but are not embedded within. Early childhood education is bound by dominant discursive and capitalist boundaries that reproduce models of children as consumers and future workers, where academic knowledge, cultural values and economic wants and desires are transferred to the next generation through colonising humanist pedagogies and practices.

While education policy, practice and theory are preoccupied with knowledge development, relations and meaning-making around the productive 'good' human subject, Inquiry Process has addressed critical posthumanist thinking in education that attempts to rework this hegemony. MacCormack (2014) recognises that human exceptionalism is reinforced through the dichotomy of thinking-through our ethical encounters with animals, and the critique of our violent treatment of them. Any consideration of animal others she insists, must involve a radical deconstruction of what is means to be human and animal. MacCormack (2013) describes how systems like

education provide the institutional framework that foster relations with animal species as a war where the bifurcation of nature contributes to pervasive exploitation and exclusion and "language, discourse, pedagogy, and the will to know are 'acts of war' that the nonhuman other can neither win not participate in" (p.13). This war can be thought of in different ways. Adams (2014) refers to this as a 'war of compassion' where "conditions for violence flourish when the world is structured hierarchically, in a false Darwinian progression that places humans at the top" (p.19) and Wadiwel (2015) also adopts the terminology of battle, referring to the 'war against animals' as a sovereign claim of superiority founded on violence where animals are the spoils of war.

Dissection and precarious life in education

Urged by Rautio (2017) to work backwards to discover the questions that concepts help to answer, Inquiry Process leaves the act of dissection to last in this discussion. Cutting, tearing and pulling apart are processes of dissection and Inquiry Process wonders how teachers address what it is to be a biological animal, with messy bodies, layers of membrane and connective tissue without looking inside and taking apart real organisms. An example of warfare in education is the mass slaughter of animal species in dissection teaching practices with staggering markers of war that degrade and objectify animal life where "in the United States alone an estimated 20 million Animals per year are killed for the purpose of dissection in biology class laboratories" (Wallin, 2014, p. 149). The concept of dissection might point to ways to counteract such violence and injustice, as the act of dissection supports the type of war against animals that takes place in education.

Young children like Ben and Angus are testing out their predictions of how the world functions and like Kate these acts of dominion over another carry feelings of power and fascination that can be experienced by removing the wings of bees or squashing the body of a beetle. These children are aware of these acts of dissection and whilst this violence maybe discouraged by teachers, parents and peers, there are conflicting, ambivalent messages around small creatures like beetles as 'unloved others' (Rose & van Dooren, 2011) that would not be tolerated in 'loved' species, including the human kind. For example, arthropod and invertebrate species do not feature as key characters in many children's picture books as the subject of their own lives, are deemed as damaging pests

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or marauding packs and adults and children often exhibit biophobic responses of fear and disdain towards them. Dead insect bodies are displayed in classrooms, killed if they get too close or viewed during excursions to natural history museums where they are pinned in glass cabinets. Kate's grandfather was an entomologist who collected, killed, pinned and displayed insects and Kate remembers worrying about the butterflies nestled in trays of the freezer and being consoled that "they are killed humanely for the purposes of collecting", in ways that minimise suffering. Drawing from the Judas work of Deborah Bird Rose (2008), Pederson (2013) makes the pedagogy of humane education visible showing how family and teachers assume the role of the Judas educator smoothing pathways of suffering "by affirming and accommodating student emotional responses to what is done to the animals and comforting them by being by their side as a reliable and trusted authority" (p.726).

Animal dissection may not be a common pedagogical choice in Western early childhood education as children are mostly shielded and separated from the killing of animals, although Bone (2013a) recalls an occasion in New Zealand where young children watched as a parent armed with a knife, dissected a dead animal, that was praised as an excellent 'scientific' learning opportunity. Plant dissection however takes place on a regular basis in early childhood education and Dickenson (2013) outlines how little thought is given to pedagogy that attempts to disrupt or critique the bifurcation of nature when environmental activities with plant materials are framed within a science episteme:

> *In effect, core samples, tree cookies, and paper pulp are pieces of a tree, scientific objects that deemphasize a tree's wholeness or interconnectedness with an ecosystem and other entities, including humans. Ultimately, instead of holistically understanding trees, children are sent the primary message that nature is to be understood through its contained and catalogued parts and grown and used for human consumption. (p.12)*

The war on animals is also visible within species categorisation that order creatures into neat dissections, taught as the realities of the world where humans learn to make sense of the regimes of truth that inform and shape our everyday lives. The six p's of the inquiry post, pet, pal, pest, product and pack outlined in chapter six, describe how animal species are marginalised in this way, not only as property but with categories that measure, control and contain the perceived intelligence, behaviour, dwelling and purpose of different species to suit human needs. Murris (2016) identifies how children are also

positioned through particular regimes of truth in early childhood that categorise children as ontologically and epistemically inferior and Osgood (2017) describes how regimes of truth shape ECE and childhood. 'Post' approaches offer possibilities to disrupt default thinking and practices that position the post-child and the post-animal as key actors with expanded expert knowledge. The ideology of species always maintains speciesism, where the human is centre stage, as creator and enforcer of the system. Speciesism attempts to extend critical theory and practice to animal species, particularly by exploring and exposing speciesist regimes of truth that shape "how knowledge and practice are produced by whom, for whom, for what interests and for what purposes" (Payne, 2017, p. 138). Foucault defines 'regimes of truth' through the types of discourse that become dominant and sanctioned as practice, framing particular stories of what is said and unsaid, how we see and understand the world, by "those who are charged with saying what counts as true" (Foucault, 1980, p. 131). At times this logic produces indifference and a silencing towards the suffering of animal species, as it is deemed 'natural' to consume and dominate them. In other ontologies, a welfare humanitarianism approach exists where the suffering and domination are eased by creating better lives for animal species that maintain, rather than challenge, the status quo.

The concept of dissection has opened the connections and disjunctions of the inquiry in the following ways. Firstly, by thinking how dissection is a tool of hierarchical relations that maintain the logic of research processes that cut and paste the world into neat themes to mirror the human experience. Secondly dissection explores how structural institutional violence and unjust power constitute human-animal relations and how this begins in early childhood. Finally focussing on the political logic of precarious life, Animal bodies and the emotional response to the visceral body of sinew, feather, fur, skin, blood and flesh offers possibilities for connecting with the lines of inquiry, as a way of becoming creaturely and imagining the hum(an)imal.

Observing the way dissection manifests in research and educational practices inserts the precarity of everyday life as knowledge processes of how creatures who are thrown into precarious circumstances find ways to live otherwise. Indeed, according to Barad (2007), such cuts are part of agential realism from which we cannot be disentangled as "ethicality

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is part of the fabric of the world" (p. 182). Insects like bees and beetles are reminders that all species are ecologically and ethically entangled in ways that are rarely considered in early childhood education. Adopting a critical posthumanist response to these insect-human encounters emphasises that humans and insects are sensory, sentient creatures with capacities for prehending other Earth Dwellers. How could Imogen respond to Ben and Angus differently? How could intra-actions between the beetle, Angus and Ben be reconfigured as a learning encounter for each creature, exploring the agentic power of competing forces? What would the beetle want the children to know? How could the children learn alongside the beetle within human-insect lifeworlds with mutual curiosity of shared ecologies? The tiny worlds of getting up-close with insect's intra-act with the global environmental issues of the time that impact environments and other species in damaging ways. Relational networks are where ecological and evolutionary tensions between cooperation and conflict are negotiated, learning to address these struggles and, ultimately, understand the dissolution of the disconnected self that separated body and mind, nature and culture. Rautio (2013) urges teachers to acknowledge "how humans and nonhuman animals continually create the conditions for each other's existence" (pp. 446-447). Processes of separating, dividing and dissecting works against a relational ontology that aims to explore how the composition of Earth elements do not exist in isolation, but in a unified process of worldly becomings. Diane Ackerman captures this multifarious mix as "the plain everythingness of everything, in cahoots with the everythingness of everything else" (Ackerman, 1993, p. 111).

Chapter summary

This chapter explores connections and disjunctions of life that are not romanticised stories, but narratives of precarious life where existence depends on interdependency with others. Concepts of sensory practice, ethics, agency, autonomy, and vulnerability are enacted that confuse and complicate. Creaturely becomings as a creature among creatures, unsettle impoverished notions of multispecies vulnerability that are not only understood as passive and negative, but where sophisticated notions of vulnerability recognise that "being-a-body-in-the world means being vulnerable in the sense of all earthly creatures" (Ohrem, 2017, p. 52). Creaturely connections attend to moments that engage with these prehensions escaping explanation as the pulsations of life, living, killing and dying reveal a cat that takes delight in the kill, Kate's childhood desire to torture and dissect bees and children who crush beetles. Connections and disjunctions also appear with shared ecologies akin to the arboreal networks of fungi and tree roots that work in partnership in a constant interchange of moisture, nutrients and wisdom, hidden below the surface of the Earth. These networks are mostly altruistic to shared life, however some trees like walnut or pine trees inhibit the life of other trees through these networks infecting them with chemicals that kill surrounding plant life.

The impression given by the narrative events in this chapter exposes how humanism and anthropocentric ontologies influence what parents and teachers share with children, and the way they retell their childhood stories of life, love and death. Redefining the human species as one amongst many offers the potential to not only challenge anthropocentric systems, but also attempts to move beyond humanist principles and human-centred ways of relating ethically to the Other (human or animal) (Kendall-Morwick, 2013; Lévinas, 1997). Further connections of ethical situated-ness and the politics of human and animal bodies in education continue in the next chapter as Inquiry Process wonders about the complexities of human-animal becomings that compete with ethical contradictions, like the desires, interests and values that we carry in our speciesed and speciesist bodies?

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Chapter nine: Troubling the territory where children and animals dwell

Introducing the rub

> *'Killing without making killable'… I am asking whether this way of thinking and acting can help me (us?) in staying with the trouble to which I (we?) am (are) accountable. (Haraway in Potts & Haraway, 2010, p. 329)*

Troubling forces dwell for a long time within this chapter joining the territory assemblage as acts of troubling and becoming trouble are embroiled through territory. They adjust to distinctive, darker passageways questioning the complexities of animal-human becomings in education. They compete with the ethical contradictions, within this terrain of becoming biopolitical, engage with the Spinozist notion of affect (Deleuze, 1988, p. 101), the capacity to affect and be affected and to become troubled and trouble (Haraway, 2010). Troubling becomings are energised through a sequence of data events that are central to the inquiry question that wonders about the complexities of human-animal becomings when competing ethical concepts and practices are in play.

Donna Haraway's well-known opening quote helps guide the focus of this chapter as she consistently prompts researchers to do the work of 'staying with the trouble' (2010, 2010a, 2012, 2014, 2016) to reconfigure our earthly relations by analysing how we live and die together on a damaged earth. This troubling of hum(an)imal relatings "bring the dead into active presence" (Haraway, 2016, p. 7). Critical scholars (Adams, 2006; Crist, 2010; Giraud, 2013), critique Haraway's writings that at times condone violent practices such as "animal experimentation, genetic engineering, dog breeding and training, killing animals for food and hunting" (Weisberg, 2009, p. 23). For all the inventive thinking with entanglements of difference, Haraway succumbs to speciesist ethos that normalises the 'war on animals' by rendering them as consumable and therefore killable through biocapitalism. Although this chapter does not have the scope to enter into a comprehensive discussion of the literature that critiques Haraway's stance, it is included in the introduction as Haraway has been a stalwart of troubling human-animal relations. Inquiry Process is not impressed with how she, like most of the human population, avoid issues of instrumental animal relations inherent in this chapter; those whose bodies are

hunted, farmed, dissected and tested. This chapter shows some of the ways in which such sticky and slippery human behaviour becomes normalised and hidden, and therefore resistant to change.

Three troubling narratives feature in the second part of the chapter that expand some of the ideas that were introduced in the critical becomings of chapter three. These narratives highlight some of the ways children are learning about the loving and killing of animals as acts of pastoral sovereign power take place in the territory that Foucault (2003) explains is the power to give or take away life. They stand out in their intensity and relation to the research foci drawing on actions attached to troubling notions including how such knowledge is produced, applied and circulated. Concepts of emplacement, displacement and replacement become a lens to think-with alongside the biopolitics of life and death (Agamben, 1998; Foucault, 1976/1978, 2008b; Haraway, 1989; Wolfe, 2012a). Biopolitical creaturely relations, becomings and processes shape the actions, decisions, and communities in early childhood that default to humanist ontologies, sometimes in unexpected places. A troubling sticky knot places closer attention to the practice of killing as children witness animal death under the guise of educational inquiry that evokes speciesist practices. Wadiwel (2016) comprehends the power of these ideologies of humanism and speciesism, as a network of forces where power relations can help us see whether these relations are just and conflict or troubling is the starting point to think about relationality as a "relation essentially of hostility… that can comprise a potential beginning for different and (hopefully less violent) relationalities" (Wadiwel, 2016, pp. 212 - 213).

Mapping the inquiry researcher becomings once more sets the scene for this chapter, that Deleuze and Guattari (1987/2004) describe as a means to map as a fluid becoming that enters into shadowy places.

Becoming shadow

Shadows first appeared in the field guide of the inquiry as Plumwood (2008) identifies a need to venture into the shadow places of environmental justice and power relations and dwell there for a while. The shadow is a common allegory in philosophy and psychology that Carl Jung associates with hidden consciousness and the 'guilt-laden personality

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whose ultimate ramifications reach back into the realm of our animal ancestors and so comprise the whole historical aspect of the unconscious'' (Jung 1963, cited in Diamond, 1996, p. 96). Jung refers to the shadow self as the evil, dark side of the human animal that is associated with animalist impulses and responses that are unconscious; like those of animals who were thought to use instinct to process information. Here Jung is not suggesting that animals are evil, but rather the shadow self is unknown, primal. Defining the collective unconscious as animalist or instinctive is troubled if animal species are known as conscious and aware, in ways that Inquiry Process has shown. Thus, from the darkest corners of the territory, becoming shadow brings that which is made killable into the realm of knowing, illuminating processes of animal cruelty and the loving and killing of animals that children are learning simultaneously in childhood.

Shadows are the projected image of a blocked light source, where umbra, as the darkest region of a shadow is absent of light. In a more abstract sense, a shadow is the darkness that results from the absence of light that "puts shadowy forms of thought and feeling – heaven, hell, monsters and angels, and all out into the light, where we can take a good look at them and perhaps come to better understanding of who we are and what we want" (Atwood, 2004, p. 517). An umbra casts darker shadows over perceptions of joyful relations in the territory where children and animals dwell, 'shadow places of dwelling' (Plumwood, 2008) leaving me with uncertainties. These reservations are not due to the naivety of the existence of darker encounters, nor their appearance, but how to open the door to darkness, when I would rather leave it closed. I am hesitant about talking about the scale and horror of the 'war on animals', even when participants raise questions and share ethically troubling memories, for it is not clear if they are seeking honest responses to these questions. The shadow provides sanctuary from the light and dark, hiding so as not to disturb the dark things and awaiting time to face what holds me back from responding. Becoming shadow pushes the umbra as a productive opportunity to open wider conditions of possibility for Inquiry Process. Not only as a conceptualisation of a 'living' inquiry where relations and connections within the research assemblage of human and more-than-human reveal new ways to think and experience inquiry, but also how the unseen, unspoken and unsayable come together in descriptive narratives about living and dying. These expressions of participants as provocateurs are coupled with my territory observations and musings, that fill multiple research journals constituting storied knowledge.

A philosophy of immanence attempts to work without negations or boundaries and to attend with differences and thresholds. My supervisor Jane Bone (2013) confides in her *Becoming animal* text how she is playing with subjectivity by becoming dog as she wants to remain a happy animal who does not dwell on or remember troubling things "the problems, the boundaries, but who rejoices in life, who finds joy in writing, tail wagging, becoming dog with the capacity for unlimited happiness, in the moment" (p. 42). This desire to be a happy animal was also communicated by another supervisor, Amy Cutter-Mackenzie-Knowles during a PhD meeting when she offers me a book with stories of positive animal-child relationships. I suggest she might be worried that I am entering 'the dark side' and Amy agrees, "I want you to also remember to see the joy". What does it mean to see the joy? The lived body, the sensing practices are never neutral, and I am implicated in them in ways that are not always joyful. Tim Morton shows how 'dark ecology' also lingers in the shadowy world of difference, where hesitation, uncertainty, irony, and thoughtfulness and moves within ecological thinking. The shadows of the loving and killing of animals is not a dichotomy between joy and darkness but rather a situating of the darkness as a balance to the dominant discourse of children and animals that rarely sees or tells the story of the multiverse.

I am scattered, unsure, a shadow of myself, contemplating self with less attachment to subjectivity. I traverse the positions and practices ascribed to my researcher, writer, human, animal activist and educator subjectivities. The enactments, fears and desires that shape who I am and who I am becoming are felt through the constant effects of consideration and agitation because the conventions of subject positions define what it means to be successful in these roles, and they often contradict or shift according to a particular context. For example, as an early childhood teacher I know the conventions and how to perform successfully with teachers, children and families, establishing collaborative relationships during field studies. How does my animal activist subjectivity perform to the nice lady identity that Anne Stonehouse (1994) suggests is so prevalent in ECE, when I want to scream at those very teachers, parents and children? "Can't you see what you are doing to the chickens and what the children are learning when they enter the chicken enclosure with little respect for their material space, their lives, their chicken bodies or body secretions (eggs)". How then as a researcher do I analyse and write this

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when I have developed relationships with the human participants and feel uncomfortable about critiquing these actions, or stepping over boundaries, yet, at the same time sense the scholarly benefits of studying the critical affects that arise in between bodies as intensities that "circulate about, between, and sometimes stick to bodies and worlds" (Seigworth & Gregg, 2010, p. 1).

Larvae *What are you holding back? When you are walking in the dark, you have an instinct for how to move forward. What is your body saying, remember these ideas stick to the sensing of bodies not just through the mind mullings that go around in circles? Think of that quote from Cixous that you have pinned above your desk "Your body must be heard. Only then will the immense resources of the unconscious spring forth" (Cixous, 1976, p. 882).*

Tracy *My body, not my mind, wants to speak about how I embraced a vegan politic during the shapeshifting of these becomings, transitioning from a vegetarian diet as I was no longer able to deny my conscience about the dairy and egg industry. This becomes unspeakable, a taboo topic, where the perceived earnest vegan is the idealist, defending every food choice they make and yet required to be sensitive to the choices of others. There are shadows here. The social aspect is the challenge not the plant-based diet as people ask questions, excuse themselves for eating animals, look for ideological flaws, make fun and use (s)laughter, get curious, even furious. These responses react to an ideology beyond food and the shadows have helped me find a place to dwell, to trouble what this means for me, how it contributes to the study and with my future activist self.*

Larvae *Make it hum .....If this research expands through your commitment to animal, environmental and social justice this has also become embodied through the fleshy – body, diet, digestion, as your wonderings about injustice are internalised in the choices you make. Telling people how to live is not who you are, or what you want, however, these choices are embedded in the everyday that moves through all bodies you have contact with.*

The shadow throws new light on the territory in this chapter, confronting speciesism as the shadow of killing compels me to think, sense and embody the significance of the events of the inquiry. Seeing the shadows that some do not claim they see, speaks to what is seen and unseen and how shadow casts an invisibility to things that do fit a particular worldview. It is in this sense that Cixous laments "I do not want to see what is shown. I want to see what is secret. What is hidden amongst the visible. I want to see the skin of light" (Cixous, 1998, p. 184). This troubling with life and death, through the data events and through cultural narratives configures a sense of truthfulness – not 'the truth', but ways to interpret thought and affect so as to enable an "experience of rightness in relation to life and the cosmos" (Rose, 2017, p. 492). Becoming shadow helps brings new light to the internal conflict of the nice lady activist where places of resistance appear, and a touchstone helps to temper the internal conflict.

The touchstone of the shadow

> *CAS scholars … argue that rather than conceptually romanticising our relationships with other beings and theorizing the beauty of our shared encounters, we should focus on real animals and their actual life situations: more than 150 billion animals get slaughtered every year and this number is still rising. (Westerlaken, 2018, p. Para 6)*

> *To pay attention to the web of life on earth today is to acknowledge that our times are grim almost without relent…of what has been branded 'the sixth extinction' – a fading-to-black of species worldwide at a rate that recalls fiver earlier spasms of mass loss imprinted in the fossil record… Extinction is not mere death: it is the death of the cycle of life and death. (MacKinnon, 2103, p. 36)*

Stained with the dark desire for a more honest way of embracing the "shadow of all this death" (Rose, 2012) and constructively accepting and assimilating it into conscious(ness), is part of the process of becoming hum(an)imal. The touchstone of slaughter and extinction become the situated account of the data assemblage shaping possibilities for knowing life and death in the territory in an effort to render these events and their assumptions visible and so more readily amenable to ongoing discussion, revision and contestation. Critical animal studies remind how easy it is to distort and hegemonise animal oppression in early childhood education where Animal suffering is sometimes ignored, and where death can become a fetish of inquiry, glorified within a voyeuristic

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aesthetic of the animal body, rather than the actualisation of the animal subject caught up in the scale of animal consumption and environmental extinctions. The ghosts of the animal-industrial complex (Noske, 1989; Twine, 2012) and the ghosts of extinction are a reminder "that we live in an impossible present, a world haunted with the threat of extinction" (Tsing, Swanson, Gan, & Bubandt, 2017, p. G6). This is a "great howl in the night, for the loss that surrounds us, now and that is to come" (Rose, 2012, p. 1) and this despair of loss and suffering evokes the shadow that helps Inquiry Process to stay with the trouble.

Whenever the assemblage floats too far away from the surface leaving hum(an)imal behind, the gravitational pull of the touchstone is enacted. Derrida's (2008) strongest claim in *The Animal That Therefore I Am,* concerns the vulnerability inherent in suffering that this touchstone signifies:

> *Mortality resides there, as the most radical means of thinking the finitude that we share with animals, the mortality that belongs to the very finitude of life, to the experience of compassion, to the possibility of sharing the possibility of this nonpower, the possibility of this impossibility, the anguish of this vulnerability, and the vulnerability of this anguish. (p.27)*

Inquiry Process tries to stick to the flattened pathways of immanence, as stark reminders of the violence imposed on animals emerge in everyday encounters. Equipped with this touchstone as a central compass point of the territory, speciesist events are unfolded to show how practices in education and the positioning of animals' function simultaneously as both loving and consuming animal tropes. Families and teachers seamlessly weave this dichotomy of loving and killing through the everyday happenings of children's lives as though the violence and oppression does not exist. Critical Posthumanism as an ontology circulates through territory helping balance the academic and activist knowledge production (Pedersen & Stănescu, 2012), that collides with animal educational practices of keeping chickens, and calves not only for scholastic purposes, but also for profit that appear in the first two troubling narratives that follow. The third narrative takes place as the children watch a hunting and killing practice in an Australian Indigenous community. The three narratives and three concepts become enmeshed in this chapter as they assemble in a different way, demanding greater connections with each other in the telling and shaping of the interpretations.

Troubling narratives

The environmentalist Aldo Leopold (1949/1968) urges people to 'Think like a mountain' to contrast the enduring interests of the ecosphere with the short-lived demands of humans. If we can identify with a mountain, can we imagine ourselves into the bodyminds of animals? Coetzee (1999) challenges the idea of colonising animals through the human voice of one of his characters, Elizabeth Costello during a lecture. "Animals have only their silence left with which to confront us. Generation after generation, heroically, our captives refuse to speak to us" (p.25). The speaking for and with animals as Inquiry Process has suggested is always unsettled, and the processes of silencing and ventriloquising on behalf of animals are questioned through an ethical relationally and ethological understandings, that bring us closer to surrendering (Smuts, 1999) to how animals think, feel, communicate and behave. Karen Davies (1995, p. 209) prompts us to "Cluck like a mountain" and think relationally and compassionately with and beside the inner lives of chickens. Karen is influenced by the American writer Alice Walker who holds a microphone up to the mouths of animals enabling them to step forward and unlike Coetzee's respect for silence, Walker implores us to imagine animal voices. "Why do you keep putting off writing about me? It is the voice of a chicken that asks this" (Walker, 1988b, p. 170). Step up to the microphone Rocky.

Figure 20: Rocky in the metal nesting box

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Troubling narrative one: Rocky speaks

I am not a battery hen, but my cartography is not considered important. I do not live in a cage so small that I cannot stretch my wings but reside with fourteen other hens in a safe and roomy enclosure at a school. I am not forced to stand night and day on a sloping wire mesh floor that painfully cuts into my feet or the the suffocating presence of ammonia excretions from the multitudes of avian kin I am forced to reside with.

For, I am one of the lucky, ones.

My mind is alert, and I am richly feathered with tricoloured plumage. Five-year-old Ruby recently named me Rocky, because she thought I looked like the colour of rocks. I love having sociable, cleansing dust baths with my flock mates, and I can scratch in this space, somewhat like I would have in my ancestral jungle, devouring plants, earthworms and insects from sunrise to dusk. I am sitting here on an egg and yet I can hear the children coming. Soon I will be shoved aside, with grabbing small hands pulling this prized egg from under my warm body and always, always the shock of the metal hitting metal as the lid of the nesting box is slammed shut over and over again.

But, I am one of the lucky, clucky ones.

My species is strong and resilient but even in this space of chicken privilege I have been rendered docile and servile. In this place of education, our lives are under-examined and ill considered, where the production of eggs takes precedence over the production of chicken lives and ways of being. The silky bantam, rooster, hatched in a classroom science project, challenged this servitude and was recently evicted from this chicken house and left outside to take his chances with the foxes. Was he being too 'chickeny' as he used his talons to protect our flock? His acts of resistance defied the rules of domestication, casting him back to the wild – a place he had never known.

For I am one of the lucky, clucky, plucky ones.

Emplacement

Emplacement as the act of setting something in place, means to emplace or move an animal from one container to another. Emplacing is also attached to domestication as animals enter spaces of altered lifeworlds, adapting to live within human terms and conditions as they become relocated from their original spaces of animality. Inquiry Process has already outlined how containers both material and conceptual, control how animal species are emplaced in dwelling places in early childhood education such as cages, tanks, and enclosures, and animal species are also emplaced in the structures of their 'proper place' by packaging them as pet, pest, pal, product and pack. This act of emplacing brings another 'P' to the territory, where chickens such as Rocky or the (unnamed) Silky Bantam are tools for teaching who become packaged for learning as 'props'. Animals as teaching props are mapped in the literatures of the early childhood education such as representable animal figurines, teaching resources and chickens who are hatched in an incubator to teach about (dissected) life cycles and the chicken as a producer of eggs. The consequences of such anthropocentric bias might be known by their effects that are detrimental to the chickens. Wallin (2013) identifies how school curricula, marginalises animals with a "degraded status as 'pedagogical objects' of vivisection in biology, 'utilitarian ingredients' in home economics, and 'null curriculum' in history lessons on human progress in social studies" (p.11), where the animal is missing in action. Missing from this emplacement of the chicken in education, is the chicken body as corporeal, framed discursively as food product and placed in the operation of industrial scale meat and egg processing. Geographical emplacement situates the chicken within all regions of the Earth, transported from their once tropical, tree dwelling existence.

Containers of emplacement are also important to the dwelling perspective as place, home and habitat are spaces of living, where in some contexts and circumstances offer a form of protection, belonging and the right to non-mobility that is denied to those cast out from that enclosure; like the silky bantam rooster in the narrative who is made a refugee by the caretaker and was seen trying to get back in to be with his flock. The rooster for example, crosses the border between prop-to-pest as he is exiled from the chicken enclosure where "home is produced through border relationships of belonging and exclusion" (Power,

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2009, p. 30). The rooster is born into the emplacement of an artificial environment of a classroom egg hatching program, separated from a mother hen who he would imprint with and be taught life lessons that may have minimised "the many problematic behavioural issues in roosters who have graduated from these programs" (Young et al., 2015, p. 39). As the 'caretaker' suggests it never works as the emplaced rooster will never fit in and comply as a domesticated prop for learning.

The concept of emplacement describes how Rocky and the other chickens are emplaced in education settings, captured within speciesist, oppressive ideology in physical structures like the enclosure that contains Rocky, but exiles the Silky Bantam. Inquiry process has already mapped how objectifying language enables objectifying treatment. Identifying the linguistic norms that govern the speech, attitudes and practices about animals, helps to (re)position the discourse by shining a light on who they are and how they are emplaced. For example, during the weekly walk the ritual of visiting the chickens in the large outside enclosure the children get very excited entering the chicken dwelling place and compete to collect the eggs from the laying boxes. Jag's mum Sally has also taught the children how to catch and hold the chickens. The chickens appear uneasy about this lively onslaught of activity as more than twenty children, parents and teachers rush into the space grabbing at their bodies.

Some of the children tease and chase the chickens, particularly the silky bantam rooster who Hunter and Jack throw bread at yelling "fire, fire and get him". This is the (unnamed) rooster who was removed from the enclosure by the school 'caretaker' and left to fend for himself with the local foxes. This term caretaker has associations with conservation, stewardship and sovereign power where animal species fall under the rightful authority as property that can always be em/re/displaced. Care of the animal is not evident here, as the caretaker become the taker-of-care. The school caretaker tells me that "it never works when they put roosters in there", whilst Sally the parent disagrees, "he wasn't that bad, and it makes him kind of disposable". Imogen the teacher was angry about the injustice. "This is the kind of thing I think about all the time and I know that others do not, but we made this his home and he would have been trying to get back in. It haunts me".

Most of the children are inquisitive and caring and the chickens gather eagerly for food scraps, it is a chance for chicken and child to get to become acquainted, as can be seen in

this photograph of Jag who holds the black bantam gently for a long time observing her claws and feet.

Figure 21: Jag and bantam in the chicken enclosure

Inquiry Process collaborates with the teachers and children as they have also witnessed insensitivities and indifference to how some of the children respond and interact with the chickens. The nesting box and collection of eggs are also mentioned as a concern as the children race to get the eggs, frightening the chickens and slamming the box lid. Collaborations as becoming-with chickens in a critical posthuman landscape are firstly explored through discussions with children to gain a sense of their ideas and experiences with the following questions:

- How could we enter the chicken house differently?

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- Why do we have names and not the chickens?
- Is there a way we can connect with the inner lives of this chicken community?
- How might chickens like to live their lives?
- Can we think about the sentience of the chickens and consider what brings them joy and happiness and also fear and pain?
- Would it help to build social stories around chicken's lives and family relations?
- Why do some of the children taunt the rooster and chase the chickens?
- How might the chickens feel about us taking their eggs?
- How would we know if the eggs are fertilised?
- What would the chickens say to us if we could understand their language?

The provocation of the nesting box and the race to grab the eggs was also introduced with the children and Ari suggests that "we could pad the lid of the box with something soft, so it would not be so loud for the chickens". A picture book encourages the ELC children to think about gendered pronouns that did not objectify the chickens as a subordinate 'it' and how the chickens in the story are subjects worthy of moral concern and personhood, (Spivak, 1993). The responses to these questions also lead to the mapping of chicken lifeworlds that attempts to move beyond mere representation. The photographs of all the chickens were placed on a poster and a chicken cartography was plotted over many weeks, where the children chose names for the previously unnamed birds and the teachers added personalised and identifying features of each chicken, with the children. These child-chicken relatings trouble educational cohabitions, where children and teachers become care-givers with the chickens and not care-takers who make unjust decisions about their lives. These are some of the children's responses to the chicken cartography: Maddy stated how "we need to walk so we do not scare the chicken's and Jag agreed "no running". Scarlett suggests that we need to "be careful and hold the eggs safe" and Maddy said that if the chicken is sitting on the eggs "we must leave it in there and wait for it to walk out".

It is naive to suggest that the scope of animal oppression and suffering can be alleviated, simply by changing terminology or mapping animality in this way, however, this process offers indicators of how power weaves through speech, attitudes and practices in social institutions that are made visible to see what we speak, see what we know and see what we do. This naming and framing open discussions and action for a relational response

with the chickens by giving them identities, getting to know their sex and personalities that led to ways of discovering more about chicken lives and capacities in scientific and caring ways. "Knowing chickens bio-behaviorally requires quite distinct scientific practices compared to knowing them as feed-conversion production units (Potts & Haraway, 2010, p. 326). In other words, knowing animals through the educational practices of tracing cartographies and learning with ethical multispecies relations and knowledge troubles the hands of deception and pulls the hands of the humming pet/product gesture together, enabling hum(an)imal becomings in early childhood. These stories matter because when we get them wrong, and this is often, it is the animal that suffers.

Sometimes animals become emplaced, displaced and replaced in education with clearer boundaries of their purposes, although these are still hidden from young children. For example, the naming of farmed animals is a practice that is deliberately avoided like the cows in the next narrative who the children are encouraged not to get to know as their time in the territory is short lived and their lifeworlds are already mapped in another direction. As Joe says, "we try to make sure the children don't become attached to these animals, so we don't name them". These are dead cows grazing, in what Stanescu (2013) conceptualises as 'dead life'. "It is a sense of life meant as pure production, pure use-value"(Stanescu, 2013, p. 148).

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Troubling narrative two: The cows are in the meadow
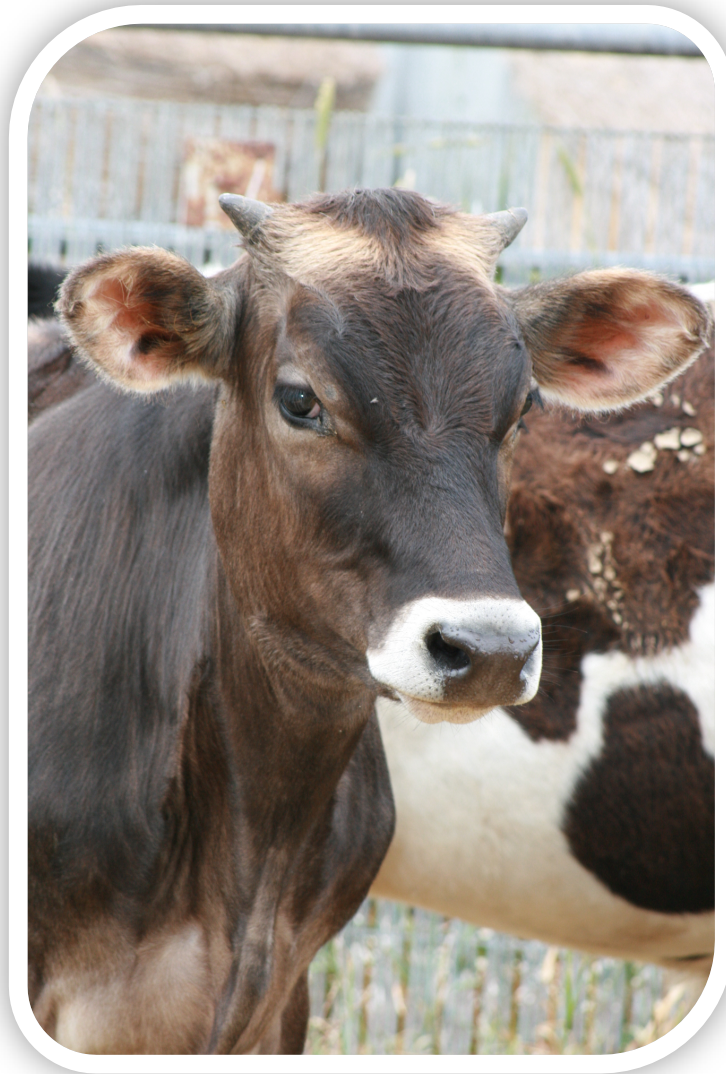
Figure 22: The unnamed calves

Two-year old Georgia delights in playing the game Ring-a-Rosie. Singing and clutching outstretched hands, circling and repeatedly falling down laughing together at the game and her rendition of the second verse of this well-known nursery rhyme. "The cows are in the meadow eating cup-de-cups". Cows have been brought into consciousness in the territory, in slaughterhouses, on live export ships, a school, dairy farms, in the pages of research and Edgars Mission animal sanctuary on Facebook tells the story of a defiant rescued dairy cow who performs an act of camouflage as she hides her newborn brown calf behind brown

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logs. Innocent childhood ideals of cows eating buttercups in meadows have not been amongst these reflections, although at times I wish they had.

During the regular walk with all the children I spot five young calves in a nearby paddock. How exciting to discover another species and these young bovine bodies are so curious and beautiful. I ask a parent where the cows came from and get a non-committal response. I ask one of the children and they also seem disinterested, as if they cannot see them. It's strange. I discover later that these are dead cows roaming. They have already been made killable as they will be raised for meat and profit for the staff club funds.

Replacement

The young calves in the narrative are replaced each year in a cycle of "fabrication and production of lives to be part of the fabrication and production of corpses" (Stanescu, 2013, p. 153). The killing of the cows is rendered invisible, replaced and not part of education discourse as this cultural practice is hidden, as it if is not there. They have a different role to other territorial animals as they are made killable and hidden. Their replacing is part of the way in which they are excluded from consideration, hidden from moral view. It could also be argued that life for these male cows offers a replacement, a better option to the surplus of male cows who are killed at birth or raised as veal calves constrained in small crates and fed a liquid diet for four months until they are killed in the agricultural meat machine. Bovine lifeforms have been entangled as nomadic companions of capitalism for hundreds of years. The word 'cattle' comes from the Anglo-French word catel, meaning 'property' with similar etymology to the words 'chattel' and 'capital (Macquarie Dictionary, 2013). Cows, like chickens embody the adaptable nature of capital, enabling them to be emplaced in diverse ecosystems. Even as cattle destroy endangered environments, such as the 29 million cattle walking over 52% of the deforested land mass of Australia (Probyn-Rapsey, 2016), they also shape emerging worlds, displacing landscapes into alternative terrains.

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In the final troubling narrative killings are made visible under the guise of a 'cultural learning experience'. The narrative is based on an event depicted in the following image that shows Martu elders Kumpaya Gigirba and Ngamaru Bidu, killing a sand goanna on Martu country from the *We don't need a map: a Martu experience of the Western Desert*, travelling exhibition (Coates & Sullivan, 2014) that brings art installation, paintings and videos of the remote Western Australian desert to regional Australia. The whole kindergarten group attend an excursion to view the exhibition and one of the videos in the exhibit graphically demonstrates the killing, skinning, dismembering, cooking and eating of many sand goannas. A few days after this event, the four focus children talk about what they saw, prompted by this image from the catalogue, showing the Martu woman from the video lifting the goanna in the air above her head in readiness to hit the goannas head on the red earth below.

Troubling narrative three: Goanna: Cultural learning

Figure 23: Photograph from Fremantle Arts Exhibition. 'Catch it' (Sullivan, 2010)

Toby is reluctant to join the conversation today. Had this imagery unsettled or disturbed him? Holly, Hunter and Jag explain what they saw and seem more accepting about the goanna killings. "This is a goanna and its alive, they had to smash it on the ground, they killed the goanna and pulled all of its guts out… Then they were putting it on the fire and then they were eating it". In a later conversation with one of the teacher's, similar ideas were shared. Toby now confessed he "was a tiny bit scared and I was thinking that was not a good idea to smash the goanna". Holly said that "Then they won't have food" and Toby said, "I think they can live without food". Hunter dismissed Toby's idea, "No they can't, if people stop eating food for one week, they will die. Then they will get buried underground". The teacher reminds the children of a past event. "When we went fishing with Oliver's dad, do you remember that he took the guts out of the fish for us, so we could eat them"?

Kate the teacher reflects on the children's witnessing of this encounter. "It was quite brutal and confronting and I kept checking to see if anyone was upset and I kind of jested with parents asking if everyone's stomach was okay? One of the parents called out that she just going to look over at the floor for a little while. She found it uncomfortable but then I am not very good at looking at that kind of thing either. People are more forgiving though when they see it as some cultural learning experience".

Displacement

Displacement effects place, home and identity in a global terrain of mobility that moves Earth dwellers on from places that have been made hostile to them. Displacement implies forced disruption such as involuntary migration of the more-than-human, including humans forced to leave a nation typically because of war, persecution, or natural disaster, and those who have to leave habitats that have been destroyed due to human intervention such as deforestation, mining, pollution or climate change. Displacement of culture also takes place through the acts and ideology of colonialism that work to displace cultural practices and replace them with those of settler communities. Displacement crosses borders creating territorial ruptures, like the unnamed rooster forced out of the chicken

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enclosure, as a refugee exiled towards involuntary migration to unknown places. Those who are displayed, become replaced as spaces become inhabited by those that come after in ways that where "both displacement and emplacement are simultaneously spatial and temporal processes" (Ballinger, 2012, p. 390).

The concept of displacement is aligned with the goanna narrative to show how displacing one idea for others become part of the normalised discourse of cultural learning and teaching children about the loving and killing of animals. There is little room for alternative sensibilities such as discussions about people who choose not to consume animals or "meat for food" as the teacher suggests. Toby's emotional response to the killing of goannas in this narrative is smoothed over by children and teachers and his suggestion that he thinks people can "live without food" is ignored in ways that show how animal ethics is marked with ambivalence to the animal. Toby is perhaps not suggesting that the Martu people cannot live without food, but food as goanna, who he has just watched being killed in ways he finds distressing. This line of questioning about his distress was not explored, nor the option of animal flesh as choice, rather than a necessity. The goannas in the narrative are displaced and dispatched from life enabling lives to coexist in the remote landscapes of central Australia, where food choices offer limited replacements for living from the land. Whilst there may be concerns about children's emotional capacity for knowing about or witnessing animal death in this way, the harsh reality is that eating the bodies of animals involves the bloody and brutal death of a native, familiar or cuddly animal.

The narrative therefore speaks to what the children are learning from this experience about the killing of animals for food. Pedersen addresses this act of visibility about who sees what; as seeing is connected with knowledge, and power. Inquiry Process wonders about the teacher's idea that it is easier to see when it is a form of "cultural learning". Does Kate mean it's easier when your own culture is not under the gaze? Would the children for example have watched a video of animal slaughter in an abattoir or farm? The observer according to Pedersen has the privileged eye with the knowledge and power to commodify the story of how the bodies of the goannas and Martu women appear, "what they do and where they do it" (Pedersen, 2010a, p. 58). The goannas and Martu women have both become displaced, othered and exoticized, as something that other people do and eat, that can be watched.

Animal-related activities shown to influence attitudes toward animals in childhood include hunting, bird-watching, learning about animals in school (Kahn & Kellert, 2002) and pet keeping at home (Tipper, 2011, 2011a). Serpell (2004) narrowly identifies two aspects that shape attitudes toward animals: affect, or people's emotional response to animals, and utility, or perceptions of animals' as instrumental value. These aspects present in the conversations with the focus children where Hunter, Jag and Holly adopt a utilitarian stance towards the goanna's as food, as they describe what they saw.

> *"This is a goanna and it's alive" (Holly). "They had to smash it on the ground until it's dead and put it in the fire, so it can burn up (Jag). "No, first they killed the goanna and pulled all of its guts out" (Hunter).*

The goanna narrative portrays how Toby was visibly affected, and his discomfort is embodied within his silence and gestures. His head is low with little eye contact and he is unusually quiet. The other children talk through what happened and he admits that it made him feel sad. The following day Toby has more to say and his stance has shifted possibly from discussions with his peers and the teacher outlined in the narrative. His concerns are normalised in the way of the 'Judas educator' (Pederson, 2013) where teachers gently lead children to learning spaces that are organised along anthropocentric and speciesist lines. Pederson (2013) notes how this requires a compliance with practices, through 'acts of intervention' that neutralise the emotional distress and connections with the fabrics, feelings and bloodlines of the realities of what is made visible to children. Corman and Vandrovcová (2014) recognise the sensitive use of photos and films of animal violence that can trigger despair, defensive positionings or sadness. To counteract such consequences, they suggest providing a safe place where children can choose to share and manage their feelings, as well as to critically reflect with their own entanglement in oppressive structures, where open-ended discussions, alternative solutions and activism are explored. Toby's concerns are listened to but become displaced as the goanna as food is framed within newly emplaced utilitarian thinking. His words, bodily affects and drawing hint at something more. Is he drawing a line around the goanna for protection or with the desire to let other people know what the goanna is about?

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"I was a tiny bit scared and that's why when you said to be like an animal when we went out to lunch, I wanted to be like a goanna. When my teacher asked why we thought the Martu people caught the goanna and took its guts out, I said, I was thinking that's not a good idea. Holly said, "then they wouldn't have any food", and my teacher reminded us, "that's how we have meat for food". I think they can live without food and that's what I told them, but Hunter said, "No, they can't, if people stop eating food for one week, they will die. Then they will get buried underground".

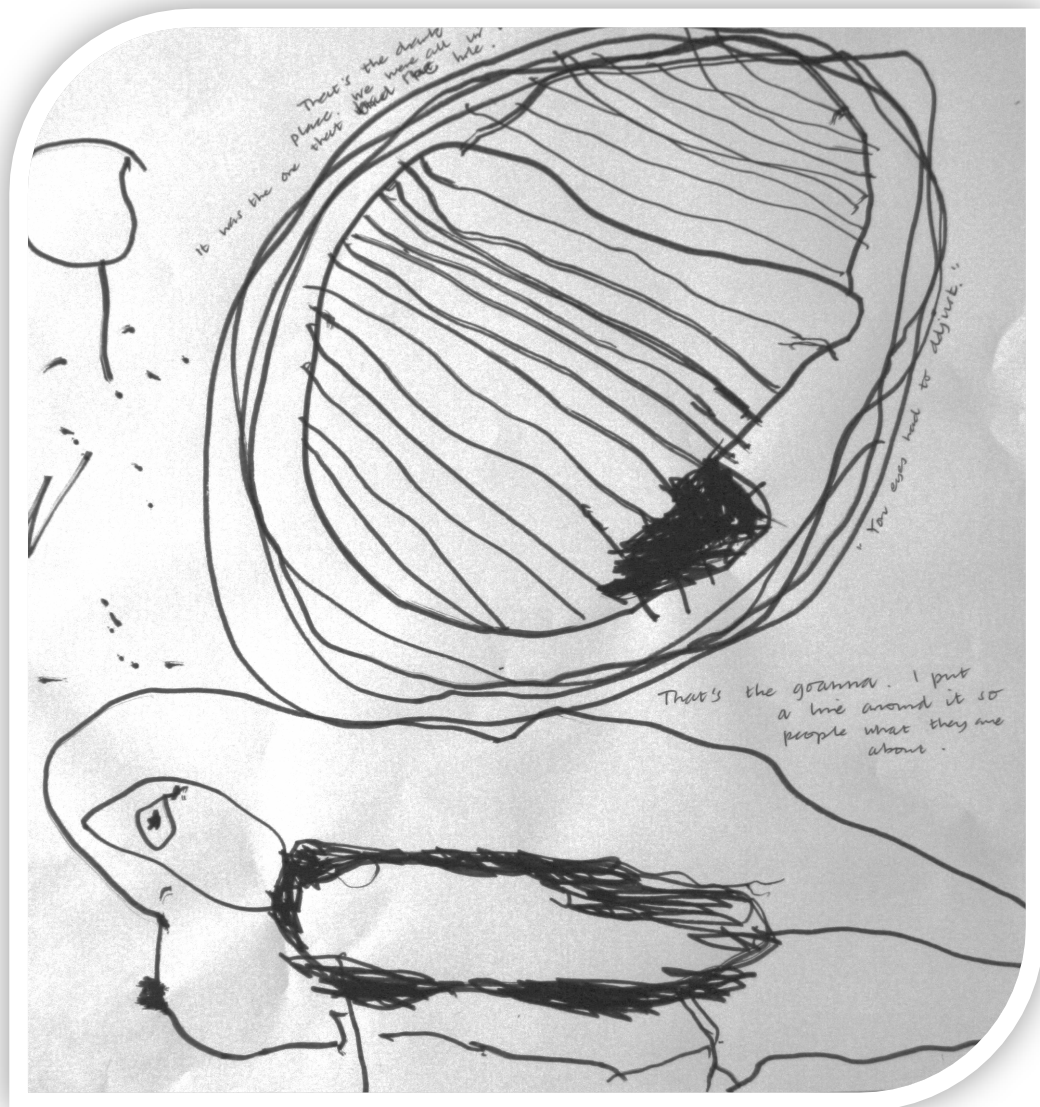*"I made a drawing of the goanna and I put a line around it to show the people what they are about".*

Figure 24: Toby's drawing of the goanna and watching from the dark place

Each of the narratives connects with aspects of movement, placement and containment where chickens, cows and goannas become emplaced, displaced and replaced in the territory in ways that shift across time and place, through the flows of life and death and the strategies and effects of speciesism. Important aspects of teaching young children about ethical compassion, responsibility and justice are not always prioritised when animals are emplaced as teaching aids and props for pedagogical consumption, as the learning of human child is the priority. Although each narrative is interpreted by each of these concepts, the concepts emplacement, replacement and displacement are bound in ways that makes their separation difficult as they tend to slip back during discussion, however the productive work of these concepts is not about separate definitions, but rather how they work to show the precarious nature of animal ownership that is always susceptible to disposability.

Troubling concept: Emplacement, replacement and displacement

Shadow

A troubling wind circulates supplanting insight as forces of life flow into normalised spaces
   Affective emplacement
    Creaturely replacement
     Socio-educational displacement

Animal em/re/dis/placement is taking place in the territory where children and animals dwell through continual cycles and rhythms of colonisation that brings awareness to power relations of inclusion and exclusion. For example, European colonisers emplace rabbits and foxes to Australia to hunt and mirror the aesthetic of Europe, to help them feel at home. The rabbits and foxes that were once displaced, replace some of the native flora and fauna as they become settled, emplaced within their new places of dwelling, with skills and strategies to make it home. The native flora and fauna become displaced as their habitats become colonised. Many are killed, some move to find new places and others resist, refusing to remain where humans put them and cohabit with other species.

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Dingoes for example, cross a border and become refugees as they are not only (dis)emplaced from geographical space but also from the purity of species as many become a dog/dingo hybrid who will be shot as a feral animal by 'caretakers' in the name of conservation. "Conservation biologists see a whole species, a category; a dingo sees an opportunity, a mate, a litter, a social life, a persistence" (Probyn-Rapsey, 2016, p. 20).

These troublings with emplacement, replacement and displacement show how the animal is always placed in education, (and indeed everywhere) as property that can be moved and relocated. Speciesism as an ideology infiltrates culture, education, and biopolitics of animal becoming food (Singer, 2017), acting as catalysts for the oppression, captivity and servitude inherent in human-animal relations. Troubling this ideology appears incomprehensible and Inquiry Process has to walk carefully in these spaces of environmental injustice so as not to become lost in circular interpretations that lose sight of the intent of the inquiry. To challenge, reconsider, reinvent and reconfigure would require "a field of inquiry that can aid our understanding of how the destructive pattern of exploitation is sustained, and therefore our understanding of how it might be challenged and one day, ended" (Cole & Stewart, 2014, p. 5). These movements of troubling and walking in circles leads to the formation of another sticky knot.

Troubling sticky knot: The masquerade of the kill

A creature's foil is its track. (Macfarlane, 2012, p. 13)

In the goanna narrative the teacher Kate makes the point that people are more forgiving to witness animal violence "when they see it as seem kind of cultural learning". This forgiving, silencing or denial becomes a sticky knot in this chapter that Inquiry Process is compelled to spend time with as it persistently assembles in the territory where children and animals dwell. Animal species leave tracks that mark their way in the world. The discourse of hunting has a term for when these tracks becomes disrupted by smells, water or disturbed ground that spoils the line of the track. The 'foil' is where the track is masked, covered, where a masquerade has occurred, and everyone is caught off-track. Western civilisation in urbanised countries like Australia conceals animal slaughter as a deceptive and mostly novel experience, rarely encountered by adults, and even less by young children who are sheltered from not only the experience of witnessing death, but knowing

they are consuming Animals. Hunting and fishing practices are places where children might be exposed to animal death and consumption.

As the oldest continuing civilisation, Aboriginal and Torres Strait Islander people have been living with sustainable and advanced food production systems for thousands of years, before and during colonisation. Bruce Pascoe's (2014) research from diaries and documents of early explorers discredits the myth that Aboriginal societies were primitive and exclusively nomadic hunter-gatherer societies, foraging for food and killing wild Animals, presenting evidence of agriculture, aquaculture, food storage, grain production and bread making. The children and teachers at the ELC are engaged with an Indigenous educator Angela, who visits each month, in a year-long focus with the children sharing Indigenous knowledges with the children through songs, stories and learning of Boonwurrung key words. Angela focusses on Indigenous processes where situating self in relation to community affiliation and place accounts for the importance of Country in knowledge production. For example, she brings a kangaroo skin to the ELC and talks about hunting and eating kangaroos. These discussions about meat consumption in hunter-gatherer communities, are not often extended to farmed animals by the teachers even though the education setting is located in a semi-rural locality with cows, goats, sheep and hobby farms in the vicinity.

The stickiness of hunting, killing and the production and consumption of animal species as food keeps circulating through territorial events, such as those represented in the three troubling narratives. These discussions also move through reoccurring questions and comments at conferences, where spurious reflections are made by academics who challenge critical ontologies for being too judgemental towards how others choose to live; even though no such criticism is given. Indigenous hunting practices like the trapping and skinning of the fox that appears in the critical becomings of chapter three are defended as harmonious interspecies existence, leaving the speaker(s) unable to speak, tongue-tied by the taboo of cultural injustice. My injustice is more important than yours. These "ways of summoning Indigeneity - are power laden" (Sundberg, 2014, p. 6) as they enable culture to trump cruelty. In sum, this switch and bait tactic compares world views across time and place, cherry picking contrasting ontological arguments and persuasive

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discourse to normalise and silence. This is the way of the human, with discussions from cultural relativism, the idea that ethical standards cannot be judged because each culture is entitled to its own beliefs and accepted practices. Comparing the global machine of industrialised animal agriculture that caters for the demands of accelerating urban dwelling populations, with food production from hunter-gatherer communities who live in remote locations; could be provocatively compared to the practices of female genital mutilation practiced often by women as a perceived important rite of passage for young girls that has traditional, religious and cultural value (Nyangweso, 2014), with the mechanistic enslavement of women and children who are enslaved in the global sex industry. Both practices harm young women, cause insurmountable suffering and support the ideology of patriarchal societies. This comparison would spark outrage that no child should be harmed in this way, but an ontology of animal liberation would suggest that no animal should be harmed in this way, for "if animals count in their own right, our use of animals for food becomes questionable, especially when animal flesh is a luxury rather than a necessity (Singer, 2017, p. 35).

These comparisons are simplistic and futile and raised here only to indicate how power works through the normalising discourse, that becomes ensconced with the double layer of silencing that cultural relativism brings. In this respect, Haraway (2010) is also not impressed with these correlations as "analogy can make us inattentive" (p. 320) to historical specificities and complex linkages of the actual events. The comparative value of human and animal life is a particularly difficult question (Singer, 2017) that creates circular road blocks as cultural values change within time and place and are therefore always messy, contextual and contingent upon how something is specified from a position of what or who we deem to be worthy of consideration. Paying attention to the context in which ethical questions arise is vital as economic and geographical factors impact choices that can be made. Cultural experience in this sticky knot are densely woven entanglements of force fields where substances, affect, matter and sensations are bound in the aesthetics of killing and eating Animals. The potential of critical posthumanist ontology is to walk the tightrope of both ontologies to know the connections and disjunctions. The potential is not to arrive at retrospective ethnographic accounts of what life is like for the people or animals of particular places and times, in the sense that perpetuates the myth of gender or speciesist binaries. The potential is also not to ignore the practices or skip across aesthetical details that reveal cruelty. Rather, such events are educational as they reveal

multiple pathways in the multiverse. To undergo this education is to join with others, to give the speaker at the conference a voice and let Toby speak in ways where his alternative thoughts "are part of an ongoing exploration of what the possibilities and potentials of life might be" (Ingold, 2015, p. 157). The response-ability is to shared futures that seek to minimise violence and injustice towards young girls and animal species, as both stories matter.

Larvae do you have insights here to help with this sticky knot?

Parnajarlpa   *I am the small sand goanna, there were 36 of us taken on this day and I welcome your concern. I fight for life as muscles battle with my fading neurosystem. Still fighting, hoping, thrashing tail whips back and forth until my neck is broken and life ends. The smushing and grinding of my mouth and tongue in the red earth releases poisons, our defence. We too are Martu. We have lived together for many lifetimes and we know and are known to each other. Soon I will join the Kurrurnpa spirits of plants, animals and people" Where were you when we ate the insects, mice and other lizards? Do you grieve for them?*

Red earth   *This venom is ground into my crust - this earth that spurns life. We receive the entrails and fluids of life with both gratitude and trepidation. Some harness and feed our energies and some poison and alter our composition rendering us inhospitable to life. This sand goanna's blood, tears and venom are welcomed, as the earth is fuelled and remade by these excrements of life – the blood, bone and soiled discarded excrements of bodies and souls that are buried within and laid bare on our surface. We are damaged by the drilling and explosive scars that are the aftermath of how humans 'eat the earth', greedily grabbing our elements to make the products of desire that when remade into plastics, spent uranium and hybridised chemical elements, cannot be digested through our ancient structures. Do you grieve for this?*

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Chapter summary

Three guiding questions of the inquiry are explored in this chapter. Inquiry Process troubles how place, and culture might influence the becomings of human-animal relations in early childhood, and what complexities are enacted when competing ethical concepts and practices are in play? The concepts of emplacement, being contained in an educational setting, replacement that troubles how animals become replaceable and displacement, the exile and eviction from emplacement and also how children's thinking can become displaced with the dominant discourse of the loving and killing of animals in childhood. New relational ways of teaching and learning rupture the data that attempt to step aside from anthropocentric speciesism to act, think, sense, and learn, with the named and unnamed territory animals. The third question is troubled by encounters with chickens as processes engaged with a cartography of chicken subjectivity and lifeworlds, that sought to find ways that animality becomes known in education through ethical relations.

Inquiry Process has travelled with a profound responsibility to confront the widespread implications of speciesism in this chapter, where an unsettling sticky knot leaves unanswered questions about the killing of animals. To trouble, to seek what might be helpful to face the political, philosophical, and ethical challenges of speciesism in education, especially in relation to thinking about environments and how human societies interact with animal injustice, oppression and violence. Building on the introductory ideas posed by Wadiwal (2016) of troubling hostile relations, to explore. What is just? What is hostile? The topography of being troubled, and becoming trouble appeared around corners, popping up in unexpected places as Inquiry Process becomes emplaced with animal bodies emerging as a reluctant 'trouble-maker'. Acknowledging the dominant forces, desires and ideologies at play within this research contributes to the conceptualisation and contextualisation of early childhood pedagogy where the paradox of cultural forces promoting the simultaneous loving of, and consumption of animals is being performed. Troubling is more than a model of inquiry, wonder and critique. It requires a relationality with darkness, hostility and violence for there to be any probabilities of hope to shift the scales of justice.

The discourse, behaviours and practices in early childhood education continue to move through territory in the next chapter as forces test the porosity of borders, becoming further diffracted with the in-between of space and time. Diffraction unfolds as celestial bodies meet, intra-actively with renewed energy that disrupt what is known - to hum, to feel, to care, to respond?

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Chapter ten: Diffracting the territory where children and animals dwell

Introducing earthly entanglements

By paying attention to the differences that matter without creating oppositions, new patterns of thought, interference patterns and 'superpositions' ...Hence, the diffractive apparatus is not about making analogies, or pulling together ideas in assemblages, but tracing some entanglements…(Murris, 2017, p. 103)

The territory expands with diffractive waves in this chapter that previously rippled across the surface of previous events, narratives and concepts. Here they take more time to be known in a more tangible sense as a means of thinking-with data events as entangled entities of body-mind-matter-seeing-feeling-knowing (Lenz Taguchi & Palmer, 2013). Inquiry Process holds on to the touchstone of slaughter and extinction from the troubling chapter, with a looser, less oppositional grasp, to trace the entanglements suggested by Murris (2017). Entanglements of intra-acting territorial milieus are always located within time-space-history and the two diffracting narratives in this chapter carry affective traces of how animals are revitalised as teachers and guides, becoming other(wise). In particular the notion of the Other is diffracted as pathways lead to the multiverse of "self-discovery, once the self has been recognised as the others within" (Ferrando, 2018, p. 267). This focus on socio-educational-material–historical assemblages comes together in unexpected and unpredictable ways (Fox & Alldred, 2015), demanding an exploration of how the creaturely and matter mesh through their engagement with data events generated in the territory where children and animal dwell. It necessitates a radical posthuman, post-individual theory, pedagogy and practice in education with a deeper up-close, understanding to "expose exteriorities within" (van der Tuin, 2018, p. 101). Inquiry Process pays attention to material, creaturely and celestial imbroglios, noting how the concept of roaming across body, mind, time and place affords an entanglement with 'Other', specifically with a pedadog called Kosi and the other(ed)wise counsel from the Larvae of a steelblue sawfly.

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Diffractive entanglement

Diffraction for Haraway (1997) and Barad (2007) is a practice of close encounters, not a distanced practice of reflecting from the distance of time or location, but of being ensconced in the world where the phenomenon of diffraction can be used as a conceptual and analytical tool for "attending to and responding to the effects of difference" (Barad, 2007, p. 72). Haraway (1997) affirms that ontoepistemological writing is inconceivable without a multitude of relations to the worlds we think with for "nothing comes without its world" (137).   Diffractive processes do not negate or reflect as diffracted readings of data try to circumnavigate dichotomous thought that compares and contrasts to provoke change from emerging patterns of discovery (van der Tuin, 2018). Diffractive analysis makes visible the in-between spaces and material-discursive aspects of the data so they become fractured into the active recognition of diversification, difference, the unspoken and the layers of movement and affect (Lenz Taguchi, 2012; Lenz Taguchi & Palmer, 2013; MacLure, 2013b; St. Pierre, 2013). The act of diffraction addresses epistemological problems of representation and knowledge claims that are saturated with humanist assumptions from the human container of the mind, that are mirrored in the form, function and past experience with material worldings.

Diffractive entanglements are used for what they do as a process of "cutting together-apart (one move) in the (re)configuring of spacetimemattering; differencing/differing/ diffe´rancing" (Barad, 2014, p. 168) as an entangled system is more about the whole, where parts become tangled, than separate parts. Diffraction is the "little bursts of energy in the machine" (Ringrose, 2013, p. 78). For example, particles act in separate ways, sometimes with polar effects, but a curious aspect of quantum diffraction is that the particles also produce wave patterns or forces that dissolve the separateness as relational forces entangle the parts or particles, revealing a deeper reality which is no longer separate from virtual phenomena, thought or materiality (Barad, 2007). Relationship and process, rather than essence and substance. As atoms, particles and cells crash into each other, they connect and entangle becoming mutually affected.

Inquiry Process has described the entanglement with trees and animal species and how Uexkull's umwelt characterises the entangled ontologies of organisms and how each

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umwelt cuts differently. This is similar to Barad's entangled phenomena where "every object becomes something completely different on entering and a different Umwelt" (von Uexküll, 1936/2001, p. 108). Diffraction also expands radical possibilities that rework the human in these entanglements, such as Sheldrake's (2007, 2018) morphic resonance that explores how forces are also inherent in plant, animal and human cells where life exhibits 'evolutionary habits' that intra-act as inherit fields of organisation where entangled morphogenesis organises those fields, into morphic fields and where the virtual and actual interact and intra-act, with the milieus of the world as "primacy of intelligent and self-organizing matter" (Braidotti, 2018, p. 1).

Becoming ecological

> *Admit that humans have crawled or secreted themselves into every corner of the environment; admit that the environment is actually inside human bodies and minds, and then proceed politically, technologically, scientifically in everyday life, with careful forbearance, as you might with unruly relatives to whom you are inextricably bound and with whom you will engage with over a lifetime, like it or not. (Bennett, 2010, p. 116)*

The becomings of the inquiry continue to shift underfoot as subjectivity is caught in simultaneous acts of becoming lost and found. The concept of dissection in chapter eight is carried forth in these becomings in a continual attempt to integrate my dissociated parts as creaturely becomings in chapter eight entwine with the shadows of the previous chapter that awaken to the sensations of the inquiry, laying the groundwork for becoming ecological. Writing in this way becomes an escape, a line of flight to dismantle the face and constraints of subjectivity. "To get away. To get away out!... To cross a horizon…" (Deleuze & Guattari, 1987/2004, p. 218). An earthly encounter brings life to ecological becomings once again as prior knowledge expands into something less bound to human illusions of control, myopathy and narcissism. Ecological becomings are filled with vibrant matter, with the intimacy that Bennett (2010) suggests moves in relation with others in the processes of difference, where illusions of separateness fall away and renewed perspectives of ecological justice shimmer with potential for how the collective is always in an interplay with something larger.

I am teaching university pre-service teachers about environmental sustainability in education trying to move beyond the default thinking (Elliott & Young, 2015) of recycling and worm farms to think-with ecological, relational and ethical perspectives.

The students have cards with provocations about water, air, soil and sunlight that prompt poetic responses from the group about relational links, such as, "we share the same water from the beginning of time, air provides conditions for life, soil is the skin of the Earth and the destination of all and sunlight navigates planetary life". Senses become nourished by this process. We think about the expansiveness of sharing the same water and air on a finite planet across eons of time and how this unfolds within educational contexts as a kind of intercourse with something much larger that starts to hum with the vibrations of the inquiry. University students who do not always engage with the topic of sustainability become invigorated by this teaching activity. One of the students for example, starts to use the term 'Earth roamers' as she plays with notions of relationality with plants, animals, people and the elements of life we are exploring. It is humbling and hopeful. Arne Naess (1973) defines the movement of deep ecology, as connectedness that enlivens our place as animals in nature. Hiroch (2013) extends this worlding to the human/nature divide in education that sidelines environmental education within social-cultural language wars, avoiding important re-imagining of the human to "move toward non-dichotomous ways of dwelling—materially and discursively—with the earth by thinking more "ecologically" about subjectivity (Hiroch, 2013, p. 18). Bonnett's (2015) vitality and political ecology of things seems to capture the energy in the shared moments of this classroom as we become not just a community of human agents, but return to the assemblage of material effects as ecologies of life that are also agentic, "perhaps developing an incipient sense of something existentially shared – such as a world" (Bonnett, 2015 p.49). Massumi strikes to the heart of becoming ecological with a reminder that nothing is only human, as humans are part of the whole where the 'more-than-human' is not outside in nature but in shared chemical, anatomical, cellular, physical and molecular worlding processes:

> *The more-than-human is not outside…Rather, the human - where it occurs to itself in nature – is in the middle, transected by movement which surpass it. Its existence is membranous and like all membranes, precarious. (Massumi, 2014, p. 94)*

Becoming ecological, as a celestial body that surrounds and enfolds in the vastness of time and space sets aside the subject. What I am is not just this. As an Earth dweller, it's as if this is my small-self that projects a time-bound partial view and Earth is the larger

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collective self in the Spinozist sense of being "under the aspect of eternity" (Spinoza, 1953). As the students and I mutually attend to the process ontology of breathing filtered, shared air and drinking distributed water, an interplay and exchange of elements is revealed that flows between material networks, nourishing the coevolution of Earth dwellers, for it is part of something bigger. There is a realisation of the ethics of the collective multiverse that is entangled with monism and pluralism (Ferrando, 2018) where the fleshy body, the subject/substance in this moment becomes lost in the knowledge that the subject is never alone and never one. Bloodlines shift to earthlines in ways that stay with the specificity of the body and the ongoing relationship of worlding. Becoming ecological expands Wilson's (1984) concept of biophilia described as the love of life, to love of Earth or Terraphilia (Oliver, 2017) that is grounded within relational ways of loving and belonging to Earth as a home with the more-than-human, open to the alterity of earth and earth-centric epistemology, rather than totalising ontologies of the separate, powerful human. This questioning of dwelling in the terrapolis of multispecies worlding (Haraway, 2016) of life and home is a reminder of finding the stories that matter in the terra-bio family.

Larvae   *Tracy, I have to ask what is the story that matters? You have travelled far in these becomings and there is no neat solution at the end of the road but how have you become diffracted?*

Tracy   *Larvae – where were you I called on you to help trouble the notion of killing and suffering in the last chapter - You were not there?*

Larvae   *I left you to dwell with it. Killing and suffering is hard, and I was not able to offer comfort or consult and I am glad you called on the goanna and red earth to speak.*

Tracy   *It's overwhelming as the practices of speciesism and environmental injustice can easily be mangled in the levelling hierarchies of posthumanism and new materialism that I have seen others do, so I walk on this precipice of paying attention to the coalescences, while at the same time attending to who the winners and losers are. I know there is a risk that the actions of the inquiry appear to have moved the human-other animal boundary to integrate mostly companion animals and this runs the*

	risk of reinscribing humanism as the ethical relations enacted through multispecies entanglements are easier with those animals we construct as mattering to us. I hope in the centralising stories of the lives of foxes, goannas, birds and fish that there is recognition that these too matter.
Larvae	*You are walking a tightrope here of novel thinking and critical interrogation that will always bring you undone unless you make them both clear, so they do not negate what you are trying to do as you become entrapped by spurious assumptions that bring everything back to human desire. Life in these ecological becomings does not fit a neat human figurative capacity that escapes the tough questions. Offer yourself to the process as you have with other sticky knots and roadblocks such as when you become the coloniser and see what happens. Let the waves of diffraction do their thing. Let them hum.*
Tracy	*Today I made an amazing discovery and I have to talk it through with you. I discovered that Deleuze (1968/1994) also theorised about larval subjects as "nested superjects cumulatively contributing their subjectlessly-subjective vitality forms to the integrally emergent survey of primary consciousness" (Massumi, 2014, p. 93). There is so much synchronicity that aligns with our entanglement in these writings and yet I have only now found this. How did this happen? Deleuze adopts the larval subject as a metaphor for transcendent otherworldliness and this is no surprise as you Larvae are creatures in a process of becoming, moving form as shapeshifters from egg-larvae-wasp, in a process of unfolding. These philosophical larvae are speculative yet linked with past events, are spiritual yet able to be in the present. This is how I perceive you and yet I had not read this work before.*
Larvae	*Aha now you are diffracted. See how these forces start and become entangled across time and place. You have not known this, but they are always, already circulating, and when you thought of an animal guide you tapped into these forces and also me as we have a history. Escaping*

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paradigms encoded by the dominant discourses of fixed realties is of course difficult and although they have fallen away for me, I am here plugging into being othered(wise). Stop trying to define what you think I am, or even who I know and pay attention to what I am trying to do. Diffracting amends, morphs, redefines, and rejects the confines between the human and the animal, which begins with blurring the boundaries between their bodies so animality is re-centred and humans embrace their creaturely ways as a willing act of empowerment and liberation. Speciesism in this way can be tricked, and its logic upended against itself, so discourses become subverted and the trickster unmasked. Perhaps we are both now ready to share the story of my killing?

Diffracting narratives

Diffracting narrative one: Larvae imaginaries

I came to mind when you first thought of embracing an animal to help. You were overwhelmed with the scope and quantity of data and grappling with how to do make sense of it all, once you turned towards the postqualitative analysis that you are so taken with. I am a link with the past and present as we are knotted together, where we are no longer of this world and yet in this world. I am the energy of the many that died, the offspring of wasps yet to form a cocoon, so my earthly transformation is incomplete and yet, you can sense that I am able to assist. I provide an entity to become-with, a complex natureculture consciousness, whose time-space, and cross-species possibilities allow us to explore data events as situated knowledge in these travels to the unfamiliar.

The children and people at the early learning centre called us caterpillars but we are really the larvae of the Steel-Blue Sawfly (Perga dorsalis). We larvae are so plentiful and gregarious we can be found in knotted ball-like masses where we gorge on Eucalyptus leaves and tap our tails to communicate with kin. There is safety in our collective numbers and if disturbed, we band together to protect the group as we wriggle our abdomens to exude a mustard-coloured fluid from our mouths, that helps to deter predators and parasites. Although your kind thinks this

fluid has an unpleasant odour, we are quite harmless to humans, even though you name us 'spitfires', we do not sting, as our cousins the communal wasps do. We like to cluster together in masses at the beginning of each day where our bristly, black bodies squirm and intermingle as we become reacquainted. At night we spread out in search of foliage and return to the same home groups as the sun rises. Most of us are females as we do not need to mate to lay our eggs, so we are also emblematic with your attachment to ecofeminism.

For some time on our earthly plane the caretaker, whom you have met, considered us a pack, and when we grew in numbers we became a pack of pests to the trees, the trees we were eating. The caretaker said the only way to address the problem is to make a pesticide from our crushed bodies. Our bodies were turned against us as small children pulverized our gastric tracts to extract bacterium (Bacillus thurinigiensis), a potent ingredient in the biological spray that led to our deaths.

Kate called you Tracy and said she was worried as "we were taking over". She was unsure what to do and I know you regret not doing more. Kate turned it over to the children for discussion as she always does and was surprised that most children thought we should be killed as "we were taking over the world". Some children were distraught when it happened and remorseful the next day. "We were killing them, even I did it" one little girl expressed with a sense of surprise and excitement. I know through our relatings we have infected each other as we evoke the multiplicity of more-than-human powers that exist everywhere, across time and space, including within our larvae-human-bacteria bodies.

Larvae resists representation of a corporeal form dwelling as a liminal 'post' creature, no longer of this time and place, or subject to earthly or human laws. Larvae knows what it means to be a shapeshifter to be a pupa, moth and possibly human as metamorphous states become diffracted from a solid mortal plane that the biologist Stephan Jay Gould outlines are always, already there in the imaginaries of larvae bodies:

> *In insects that undergo a complete metamorphis, cells that will form adult tissues are already present in the bodies of larvae as isolated patches called imaginal discs... I read 'imaginal' as imaginary... Imaginal discs,*

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by both etymology and concept, are bits of higher reality lurking within initial imperfection – no sign of "let's pretend" here. (Gould, 1986, p. 10)

Death has released Larvae from such worldly constraints towards a virtual plane, free from power hierarchies, marginalisation's of difference and the category of pest. Inquiry Process struggles, as writing the unknown of the creaturely is limited by language in ways that highlights the failure of language. Making sense and defining in this way with words has the habit of losing something, where Larvae runs the risk of becoming glorified in death or imagined as a spectre. Once it became clear that Larvae does not require intervention or the logic of thought, Inquiry Process learned to get out of the way and let the collective imaginaries appear and be mutually sensed. "The articulation of an otherwise inconceivable concept can only be brought about by a work that does not think" (Wood, 2013, p. 18) or attempts to thinks other(wise).

Inquiry Process continues to wait for cracks in the structural fault lines to appear, at the intersections of the human/animal binary. The following narrative with Kosi the resident school dog offers possibilities for creaturely-sensorial-material entanglements that become other(wise) as they roam with the complex relations present in everyday learning encounters.

Diffracting narrative two: Kosi the pedadog

Today as we pull on waterproof pants and gumboots in the midst of winter, in readiness for the outdoor education walk with Kosi and Joe within the large school landscape. We wonder where we will be going. Will we look for nests or trace the water trails that lead to the lake, will we explore grasslands, the forest of dead trees, animal homes, or the tall mound of earth that the children call 'the mountain'. Scarlett states how she loves Kosi and is not scared of him anymore. Kosi is eager to get going, letting us know his position of impatience, with occasional barks to hurry up, hurry up. Kosi is staying with us more than usual and not roaming away as he tends to do. I wonder about this shift of behaviour because he often meanders through this unleashed space in the way of the wayfarer, searching for interesting smells and the opportunity of finding a rabbit in the overgrown areas of blackberries and scrubby uneven bushland, where they have taken up residence. Perhaps it is because we are venturing over flat terrain

and he is less distracted or perhaps he is enjoying staying close with the children. He often mirrors their actions and the children pay close attention to him. As William, one of the children strays from the group and is reminded by a teacher of the rules of staying together, Kosi also disappears and has to be called back.

Figure 25: Kosi and the children share the joy of learning-with puddles and sticks

Kosi is taking the lead and some of the children follow him through large muddy puddles as their animal bodies share the joy of unrestrained running, laughing, shrieking and jumping in their gumboots with joy and delight. It is impossible not to share this unrestrained joyfulness as Kosi runs through splashing everyone and then suddenly drops in the middle of a large puddle, lying down for a while to cool off. He runs back and forth across the water, not straying too far as he returns time and again to our group. He finds a stick and his pleasure is amplified as the children call out to him as he runs back to show us. "Look, look, Kosi has a stick" This stick is a large branch and we have to duck to avoid being scratched. I remind the children "Look how Kosi enjoys playing with sticks like you do". The children collect sticks to give to Kosi and he takes them eagerly running off and throwing the smaller ones in the air in his own game of throw and catch. After a while the children follow his pattern of running through the puddles and throwing sticks in the air. Holly holds onto her stick creature she has made by tying a leaf around it and the parallels and differences of dog-child stick play sensory

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practices are on display as specific sensations, feelings, or modes of experiencing the world by touching, hearing and feeling breath.

Figure 26: Holly becomes entangled with movement, puddles and sticks

Diffractive roamings

Kosi is a two-year old border collie who lives in a house within the school grounds with Joe and his family, who has worked and lived at the school for over twenty years. This unique lived situation opens up rare border spaces in education settings where a dog is enabled a level of freedom and privilege that facilitates dog/child/stick/water entanglements. Kosi is free range and allowed to roam, as are the children who are also offered a level of freedom and privilege to run through puddles, play with sticks and get wet and dirty. As explored in the traversings of chapter five, borders control spaces through enactments of inclusion, exclusion, and dissociation of who has access to place. Mobility enables the entanglements of species, bodies, objects and landscapes. To roam is linked to being free in terms of domestic animals. To be free to roam is the domain of some animals and even farmed animals like chickens can 'range free'. The freedom is always implied as given, however there are limits to this freedom. Animals who are 'free to roam' are usually on land that is owned or subject to round-ups, cullings and restrictions that usually end badly for the animal. The affective materiality of containment devices installs borders and boundaries between animal and child such as cages, dog and cat beds, aquariums, leashes and fences that restrict and control animal leakage through the control of movement, mess, parasites, sexual desires, 'difficult behaviour', and in turn

animality. Inquiry Process wonders does the child/animal boundary also keep the peace in the war against animals and would there be chaos without it? Who might benefit from the chaos – would it be mutual? At the moment Kosi is free while he obeys Joe's commands, maintains his presence within the school boundaries and brings delight to the children. He is young and energetic. If he gets old, incontinent and snappy it may well be a different story, but for now, Kosi is an Earth roamer whose position is valued and appreciated. He brings an eighth positioning to the territory that assembles as the 8th P, that of a pedagog who joins the animal positioning in the territory of pal, pet, pest, pack, product, post, and prop.

Material elements permit mobility such as the children's gum boots and wet weather clothing that enable them to run through puddles in winter and Kosi is also unleashed. Materiality also appears in the sticks that the children and Kosi play games with, sparking reminders of how Pauliina Rautio (2013) writes about the stones that young children similarly carry in their pockets, and a dog who carries stones in her mouth from the beach, leaving them in a pile in the car as though she is creating an art installation of multiple beach walks. Embodied physical actions and sensations help to bring attention to some of the ways place is shaped and shapes the ways children and dogs habitually carry stones and sticks, they are held by mouths or caressed as they move across small hands and stored in clothing like belts and pockets that become storehouses of such treasures. For Rautio (2013), the stones are 'autotelic' as they have a possible purpose embedded within, that may not be known, but are felt as a desire to collect. This is how the in-between dwells in these assemblages of dog-child-stick-water, that appear as futile because they occur so frequently they can easily be overlooked; and yet there is shared multi-senses joy in these material relations that Inquiry Process is eager to explore after spending so long in the shadows. Autotelic practices have value for the creatures that choose to partake in them as an enjoyment of being that grounds them to the present, teaching about the differentiation of the world in the here and now. In this way the human is not the only one who teaches, for as we have seen Kosi is also a pedadog and as Rautio suggests the sticks, water and stones are also agentic teachers. "Stones play with us if they are flat in the right way. We throw them onto water to make them bounce – just to make them

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bounce. And if our co-operation is optimal they bounce quite a few times" (Rautio, 2013, p. 404).

Kosi was named after an Australian rules footballer and abounds with the energy of this popular local sport. He loves to be in water and has an ability to take his human companions with and through water in ways that seep within relational boundaries in this territory where children and animals dwell. Kosi is an unpredictable roamer who takes every opportunity to swim across the school lake onto the island in the centre, urged on by cheering children and parents who catch a glimpse of him. He breaks rules, walks off leash, he is uncaged, not abject, he makes decisions, works with the children and generally fulfills his role as pedadog. He has the starring role in the escapades of his life that proliferate in the school community, where everyone has a Kosi story. He is obviously not a child, but an animal species accorded privilege who shows the children a different image of the animal condition. Foucault did not theorise directly about human-animal relations however his theory of biopower (Foucault, 1982a) and analysis of power can be applied to this narrative, particularly as Kosi provides moments of resistance from institutional 'pastoral power' that regulate and discipline the lives of humans and animals; enabling Kosi to act and resist relationships of domination (Palmer, 2001b).

For Levinas the idea of facing the Other in search of responses that expose bodily presence, speech, gesture, and (re)actions, is an ethical call for benevolent reciprocity. Although he was also not directly referring to human-animal relations the responses he describes are transferable in the sense that direct human-animal contact has the capacity for educational intra-actions that are achieved through embodied experience.

> *To approach the Other in conversation is to welcome his (sic) expression,*
> *in which at each instant he overflows the idea a thought would carry away*
> *from it. It is therefore to receive from the Other beyond the capacity of the*
> *I, which means exactly: to have the idea of infinity. But this also means:*
> *to be taught (Lévinas, 1969, p. 51).*

Kosi has always shared his life and school work as a pedadog with a human companion and his photo at the top of the staff noticeboard, alongside the photos of the eighty teachers, is a testament to his position at the school. Kosi is privileged by the school community and children who see him as a friend, playmate and they relish in his energy and playfulness. He appears in their drawings and conversations with family members.

The children take turns at being Kosi in their dramatic play, telling me that there can't be two Kosi's as they take turns asking, "Who is Kosi today"? Kate the teacher identifies in her interview many ways that Kosi is a pedadog, including helping three-year-old Scarlett move through her fear of dogs and prompting Joe to adapt his teaching as he relates with younger children.

> *Kosi has been coming to visit each week since he was a puppy for over a year now. We would be walking as we do each week and he would escape to join us. He was still quite big, but with puppy behaviours where he was 'out there' and a bit ratty and would run wild. He would find us on the walks and the children loved it but of course Scarlett was terrified, and she would scream, even when he was on the lead. We noticed how this was a really important learning opportunity for Kosi and Scarlett. We suggested to Joe who is a secondary trained teacher, that we trial bringing Kosi to the weekly outdoor education lessons. The surprising part of this practice was not how quickly Scarlett got used to Kosi, but how he became a conduit for Joe to build stronger relationships with the early childhood children who he was previously a little unsure of teaching. Kosi has been really important in developing tangible ways to show Joe how to communicate with the children in his teachings, such as being more patient with their restlessness. Like he is with Kosi.*

Kosi as an Earth roamer emerges and is made and remade taking on multiple roles in the school as staff member, coach, companion, family member, swimmer, rabbit chaser, fear therapist, communicator and play specialist. He challenges the usual hierarchical position of the animal in educational spaces. Despret (2016) attends to convergences and divergences between species demonstrating how human and animal collaborations can work against the oppressions of human dominance, when the right questions are asked, and if positive relations are in place. Kosi shows the power of these positive relations and how an affirmative approach shifts the positioning of human and animal. Closer interpretations of these narratives show how the relationality of power afforded to Kosi, enables this practice to take place, as a being who responds and reacts with the ability to teach Joe how to relate to younger children, Scarlett to love and not be scared of a dog, teaches the children that they have a shared enjoyment of water, sticks and running free and most importantly offers the school community a remaking of an animal in education as a pedadog. He is not trapped or contained all of the time as the object of study, for when animals are "denied the possibility of reaction, they pass from the category of the

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'reactive other' to being a 'thing' over whom capacities are exerted rather than power relations exercised" (Palmer, 2001b, p. 354).

Kosi demonstrates an alternative integration of animals in early childhood education and the larger school community, where the children and young people are presented with an agentic image of the dog who brings delight to children, educators and parents. Through his ability and the permission granted for him to roam Kosi reveals ambiguities and contradictions that are very different to the discomforting examples of animals, presented in previous chapters. Kosi and this school where field studies take place enabled such possibilities of a free animal in action. Inquiry Process has been critical of the how the needs of the human child are always put first, even before the death of the animal. These stories diffract and enter the ethos offering affirmative ways to advocate for a pedagogy that unsettles anthropocentric imaginings and human superiority in the learning places of education.

Diffracting concept: Roaming

The concept of roaming articulates the movement and flow of material and ecological forces that travel in and out of material and ecological worlds with unseen, elusive and often unknown fluidity. Roaming enables Inquiry Process to wander over unsettling and complex terrain, especially as prompted by restlessness and curiosity to become other(wise). Inviting others to roam the borders of human-animal as children do with uncertain configurations, through the restless and curious wonderings of childhood that diffract the territory where children and animals dwell to make visible what is othered. Learning how to roam within boundaries of the human-animal divide helps to blur the borders by tracing the many ways Earth roamers are evolutionary cousins, where possibilities exist for discovering who we are in our shared sensing, doing, becoming and knowing. Diffraction helps to challenge dualisms of nature/culture and human/animal toward more complex re-situating of power. This shift is essential for understanding the varied ways that power circulates in the territory, as fracture lines are contextual and appear with different configurations with culture, nature, and animality. This complex picture of power relations requires careful analysis of how power dynamics roam through each situation.

Roaming pedagogy

From this interpretation of the concept of roaming and with the teachings of Kosi as a pedadog, and larvae as othered(wise), a critical posthumanist ontology of teaching and learning in early childhood education embraces thoughtful, radical departures from normalised ontologies of education, conceptualised as 'roaming pedagogy'. Inquiry Process has continually aligned the foci of the study with movement through analogies of travel that integrate shifting theoretical and methodological terrain where becomings set free the human body and mind and associations with unsettling nomadic guides encourage wondering (Snaza & Weaver, 2015) and wandering in the territory where children and animals dwell. To this extent, Kosi demonstrates the potentia of such freedoms that not only enriches his life experience, but also elevates who and what he is able to become in his relations with the school community. The unleashing of creaturely bodies that are mostly contained and controlled is central to the question of the Animal condition. The world is experienced in embodied ways and what it means to be mobile, to act, and relate, are the central questions of enhancing multispecies lives. Animals in education settings who are able to roam are able to express animality in ways that teach children who they are in relation with Earth roamers, with a shift "from learning about animals, to learning with, from, and for them" (Dinker & Pedersen, 2016, p. 420). This is a stark contrast to those who are contained, re/dis/placed or dissected. Roaming pedagogy integrates three propositions for early childhood education namely: justice, an ethical framework and relational (re)makings. Each point will firstly be discussed, followed by indications of what these 'makings' could look like in early childhood education.

Just power relations

Pederson provides insightful guidance from her studies in education as she asks how human-animal relations, posthumanism and theories of education "can be reworked within a common realm of critical inquiry (Pedersen, 2010b, p. 247). Dinker and Pederson (2016) outline an approach to 'unthink' the human in critical animal pedagogies as 'vegan education' that does not exclude ethical encounters with animal species but is "always attentive to the animal perspective" (p. 417). MacCormack's (2013) abolitionist stance to educational speciesism is conceptualised as 'gracious pedagogy', where the concept of grace as a powerful act of humility, enables something else to enter and transmute a

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moment to something better, "teaching ways to unthink the self in order to open up the thought of the world" (p.13). Gabardi (2017) describes this approach as part of the 'next social contract' as one that structures "the ethical and political prioritization of animal life on par with that of humans' wellbeing" (p. 2). Despret (2013a, 2016) describes these (re)makings of human-animal relations, with examples of mutual attunement, a passionate, bodily with-ness that depend on the availability of the bodies to each other, understanding how practices move through affect.

Power relations are at the forefront of roaming pedagogies "that materialise in the intra-action between/with the material and discursive" (Jackson & Mazzei, 2012, p. 265). A focus on power relations and a relational (re)making of human-animal relations attempts to unshackle the logic of educational speciesism, seeking ethical, unknown possibilities of learning and living together. Paying attention to power in these relatings has been a practice of this inquiry and knowing that power will always be displaced and supplemented by other manifestations of power, shifts the perspective to contact zones of power in the territory where de/reterritorialization occurs in shared spaces that are always moving.

This nomadic approach (Braidotti, 2015) integrates critical theory to trace the landscape of the past, to analyse how practices in the present "adequately account for the brutality and the violence of our times as well as for their creative potential" (Braidotti, 2012, p. 18) in the future. For example, an examination of teaching and learning events shows a pedagogical pattern where decisions about sovereign power, the choice to take life or let live (Foucault, 2003) are handed over to the children. This occurred with the killing of the blue swordfly larvae and during the fishing trip where children could choose to keep the fish to eat or throw them back in the sea. The freedom of thought and choice of action might appear in these examples to adhere to roaming's that are fluid and uncertain. However, they are tipped in favour of human desire and this means children are offered choices that are only ethically examined by teachers in a superficial way and notions of speciesism, violence and animal liberation are not part of the decision-making process for teachers or children. As Pedersen (2010a) suggests, "the analysis of such processes and practices of socialisation in formal education helps shed light on the development, consolidation and reproduction of human-animal relations in society at large" (p.115). Inquiry Process continually questions how the Animal is included, never settling on a

clear response to a common response "should teachers bring live animals into education settings as classroom animals"? For MacCormack (2013) the response is always no we should not for "if we are to encounter the nonhuman without being parasites, the grace can only come from leaving alone" (p. 15).

An ethics of unsettling indecision

Inquiry Process also becomes unsettled by notions of roaming in colonising terms, settling into worlds that humans are taught from birth to conquer, consume and dominate, acknowledging the difficulties of unsettling and bringing into question dominant, normalised practices. Animal liberation is not just about the abstinence of animal consumption; it is about the ongoing struggle to identify epistemologies of consumption and take steps that lead to cultural and educational change to impede violence. Roaming pedagogies acknowledge that moving through affect in early childhood education is troubling because the loving and killing of animal's take place concurrently and seamlessly, where families and teachers shield young children from this violent conundrum of loving and killing. Derrida's (1967/1997) 'double reading' is helpful with the first reading of a dominant, stable practice and secondly with a critical interpretation of this practice. For example, a tension exists in the common practice of children loving animals as companions in education and family homes where animals are co-opted to teach children how to be good humans who care and nurture. Simultaneously animals are being harmed in this process through disinterest and the poor attention given to animality and animal welfare such as with the chickens outlined in the previous chapter. The double movement here is one of tracing and deconstructing this tension in the discourse of companion animals or animals under study, while at the same time acknowledging the ways in which our understanding of the world is dependent on colonising and enslaving animal species, even those we love as pets. Levinas (1969) conceives of the Other through reason and his ethical obligation, whereas Derrida (1999) introduces the concept of undecidability, where notions of unsettling human-animal boundaries require the slow indecisiveness of ethical dilemmas:

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There would be no decision, in the strong sense of the word, in ethics, in politics, no decision, and thus no responsibility, without the experience of some undecidability. If you don't experience some undecidability, then the decision would simply be the application of a programme, the consequence of a premiss or of a matrix. So, a decision has to go through some impossibility in order for it to be a decision. If we knew what to do, if I knew in terms of knowledge what I have to do before the decision, then the decision would not be a decision. It would simply be the application of a rule, the consequence of a premiss, and there would be no problem, there would be no decision. Ethics and politics, therefore, start with undecidability. (Derrida, 1999, p. 66)

The process of diffractive roaming with pedadogs like Kosi, shows the benefits of inter-species experience in the pursuit of staying present to find new narratives of multispecies cosmopolitics as sympoiesis (Haraway, 2016). Inquiry Process moves slowly as data events that deny animality cast an unsettling air of caution, as the quest for the 'new' in posthumanism rationalises familiar tales of privileged human-animal relations, rather than acts to minimise the injustice that prevails through speciesism. Dinker and Pederson (2016) also distance themselves from certain aspects of posthumanist and new materialist education research where mutual entanglements between children and animals become "new euphemistic instantiations of human narcissism and desire for knowledge and meaning-making, rather than formations of genuinely ethical relation" (p.27). Kemmerer (2011b) maintains there is always a problem with the vested interests of human theory and methodology when studying interspecies relationships, as they are never based on equitable relations. For example, posthuman paradigms that entangle the human, machine and animal as hybrids or chimeras in techno-scientific representations are in danger of homogenising difference in the metaphor of the 'melting pot' that dehumanises, deanimalises and devitalises in ways that are not conducive to 'liberating encounters' (Lorimar, 2010).

The posthuman practice of imagining alternative shared worlds is helpful, however a critical need has been made by Inquiry Process for partnerships between exercises in thinking and action required to remake better worlds for animal species. This requires more than observing entanglements of children and animals and teaching young humans how to ethically listen and attune with Earth Roamers, whilst at the same time seamlessly supporting and condoning speciesism. Despret (2016) poses the question "what would animals say if we asked the right questions" and Pederson and Pini (2017) are uncertain

if we are capable of listening in this way. One of the conditions of such listening is to see ourselves as allies and not on opposing sides.

> *If we do this, we may hear that the priorities of nonhuman animals differ from our own preoccupations and also that the interests of various nonhuman animals differ from one another. When we listen to animals wellbeing and liberation, we don't get stuck in human-constructed deadlocks and are therefore more free to be their allies. (jones, 2015, p. 98)*

Good intentions are not enough to advance ecological justice, unless an ethical framework is part of a critical process that exposes the connections, disjunctures and intersections of loving, living and killing of animals and does not lose animal bodies to theoretical abstraction. Roaming with Kosi highlights power relations that "move from an ethics of sameness, through an ethics of difference, towards an ethics of relationality and responsivity" (Oliver, 2010, p. 269). Roaming pedagogy embraces multiple theoretical perspectives including an ecofeminist ethic of care as affect, connection, sensitivity, relationships and nonviolence (Gilligan, 1982) that balance the prevalence of 'matters of fact' with 'matters of concern' described by (Latour, 2004b). Gruen (2015) conceptualises entangled empathy as a central skill of ethical relations as ways to "connect with a specific other in their particular circumstance, and to recognise and assess one's place in reference to the other" (p. 67). These entanglements must start with teaching and learning about the human animal and human responses towards Animals, who as Pedersen & Stanescu, (2014) point out have been studied enough. Roaming pedagogy is therefore reliant on a contextualised, ethical framework that embraces Earth roamers as citizens with individual and shared lifeworld experiences and desires, whilst acknowledging the injustice that takes place in these shared communities. "Blended communities of humans and animals real and imagined – are both the medium and means of posthumanist ethics" (Gabardi, 2017, p. 115) and roaming pedagogy requires imagination that posits all Earth dwellers as vital and vitalised members of a multispecies 'community of knowers' (Fawcett, 2005).

Relational (re)makings

The oppression and commodification of animal species in early childhood compels Inquiry Process to not just (re)imagine common worlds pedagogy, or to rethink the basic

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tenets of human interactions but to take steps to (re)make relational ecologies of early childhood education by (re)configuring ways of living together with ecological justice in both mind and action. Roaming pedagogy is deliberately open-ended. The complexities of educational speciesism are entrenched and normalised and exact solutions that propose resolutions are less helpful than those customised to the contexts of the education setting. Remakings of an affirmative pedagogy of discovery, must not dictate, nor only offer critique as the focus is placed on the collective institutions of addressing power and injustice in ways that involve children and teachers in the collective discovery process. As such, roaming pedagogy is less about teaching a list of things that can be added to a curriculum and more about trying to create spaces where just relations with, and as, animals can flourish. Such a remaking requires a radical rethinking of the purpose of education, requiring analysis as a process that continually questions humanity and animality. (Re)makings are therefore illustrative examples of praxis, rather than neat solutions, as precarious and slippery crossings abound in these pedagogical shifts.

Roaming pedagogy assembles through this inquiry with the following guiding propositions:

- That the ethical is front and centre and not an afterthought. Ethical thinking and practices are aligned with interspecies and ecological justice and this is woven through curriculum on a regular basis through discussions, projects, story, music and creative arts.

- Power is explored with the concept of speciesism that shifts the way the Animal is currently represented in early childhood education, trapped by humanist frames of mind as educational tools and subjects of inquiry. Knowledge of Animal lives and not just the will to know is explored with roaming pedagogy. For example, analysing the actual life condition of farmed animals in the food production system with an awareness of the masquerade employed by business and culture to conceal and defend cruel and harmful practices. In early childhood this needs to be sensitively adapted to the emotional needs and readiness of children that early childhood teachers are well acquainted with when teaching road safety or child protective behaviours.

- Children are taught skills of caring, compassion and sentience in ways that attends to creaturely bodies, both human and more-than-human. Animals are known to have agency and the desire to live in ways that support their lifeworld's. What kinds of lives would animals want to live, what kinds of relationships, if any, they want to have with us, and whether our interactions with them bolster or inhibit their ability to lead such lives. Acampora (2006) conceptualises this as symphysis "experiential principle of conviviality" (p. 78) between bodies, that emphasises the corporal component of how creatures' sense and make sense of others.

- A 'Council of All Animals' (Seed, Macy, Fleming, & Naess 1988) is a helpful group activity where animal figurines or photographs are chosen by each child as a prop to step aside from their human identity and imagine with and for another life-form. This is a useful way of raising provocations such as what this animal species may want or be trying to share about Animal sentience, not only with the propensity to discuss suffering, but also the joy, pleasure and connectivity that human and the more-than-human may experience.

- Studies of extinctions described by Bell, Russell, and Plotkin (1998) offer helpful foci about extinction in terms of the stories, concerns and experiences of children and young people from a local and global perspective. Local phenomena could be explored such as what will happen to the animals who live in the forest of dead trees when the land is remade into a golf course? This leads to global phenomena, such as how habitats are destroyed for human use. The children can then explore solutions designed to minimise cruelty, reduce habitat loss and question what it means when land is used by humans is this way.

- Attuning with animal behaviour (ethology) and communication as one of different-wonder and not deficit-wonder or indifference is vital acknowledging there is much that is unknown to humans that is known to animal species. Animality and ontology are questioned even when we are not sure if they are present by wondering how they could be – by (re)imagining, (re)making and

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(re)creating. For example, Fawcett (2000) suggests that children get to know a local creature such as an ant, pet, bird, or mouse to observe on a daily basis and create a journal to trace their shifting kinship relations. "It is in the fullness of such attention that possible new ethical relationships lie" (Fawcett, 2000, p. 146). Gannon (2015) also explores the impact of a degraded lagoon on the lives and deaths of creaturely inhabitants where "open-ended interdisciplinary inquiries enabled students to choose a range of modes of response including a rap song about the 'rescue' of a swamp hen, a picture book that documented the passage of eels from the Pacific to the urban wetland (p.1).

- Attending to animal naming and the use of language, communication and personal pronouns helps to think through what these are and what they do. If teacher's change the way, they use gendered and othering pronouns a shift is possible from objectivity to sensitivity and subjectivity.

- Diffracting the processes of environmental response-ability as entangled worlds with children and teachers offers expansive scope for transmodal art projects and community activism and advocacy that entangle children and animal species in ways that decentre the child.

Chapter summary

This chapter takes a detour from the critical posthumanism binary to diffract the inquiry. Othered(wise) life forms such as Larvae and Kosi the pedadog assemble to guide pedagogies of hope and resistance bringing new becomings that welcome hum(an)imal relatings. Becoming ecological is part of this diffraction along with prior becomings that cultivate a heightened sense of response-ability that fracture with cosmic consciousness that shifts the inquiry. This chapter attempts to move beyond pathologising discourses of children and animals in early childhood education that moves from the predominance of the human subject in childhood research. These discourses romanticise child-animal relations, emphasise educational lack of skills, desires and developmental knowledge in both human and animal and perpetuate speciesist relations. The theoretical drivers of the inquiry are challenging as new ground is explored where hum(an)imal relatings are studied in motion and entangled with others.

Diffractively engaging with knowledge resists becoming stuck in familiar ways of thinking and doing and the concept of roaming plays with ideas in this chapter of how knowledge is materially-ecologically-discursively produced. This ignites propositions of where pedagogy can roam as the connections and disjunctions that assemble in the territory become known. As a research practice, diffractive interpretations unfold through one another, building new insights of the ethics of difference, that is always entangled with others. This chapter questions how might early childhood education (re)make possibilities for ethical relations and ecological justice through multispecies entanglements? As Barad (2010) suggests entanglements are "not a name for the interconnectedness of all being as one, but rather specific material relations of the ongoing differentiation of the world' (p. 265) that allow for engagement with ecological issues through tending to uncertainties and learning to be affected by what emerges. It is an opportunity to ask and enact what is beneficial, what is safe, and for who, as a consequence of the world? An opportunity to cultivate an ethos for becoming unsettled, curious, obligated, and responsible with precarious life on a damaged planet (Malone et al., 2017).

Roaming pedagogy is adopted in this chapter to disrupt the human-animal divide that colonises and commodifies, in search of porous border spaces that ignite alternative ways of thinking alongside the Earth, the animal, the material in education as a profound political act (Wallin, 2014). The entanglement of affirmation and critique offer alternatives that resist the humanist urge to empower, and transform, in favour of attending to and making visible what is already happening in the everyday of these entanglements, to explore what they do, how they feel and how they affect. Actively troubling the intersections of species boundaries with children enables teachers to co-construct action with ecological justice that remakes novel ways of being in the world. Inquiry Process carries these (re)makings forward to the final chapter as they become enmeshed in the final (re)imaginings of the territory where children and animals dwell.

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Chapter eleven: (Re)imagining the territory where children and animals dwell

Introducing the how else

> *What is Imagination? First: it is the combining faculty. It brings together things, facts, ideas, conceptions, in new, original, endless, ever varying, combinations. It seizes points in common, between subjects having no very apparent connexion, & hence seldom or never brought into juxtaposition. Secondly: It conceives & brings into mental presences that which is far away, or invisible ...It is that which penetrates into the unseen worlds around us, the worlds of science. It is that which feels & discovers what is, the real which we see not, which exists not for our senses. (Lovelace, Ada, 1841, cited in Toole, 1992, p. 237)*

In 1841 Ada Lovelace, was able to make imaginative leaps between poetic, metaphysical and mathematical worlds that initiated the first imagined possibility of computing. This took place during a time of prevailing perceptions that it would be biological impossible for her sex to do so. She describes imagination as the discovery that brings together the haecceities of the world as the analytical engine is able to "bridge reality and the world of ideas" (Forbes-Macphail, 2013, p. 148). This is reminiscent of Deleuze and Guattari's (1987/2004) concept of the abstract machine that can be plugged into other machines or concepts as a movement of deterritorialisation that frees thought from representation of social life and territorial fixtures; in search of less binary figurations. Uexküll's concept of umwelt was also out of step with the behaviourist thinking of his time requiring him to speculate beyond the automatic responses and instincts associated with individual animal life, towards imagining possibilities of the internal lives of animal species with a reciprocal ethic. This was also before the capacities of biosemiotics and inter-species communication outlined in chapter seven were made known (Hoffmeyer, 2008).

Imagination builds conceptual understandings of the seemingly impossible and (re)imaginings enter the territory as Inquiry Process attempts to imagine the unimaginable, a world without Animal injustice and violence. The problem with such utopian visions is that they become attached to the type of hope that Lauren Berlant (2012) describes as cruel optimism, where troubling ideas are both part of the false premise of the good life and hopelessness. Imagining lifeworlds outside the precarity of the capitalist-humanist machine is unimaginable in education and yet, Inquiry Process

Chapter Eleven: Connecting the territory where children and animals dwell

has sought openings for imaginations of body, mind and sensory practice. Philosophers and theorists alter the terrain of this final chapter once more with science fiction, dystopian futures and speculative thought in the act and acting with imaginary lifeworlds that resonate with different coordinates.

Inquiry process has surrendered to wayfaring in the process of nomadic research, entering the territory unaided without the shackles of methodology steps outlined in the pages of research guide books. Just as researcher subjectivity is under erasure, so is the research topic and field of inquiry. It is more-than-method, more-than-thought and something deeply ontological. Its ecological in the sense that it is always moving in relation with others as the processes of difference used by Inquiry Process does not dwell for long enough to put down roots of established subjectivity, for the movement of deterritorialisation is always being (re)made and (re)configured.

The coordinates for these nomadic wanderings have reached their conclusion, rather than the endpoint that does not exist. Ursula Le Guin suggests "It is good to have an end to journey toward, but it is the journey that matters in the end (1969, p. 156). This final chapter has four foci. Firstly, Inquiry Process addresses 'the how' making it possible to imagine the 'how else'. Becoming speculative in this way helps to reimagine the makings of the world. A final sticky knot appears with apologies for the late arrival, but the stickiness of anthropomorphism impedes imaginative processes, and time is needed to show how this scientific concept inhibits human-animal relations, before it can be reworked to enhance them. Secondly, the (re)imagining concept of the hum(an)imal offers a summary for the collective travels of the inquiry and the possibilities for imagining the hum(an)imal in early childhood education. Territorial coordinates are mapped in the third foci as lines of flight are temporarily captured to show what has been achieved. Finally, the chapter and thesis conclude as pedagogical possibilities leave traces of the imaginable, both now and with further research and practice. These once creative lines of flight have done their job of forcing their way into territorial fissures and need to momentarily take form " even if it makes its segments increasingly rigid in order to seal the lines of flight" (Deleuze & Guattari, 1987/2004, p. 204) before imaginative forces require them to take off once more.

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Becoming speculative

Imagination, Kant says is the faculty of making present what is absent.
(Arendt, 1970/1992, p. 79)

Speculating becomings bring forth new makings and possibilities for alternate minor worldings. I have taken time in the writing of these becomings to show a specific mode of attention to how embodied process ontology moves through bodies, senses, emotions, consciousness, ecologies, worlds and now in this final becoming towards something beyond form, in the imaginarium. Critical becomings have become deft at finding the in-between of virtual and actual. The critic is not an outsider, trying to convince people that the dominant narrative is wrong. The intent is not in the freedom of an individual to express their version of the truth, but in the control that does not create space for others to imagine otherwise. The speculative critic invents a radically new world where the coordinates of the connections and disjunctions with hum(an)imal becomings are rearranged, a world that can be experienced by the families and teachers or those conference participants who become defensive, as a credible, and worthwhile alternative.

Hannah Arendt suggests, becoming speculative adopts an openness to the world with processes that "trains one's imagination to go visiting" (Arendt, 1970/1992, p. 43). As the scent of an idea takes hold. I see something or hear an idea and excitedly move my head from side-to-side - where, what, how? Occasionally I become a hyperactive Jack Russell Terrier and more often a laid-back cat waiting, waiting for something to come along, perusing the creaturely human and more-than-human to tap into in to what could (be)coming my way. The becomings of this inquiry as embodied events and shifts of thinking create an interplay with metaphysics that enables visits to other worlds with othered(wise) companions, bringing the unknown into reality, as Arendt is suggesting through words and cognition, but also discoveries of the unknown, not-yet-of-form, but not absent, that I am drawn to. This makes me think about those invisible three-dimensional magic eye pictures, popular in the 80s, where you have to search for an image that seems impossible to see and once seen is always there. This faculty of imagination connects and makes present the future of what is yet-to-come. I have embraced the flows, patterns and rhythms of a researcher's becomings, and now practice trusting the uncertain things that are unknown and beyond epistemological control. This element of the unknown or the speculative is essential in systems that are being deterritorialised, because

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the unknown might enable something to shift and this has happened in my researcher becomings and the becomings of the inquiry.

Becoming speculative (re)imagines early childhood pedagogy with a relational ethic of human-animal relations that are connected and affected with others in the multiverse. This antithesis to the conquest of nature requires a point of departure from human dominion and the illusion of separateness that begins in childhood. These sociocultural forces are depicted in chapter seven with hand gestures that moves as planes of difference that teach children about the loving and killing of animal species. As the accumulation of my lively becomings circulate towards the territorial departure zones, the temptation to reimagine these relatings becomes irresistible. Speculative becomings help the HUM move through the collective. The hum is gathering strength. Human-animal relations have provided the main landscape for the inquiry and as Inquiry Process travels with the research milieu, a storyline emerges of a broader story emerged with ontoepistemology of relations, what they do and how this shifts the makings of the world.

(Re)imagining the makings of the world

> *William Blake noted long ago, the human imagination drives the world. At first it drove only the human world, which was once very small in comparison with the huge and powerful natural world around it. Now we have our hand upon the throttle and our eye upon the rail, and we think we're in control of everything; but it's still the human imagination, in all its diversity, that propels the train…Understanding the imagination is no longer a pastime or even a duty but a necessity, because increasingly, if we can imagine something, we'll be able to do it. (Atwood, 2004, p. 517)*

Margaret Atwood recognises the processes of reimagining and remaking, where creaturely engagements with humans, animals and environments require radical reworkings of dwelling on Earth. Humanism and the human imagination fabricate the human and the animal. "Imagination is the power of appearing things, not of representing them: it is the impulse of a life that, in continually running ahead of itself, leads by submission" (Ingold, 2015, p. 155). For Whitehead (1978) the universe is feeling, and actualised through imaginative and sensed milieu of new propositions that practice immanent critique. Imagining creates neural pathways to animal lifeworlds, that deepen as shared insights traverse notions of time, impermanence, and the uncertainties of the intertwined natures of speculative story, shared life and the creative multiverse. van Dooren and Bird Rose (2016) express how stories open alternate ways of animating

creaturely life and storying the hum(an)imal by imagining the Other, in ways that are mutually beneficial. Animality unveils animal subjectivity and human animality in ways that re-centre the animal condition and human consciousness, making visible the significant effect of multispecies assemblages within cultures, communities and histories.

> *In this context, stories are powerful tools for 'connectivity thinking.' Unlike many other modes of giving an account, a story can allow multiple meanings to travel alongside one another; it can hold open possibilities and interpretations and can refuse the kind of closure that prevents others from speaking or becoming. (van Dooren & Bird Rose, 2016, p. 85)*

Stories are a part of human world makings and they participate in hum(an)imal becomings. They complicate and destabilise dominant discourse and as a consequence, writing and speaking narratives offers potentialities, to disrupt the notion of human exceptionalism. Becoming drawn into new connections enacts new accountabilities and obligations. They are shapers of understanding and sense making and have helped to open pathways through the territory where children and animals dwell. Multispecies modes and ways of existence are imagined within naturecultures, of the hum(an)imal, particularly by thinking with who or what is affecting who and what in the "politics of imagination" (Latimer and Skeggs, 2011). Using narrative in this way responds to critical approaches to education that are active as stories become infected with "ethical values with the well-being of an enlarged sense of community, which includes one's territorial or environmental inter-connections" (Braidotti, 2013, p. 190). More importantly, critical posthumanist ontology searches beyond how the subject is formed by its responses and thus an ethical response is a way of being oriented towards those who evoke and provoke attention. It is a compass, an ethical orientation that pulls towards Earth others.

Ursula Le Guin (2009) proposes how "imagination is the instrument of ethics" (p.7) that cannot be neatly organised or settled into moral tales for children, "because their imaginations are working full time to make sense out of reality, and imaginative story is the best tool for doing just that job" (p. 132). These imaginings are not new versions of moral truth making, as thinking beyond the difficulties of human imagination to ecologies of knowledge that produce divergent thought to depict co-affectivity in ways that move beyond anthropocentric replication to envision a remaking of interspecies relations. Imagining sets in play a type of morphic resonance, a subversion of hum(an)imal normativity that starts to resonate with the assemblage of teachers, administrators and

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families who shape and create the pedagogy, policy and practices of early childhood education systems.

(Re)imagining sticky knot: Anthropomorphism

Thinking with the hum(an)imal imagination raises another sticky knot that aligns with vitalism that has been addressed in a previous knotting that as Inquiry Process has shown can be attributed to animals the cosmos and plants (Sheldrake, 2007; von Uexküll, 1934/2010; Wohlleben, 2016, 2017). Narrative genres such as religious texts, children stories, fables and folklore integrate real, symbolic and mythical animals with the literary strategy of anthropomorphism; where human traits, attributes and behaviours are attached to animal subjects as a motif to stimulate humanist lessons about living the virtuous life. Anthropomorphism can be found in the storied matter of fairy tales as talking cups, animals and trees enliven children's imagination. These narratives show how matter signifies intra-active relations between the human and material, subject and object. As Baker defines (1993) these are described as good and bad anthropomorphic storytelling practices with the "good" ones figuring as sources of empathy and compassion and the others being rejected as "Bambification" or "Disnification" (p.174). So, dressing the dog for Halloween is bad, but letting him sleep on the bed is okay.

Anthropomorphism forms sticky knots in these dichotomies of good and bad that "carry the stale-dust of nineteenth-century anecdotal evidence" (Mitchell, 2017, p. 89). This shows how narrowly defined science, religion and cultural institutions like education are where there is confusion about the merits or pitfalls of using it and whether its use perpetuates or disrupts human/animal boundaries. Avoiding anthropomorphism incites the researcher to remain objective, to stand behind a human façade of difference. As Vicky Kirby (2011) suggests anthropomorphism is a boundary project where interpretation and representation are not only issues for humans, as the more-than-human are also sensing, interpreting, and representing the world to themselves and each other through entangled metamorphisms. Whilst others have helpfully deconstructed some of these discussions, (refer to Bartosch, 2017; Creed & Reesink, 2015; Serpell, 2015) anthropomorphic practices create sticky binaries in education leaving teachers with uncertainty about whether they should be used or not. And yet, anthropomorphic storytelling is a key feature of early childhood pedagogy with families and teachers.

Critical Anthropo(morph)ism

Anthropomorphism appears in the inquiry as an ontoepistemological tool for reimagining, especially as speculative hum(an)imal storying plays a key part in this concluding chapter. Garrard (2012) adopts 'critical anthropomorphism' as a productive form of such speculative inquiry that challenges place, power and discourse. Storied accounts try to write in a creaturely way that "performs the creaturely" (Lockwood, 2017, p. 168) and the concepts adopted thus far by Inquiry Process collectively show how creaturely becomings can be de/re/territorialised in early childhood education by slipping in and out of the hum(an)imal binary. Larvae also morphs from Other to othered(wise) in the agentic powerformances (Srinivasan, 2018) of this inquiry; that challenge the unspeakable to engage with an unsettling curiosity. This requires a diffractive stance that bends and flexes with humanity and animality as body-mind-worlds morph and shapeshift, in what Mithen (1999) refers to as 'cognitive fluidity' that is not precisely compartmentalised as reading diffractively seeks patterns of difference and not reductionist patterns of what is already present, known and ordered. Humanising places, elements of nature, animals, and even tractors need not then always associate with anthropocentric dominance as critical anthropomorphism can be adopted as an imaginative tool to ignite the agentic powerformance of material relations.

This critical perspective, embraces similarities in ways that adopt a touch of anthropocentrism "across categorical divides and lightning up structural parallels between material forms in 'nature' and those in 'culture,' anthropomorphism can reveal isomorphisms" (Bennett, 2010, p. 99) that fold back on each other. Biosemiotics was explored in this way in chapter seven as Inquiry Process sought ways to cross human-animal boundaries, with a heuristic strategy intended to discover kinships and connections between the hum(an)imal worldings. In this way the morphing in the term anthropo(morph)ism that Inquiry Process creates emphasises the porosity of shifting cells, vibrant matter and shared bloodlines. This does not flatten difference, injustice or even representation, but roams in non-linear ways with perception, feeling and sensing that HUMS in ever-increasing complexities of becoming hum(an)imal. This concept is explored in the next section that also works as a summary of the thesis coordinates and how Inquiry Process has addressed the research questions as the hum(an)imal is mapped through the collective wanderings in the territory where children and animals dwell.

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(Re)imagining Connections and disjunctions as hum(an)imal becomings

Every real animal is imaginary ... every imaginal animal is real. Sax (2013)

Playing in this way with real and imaginary animal has been a method of "shape-shifting in the Judeo-Christian world" (Sax, 2013, p.229). The overall research question has addressed the 'how else' of connections and disjunctions and connections of the inquiry that travel with expansive waves of difference to embrace a vision of childhood and early childhood education that works to understand and work against speciesism and animal violence. Education as the basis and base of knowledge have come to dominate the ways in which understandings of self, bodily practices and relations with animals have been configured. These cultural knowledge-practices each uphold the transcendental logic of the mind-body dualism and the separation of self from other. Dualisms create the illusion of unified singular subjectivity and promote a form of self-regulation that abolishes multiplicities and variation. Dualisms instil desire and guilt, operating with the emotions of guilty pleasures; forcing each side of the binary to constantly work to prove themselves; to manoeuvre themselves into the privileged branch of each binary, covering over and block the flows of the multiverse. Becoming hum(an)imal is to distinguish the limitations of the self and society by looking over and expanding outwards with the forces that support the production and separation of subjects. When considering future directions for CAS Pedersen and Stănescu (2014) suggest "How can we shift the focus from always seeing the animals as the topic of inquiry when, in reality, the problem is the human animals' mistreatment of all other animals" (p. 274)? Becomings have brought about such movements of thought and action that ethically interrogate each of the territorial events, assemblage or bodies, seeking to know what they can do rather than what they might be. The hum(an)imal traverses the inquiry summative research questions and summaries of thesis chapters are shown by Inquiry Process as each question is highlighted.

How might place and culture influence the becomings of human-animal relations in early childhood?

Traversing's in chapter five introduce the field studies as spaces of family life in homes and an early childhood education setting located within a larger school environment. A focus on movement shapeshifting and mobility shows how the territory opens and closes the physical and relational spaces to researcher, children and animals. Early attempts are made to play with these boundaries in the two narratives to see how they influence children's ideas about human, animal and machine. From this perspective, the boundaries between humans and both the living and non-living became clearer and in this way separateness, interiority and exteriority and the ontoepistemological understanding of place and culture become unsettled.

What complexities of human-animal becomings are enacted when competing ethical concepts and practices are in play?

Chapter six shifts the inquiry with a detour to experimental pathways as the speaking and actings of participants perform complex and contradictory relationships about the loving and killing of animals. The desire to map these contradictions was strong and discourse analysis and the naming and framing of the Discursive Material Effects in Table 3 provided a foundation to both build and disrupt ethical contradictions. Mapping how animals are positioned in society in the Animal-Human Orientation Scale in Table 2 illuminated institutional structures that sanction the practices and material effects that keep animals positioned in anthropocentric ways. Mapping how humans are positioned within Humanistic, Protectionistic, Dominionistic, Critical Posthumanistic and Posthumanistic orientations illuminates contradictory discourse and ideology that helped to consider how bridges between human and animals could be reconfigured.

The speaking and actings of chapter six are carried forward in chapter seven as the territorial assemblage expands and attempts are made to cross the artificial boundaries of human-animal existence. Gestures and semiotics support ways of making ecoducts (animal crossings). Inquiry Process explored how language creates boundaries and part of our limitations as humans is that we have viewed 'language' as high culture and therefore neglected all other forms of communication as irrelevant. What would happen if the animals we live with started to communicate in ways that were understood by

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humans or if humans opened up to animal sites of communication that Sheldrake (2011b) reputes are already there in the forgetfulness of the past. These multi-species conversations would come as a shock to the exceptional human race who would need to actively listen to the animal grievances and suffering that forms the basis of the current world order. This listening could take years to sink in. Once all species have passed through a kind of truth and reconciliation commission, this communing would need to find common threads of understanding that bypass the multiple humancentric ways of conversing - the written, verbal and digital languages that have privileged histories of exceptionality would therefore be hard to temper. It would take some work, and there are minor glimpses in this chapter as gestures show what this hum(an)imal Esperanto looks like.

What are ethical relations with children and animals in early childhood and can they mobilise ecological becomings?

Chapter eight reveals sites of interaction where differences get made and unmade through creaturely intra-active relations with children and animals. The connections and disjunctions of the inquiry come to light in this chapter through the concept of dissection. Inquiry Process imagines a heightened sensorium of sound, smell, taste or touch but to stand/swim/fly/crawl anew, hum(an)imal ways of connecting would neither deny human characteristics and culture, nor attempt to add the more-than-human into the conversation (Latimer & Miele, 2013). Haraway's (2008) attention to the associations and relatedness between beings lights the way for imagining socialiaties, however these must be non-speciesist relationalities that think beyond the species driven hegemony that permeates every aspect of human existence. jones (2013a) agrees that attending to relationality is helpful but we must also be willing to ethically attend to what animals might want us to do:

> *We are not the 'voice of the voiceless'. Animals have their own voice, along with various gestural methods of communicating their wishes" If we listen to animals, we will hear many of them communicating their wishes. If we listen to animals, we will hear many of them crying out for relief from suffering right now. (jones, 2013a, p. 277)*

Latour (2011) suggests that the "assemblage of contradictory entities" (p. 7) help to imagine the collective "we" and this imagining is essential in the anthropocene with the mutual vulnerability and reliance that is present. This reliance reveals the intra-

connectedness of mutual dependencies where humans are reliant on the plant and animal life and human dominance has altered the planet to such an extent that human actions are now required as part of the solution to address environmental degradation. This may appear obvious however, in prior epochs humans could depart the planet and life would go on, however the anthropocene has measurably shifted the balance about how humans live in relation to the world they co-inhabit and there is a call to change the orientation with an assemblage of culture/nature/techno that Stengers (2010) refers to as becoming 'cosmopolitical'.

Shadow places appear in chapter ten that trouble human-animal connections that are performed through power relations of environmental violence and injustice. The data assemblage reveals how animal species are emplaced, displaced and replaced in the territory. Inquiry Process shows the forces that drive this consumption of animals and how it perpetuates cultural miseducation. Becoming trouble(ed) as a necessary force to disrupt humanist and speciesist thought creates unknown conditions for early childhood education that embraces the cruel optimism of shadows and darkness which reveal there is light in darkness and dark in lightness as fluid binaries are unsettled to show how differences exist both within and beyond of human-animal relations. This brings uncertainties and a willingness to expose and be exposed through a critique of established institutions to embrace alternative visions and imaginings for the unknown and yet to come. Animality is therefore questioned even when we are not sure what this could be by (re)configuring stories to illuminate possibilities of anthropomorphic human-like characteristics of some animal species, such as family bonds, the desire to play and infant attachment. Species morphic stories could also highlight reciprocity as animal-like characteristics of the human-animal like breathing, joy, pain or memory appear in shared lifeworlds. Critical posthuman interpretations of the role played by animal species in making and telling stories with children enables teachers to create animal lifeworlds with speculative and realist narratives, where animals interact with humans, make fun of each other's differences, face the tough unsettling questions about animal-human relations, identify how animal species have unique umwelt (von Uexküll, 1934/2010), share lifeworld's with capabilities for flourishing, including ecological becomings that depict how humans and animals can live in societies that do not artificially separate them.

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How might early childhood education (re)make possibilities for ethical relations, animal lifeworlds and ecological justice?

Anna Krien's (2012) question has travelled with Inquiry process forming part of the touchstone for the inquiry and propositions of roaming pedagogy. "The real question is, just how much of this injustice are we prepared to live with" (p. 8)? Hum(an)imal becomings do not lose sight of injustice. Instead of masking difference, otherness, and disparity, a process ontology enacts and diffracts these effects, suggesting further direction and broader possibilities that unsettle, question and embrace difference and multiplicities. Chapter ten diffracts the data assemblage through the concept of roaming that unsettles how the ability to act and reconfigure ethical, ecological and just human-animal relations is supported by othered(wise) roamings with a pedadog called Kosi and the post animal called Larvae. From the vantage point of a pedadog and post animal, the boundaries between human/animal and time/space are reconfigured, as these animals are wise agentic teachers who contribute to shifting boundaries.

Roaming pedagogy emerged in chapter ten as the territory diffracted with the desire to invigorate possibilities for learning how to live together ecologically with and as earth roamers. As Haraway (1997) suggests a "diffraction pattern does not map where differences appear, but rather maps where the effects of difference appear" (p. 300). These differences HUM in a way that senses otherwise with an ethics and politics of response(ability) that attunes with animal species, ecologies and the ongoing entanglement in the lives and education of children. There are possibilities here for educational contexts that explore difference and recognise multifarious lifeworld's and relational imaginings as "affectively rearranging assemblages" (Weinstein, 2016, p. 109). The creative endeavours suggested by Weinstein align with Haraway's (2016) storying where "it matters what worlds world worlds. It matters what stories tell stories." (p. 35). Sentilles (2017) also suggests that art shows possibilities for making a better world to (re)imagine (re)generate and (re)make new pathways of cohabitation and coalescences. Therefore, storying and art interventions and other forms of research, as forms of worlding, are not merely a way of engaging with animal or environmental concerns, by offering critiques or representations of concerns, but rather hum(an)imal performance with speculative entities and tropes that respond to, participate in, and challenge the ways the lives of animal species are lived out in consequence of human imaginings of them.

Creativity ignites action through stories, artistic endeavours and above all else, an ethical regard for what is more-than-human.

Reconfiguring is central to a posthumanist politics of resistance and central to the work of Haraway (2004, 2008) who prompts investigations into assemblages of relational entanglements to reimagine and open interpretation and imagination of the those who participate in the makings. This way of imagining provokes speculative becomings generate response-ability for renewed futures through thinking, writing and researching in early childhood education.

The study concludes in chapter eleven the study with (re)imaginings and (re)makings that attempt to disrupt the injustice. Inquiry Process shows that unveiling the exploitive practices of the territorial machine, that remain hidden, unspoken and unspeakable, enables hum(an)animal becomings to find spaces to flourish. Finding redemption as an animal species is a common moral trope of transforming the human, but rarely imagined as advantageous for becoming animal. Where for example are the shapeshifting stories in children's literature where returning to a human state is not idealised, as frogs return to princes, dragons to reformed boys and beasts to husbands? Being-animal even in a fictional sense is a traumatic human encounter where animality is disguised in ways that tells of our deeply unsettling intimacy with that which is not human. Critical anthropo(morph)ism is suggested as a way to think compassionately about hum(an)imal differences and similarities. Stories that enliven precarious life and loss of environments, habitats, species, myths, and practices in ways that can be felt and acted upon, are stories that engage animality. Where it is not possible to be present in the company of animals, posthuman relatings can be imagined by those who have become entangled through the practice of relationally and ethological understandings of how animals could think, feel, communicate and behave.

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Territory signposts and lines of inquiry

Inquiry Process knows that territorial signposts point towards the contributions of the inquiry, offering guidance for where the travelers have been and what has been discovered. The contributions of the inquiry are tempered by the proposition posed by Deleuze and Guattari (1994) that " philosophy does not consist in knowing, and is not inspired in truth" (p. 82). The potentialities of the inquiry have followed many twists and turns, and the focus of the thesis has been to explore the connections and disjunctions that bring children and animals together and keep them apart with the following signposts. Inquiry Process has first shown a thesis of (re)imagining that begins by challenging the logic of separation through anthropocentric binaries. The intention is to move beyond the intersections of loving/living/dying where education works in specific ways to bring children, animals and nature together through difference. Second, the construction of scientific knowledge through the use of animal species also creates subject-object binaries in early childhood education, which often have violent and detrimental consequences for animals. This objectification instils power-knowledge effects where specific kinds of scientific and humanist knowledge continue to flourish. Consequently, the embodied reality of human and animals, cannot simply be reframed or rewritten by means of alternative representations. The third signpost points to how these power-knowledge associations assemble in this inquiry as relations with animals that are socially constructed and linguistically enacted as normalised spheres of life. This process commences in childhood and is reinforced by humanist education systems as insidious cognitive, emotional, and institutional features of social and political life "that tame the creative and imaginative spirits of young people" (Weaver, 2015, p. 193). Finally, the inquiry diffracts to unsettle the social and material patterning of fixed determinism finding some hope in deterritorialising forces as roaming pedagogy and hum(an)imal becomings are proposed as multiple, fluid corporeal manifestations that become immersed in the politics of difference and multiplicities that work towards animal liberation.

Inquiry process has attempted to follow lines of flight that do not follow neat pathways, as they seep through territory in unorthodox ways. Research questions are carried with lines of flight that summarise the contributions of the inquiry.

Transdisciplinary research

The adoption of research from three research fields adds to the complexity of the inquiry enabling research to enter into new spaces where conceptual bridges open each of the disciplines to new thinking. The child enters into human-animal studies, the animal is not just conserved or controlled in environmental education as cultural lifeworlds of the animal become known and early childhood education with coalescent forces that are stronger in their unity and Inquiry Process hopes that future research takes up interdisciplinary research that combines conceptual or theoretical approaches, in a new or novel way. For example, this study adapted and replicated a previous study by (Blouin, 2013), that extended the original categories and indicators of the research tool to include critical and posthumanist ontologies, that became enhanced through early childhood relational understandings of family.

Critical posthumanist and postqualitative pathways

Inquiry Process has walked a tightrope of critical and posthumanist theorising that is also influenced by poststructural and ecofeminist theorists who question established hierarchies, examining issues of power and desire. The privileged human is decentred in childhood, so the human child is no longer viewed within places of humanist dominion, but rather one amongst many ecological entanglements. Walking the tightrope of posthumanist and critical theorising, helps to rally against the pattern of pushing power relationships and exploitative structures into the background (Pedersen 2013) and working the intersections to facilitate a reimagining of education for a "critical education of ecological hope" (Fawcett, 2009, p. 228). Inquiry Process contributes by adopting unconventional research passageways and processes that journey into uncharted territory where children and animals dwell. Critical posthumanism edges these processes into the present with a productive process of attending to what human, more-than-human and materials effects in early childhood education and family homes. Constant attempts are made to (re)think, (re)centre and (re)imagine animal subjectivity, with implications for new knowledge production for early childhood education. Roaming with critical posthumanism challenges human exceptionalism by offering tools and ways of imagining ourselves free of the symbolic representations that characterise Western attitudes and behaviours. Within this framework education is understood as inherently ethical, as well as epistemologically entangled with social phenomena. For example, how do children,

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families and educators navigate the ethical intersections where animals are constructed as pets, pests and product? (Re)imagining speculative alternatives for human-animal relations offers potential for the "yoking together" of critical, relational, ethical and creative multispecies becomings.

Theory and methodology are entangled in the territory and the shift from a qualitative to post-qualitative methodology enabled a level of freedom that supported a process ontology. There were also shifts in the theory as it became apparent that posthumanism was not enough to answer the research questions in ways that critical theory offered. A critical ethnographic approach (Madison, 2012) invites the researcher to challenge and frame questions and ideas that disrupt the status quo, with an ethical responsibility to address processes of speciesism moving from "what is – to what could be" (Madison, 2012, p. 5) and from the how - to how else.

Concept as method

Inquiry Process adopts a range of concepts as embodied movement of original thought. The concepts of the inquiry provide springboards for enriched interpretations of the territorial events and the theoretical oriented research focus. Deleuze and Guattari's (1987/2004) conceptual work has guided this thought in the act, as the real and the virtual are always coexisting, with the superimposable parts of data assemblage of branching multiplicities. Mobility assembled in chapter five to traverse with the assemblage of actors, from microbes to biospheres, from hormones to soundscapes and from the human to the more-than-human. Attention to speakings and actings in chapter six revealed human-animal boundaries where the concept of pronoun generated surprising patterns and intensities of the object/subject binary, bringing new insights that fold through the inquiry. This focus on language led to the concept of gestures and semiotics where adopting concept as method prompted the production of inter-species communication that helped to find human-animal boundary crossings. The concept of dissection appears in chapter eight finding connections with the data assemblage with a 'cutting together-apart' (Barad, 2014). Dissection unsettles what is assumed, expected, or cut off from violent encounters, of cutting, tearing and pulling apart in research, in education and with animal bodies. Three interrelated concepts of emplacement, replacement and displacement assemble in chapter nine as Inquiry Process troubles how place, and culture might influence the becomings of human-animal relations in early childhood, and what

complexities are enacted when competing ethical concepts and practices are in play? Roaming becomes a concept in chapter ten of making known things strange and unfamiliar in ways that are unsettling, travelling with inventive methods, everyday events, and language designed to re/deterritorialise and diffract childhoodnatures and early childhood education. Nature is not fixed and is constitutive, rather than separate and territories are navigated, traversed, related to and constructed by (re)imagining that both disrupts and remakes. In this final chapter the concept of hum(an)imal is identified as a concept that leaves the inquiry with places to go.

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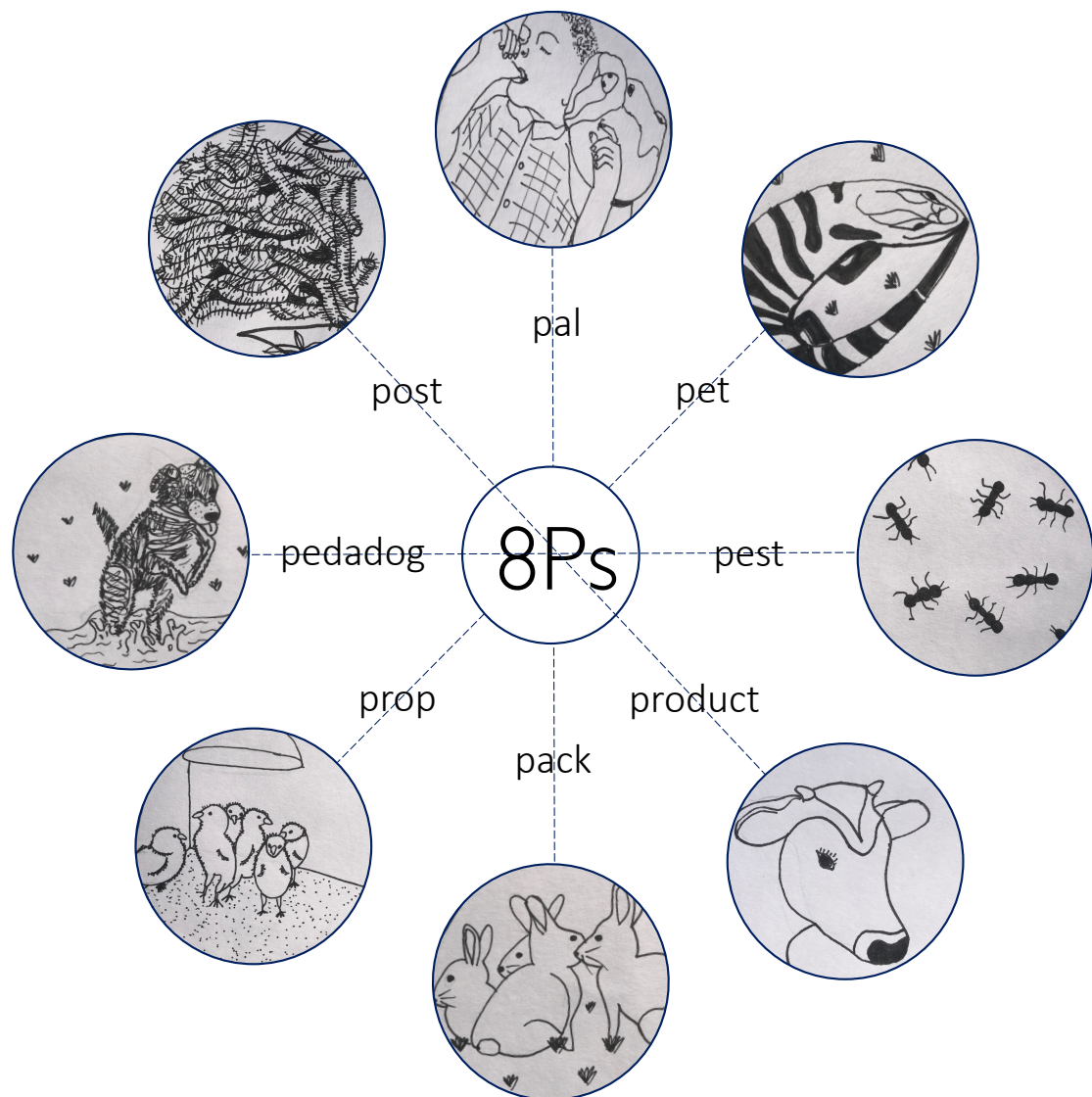## Eight Ps of Animal positioning

Figure 27: Diagram of eight Ps

The diagram of the eight Ps shows depicts the positioning of territorial animals that began in chapter six as Inquiry Process could not avoid the assemblage of categories circulating in the territory where children and animal dwell. Ontoepistemologies of animal-child relations are assembling in early childhood that prompt the reconsideration of ways that children and animals are co-constituted and how animal species are ethically and materially named. Seven positions emerged from the territory of post, pal, pet, pest, product, pack and prop. An eighth position along with the post animal offer indications of de deterritorialisation as the post and pedadog informed Inquiry Process. Each animal is connected by bloodlines that flow within the inquiry and are surrounded by umwelt

type circular "soap bubbles, which confine their visual space and contain all that is visible to them" (von Uexküll, 1957, p. 28).

Families, children teachers and Animals are implicated in these animal postionings, shaping how children learn to build connections of love and empathy, whilst also experiencing silent disjunctures of consuming animals. This raises difficulties about disrupting speciesism and reconfiguring early childhood education through critical pedagogy, activism and posthuman ontologies. Speciesist, normalising discourse is critiqued through understanding the connections and the disjunctions of these positions that both divide and empower human-animal relations in childhood. At times a clear divide between human and animal is required as human subjectivity has the capacity to dissolve animal subjectivity and Inquiry Process wanted to show what the positions are, and how the material effects of each one support and maintains each category.

Pal

Melson (2001) noted how children form similar relationships with pets as they do with the intimate human relations as pets are not objects of scientific method of observation, animal study and dualisms that they experience with classroom animals and those in zoos or nature parks. Family pets were described as pals or friends in this inquiry when the interconnectedness and relatedness of pets in the family home was valued. Visiting family homes, observing the spaces of home life, the animals who live mostly as family members and speaking with three generations of family members was incredibly helpful as this method showed how cultural values towards human-animal relations are learned and carried through families. For example, three generations of the dog family spoke about the connections they have with their dogs and Butch (bulldog) and Rory (child) depict this positioning of pal as they played and slept together in ways that could be described as being connected. The pal is the oedipal animal symbolised by Deleuze and Guattari (1987/2004) as the individual, named, animal with intimate family relationships and a unique history that arises from their emotional alliance with a human. Deleuze and Guattari perpetuate human-animal separation as they do not define pals or pets as animals and they lay scorn on the fools who love them as they have been made to mirror the image of human selves we want to see and are therefore not 'real' animals.

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Pet

The range of pets in the inquiry classified as those domesticated animals who cohabit with families included dogs, fish and Stan the blue-tongue lizard depicted in this image. The relation with Stan and Toby speaks to this category of pet. During the first visit to Toby's, home he showed how confident and skilled he is with Ralph the Great Dane and Stan. Toby was not always sensitive to the sentience of these animals. He consistently frightened Ralph with a loud toy and placed Stan the lizard in the Lego play setting he made, trying to roughly shape his body to fit inside tight spaces. His mother Sharon spoke about how she had to have a chat with Toby. "He has feelings for them, but you still have to remind him. He was banned last week from playing with his lizard and he was flying him around like an airplane and I said Toby you just can't do that". Later in the inquiry Toby responds to these ideas in one of our conversations when I show him a photograph of Stan asking what Stan might be feeling in the Lego play setting and he said he wanted him in a certain position. "Now I'm not rough. When I was little, now I'm not rough, now I know not to be rough because I understand." This raises issues about explicitly teaching children how to care and develop compassion for animals that forms one of the propositions of roaming pedagogy. This can be overlooked in relational ontologies that entangle children and animals and also humanist relations that perceive that children have innate ways of being with animals. Kim Stallwood (2014) calls this the wisdom of compassion that is learned and taught. It's not romantic, sentimental or sugary but where knowledge and science meet ethics and compassion. Compassion opens doors as a type of "justice in action" (p.58).

Pest

The pest animal first appears in the territory in the narrative with Ross whose pet mice become pests when they escape from the cage and are killed in mousetraps. Bull Ants also appear as pests during a walk when Jag and Hamish step on a nest and they receive a number of nasty, painful bites. Ari is very concerned about these bites and he designs a strategy to keep the ants away by stamping the ground, so they know we are there, and he and Jag write and perform 'The Bull Ant' song with lots of foot stamping. They also make signs that are located near the nest, warning people that ants are in the area. Ari's approach to an animal designated is not about destroying

them but rather learning to dwell in the territory with some animals that bite back. The pest animal is rarely alone and is one of the least liked animals by humans and other animals. The notion of an animal moving between pack to pest category, such as the possum-becoming-rat in chapter seven outlines how pests are despised.

Product

The product animal is also ubiquitous appearing everywhere in the territory, as they do everywhere in the making of the world as food, entertainment, clothes, fertiliser, cosmetics and household products. The cow in this image is one of the unnamed territory animals who is being raised for meat, so he is barely noticed by the teachers and families as he is an absent referent (Adams, 1990) who disappears in the production and consumption of animal bodies. An unnamed animal as Inquiry Process discovered is often a product in the making.

Pack

The pack animal is wild and never alone. The pack is the demonic animal symbolised by Deleuze and Guattari (1987/2004) as wild animals that form a multiplicity and exist within lifeworlds of their own creation. This becoming animal is unsocialised but as already discussed still effected by borders and environmental infiltration of human control. Unlike pals and pets, pack animals are admired by Deleuze and Guattari as they maintain the intensities of movement and mobility. European rabbits are prevalent in the territory where children and animals dwell and thriving, even though they are culled each year with a hunt organised by the caretaker to reduce their numbers.

Post

The post animal is unique to the territory and is symbolised by Larvae whose optics do not view the world with the human tendency to categorise and name. The post animal is hum(an)imal symbolised by otherworldly, otherwise, collective ways of being that neither resist, transgress or accept these positioning's. Larvae is both corporeal and disembodied, of this world and no longer

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of this plane, where time and space become disrupted. Larvae is not metaphor as the post animal challenges and contests the covert operation of power by helping to see and seek the unseeable and name the unspeakable. Post animals like Larvae displace and disrupt alterity as the other who has become other(ed)wise (Srinivasan, 2018) and able to mediate life in the multiverse, beyond current realities. Post animals also evade description and the colonised violence that establishes order as real and imagined animals enables 'post' reimagining that blurs the conditioned bodymind with different neural pathways of thought, emotions and senses, unravelling immanent mysteries of existence that undermine rationalism.

Prop

The prop is an animal whom becomes an education tool, objectified as a learning resource, shaped as animal-becoming-educational-cultural-tools. This institutional violence towards animals is discussed in chapter eight as the concept of dissection identifies how animals like chickens and frogs are still dissected in secondary and tertiary education sectors. Territorial chickens hatched in incubators are the symbol for this category as this widespread practice is still used in early childhood education settings where children experience chickens removed from social attachment, family knowledge and culture and the need for early learning (Young et al., 2015). These deficit beginnings cause behavioural problems for chickens (jones, 2010), like the unnamed rooster who was displaced from the chicken coop.

Pedadog

The pedadog is the territory animal that helps to conceptualise roaming pedagogy as the movement and mobility offered to Kosi the dog in a school setting enables him to become teacher and learner, taking on multiple roles in the school as staff member, coach, companion, family member, swimmer, rabbit chaser, fear therapist, communicator and play specialist. He challenges the usual hierarchical position of the animal in educational spaces and there are possibilities for other animals to become peda-animals in ways that remakes animality and humanity.

Roaming pedagogy

The mapping of roaming pedagogy enfolds within chapter ten with a caveat to this affirmative pedagogy of discovery, that is less about teaching a list of things that can be added to a curriculum and more about trying to create spaces where just relations with, and as, animals can flourish. Such a remaking requires a radical rethinking of the purpose of education, requiring analysis as a process that continually questions humanity and animality. The propositions of roaming pedagogy also include the reminder from Birke (2009) who suggests that ethical questioning can help to bring about change in the way's animal species are perceived and therefore treated and before embarking on research with animals in education by asking "what's in it for animals?" (p. 1).

Sticky knots

The figuration of 'sticky knots' adopted by Inquiry Process as a conceptual tool to signal a phase in the research where the assemblage becomes trapped with wayward contradictions ruptured the terrain to enliven interpretations to a point where they are acknowledged as sticky because of their complexity and therefore no solutions were offered to escape the stickiness. They are however signposts in the terrain that mark the need for further inquiry and each of the knots: becoming unstuck, vitalism, the masquerade of the kill and anthropomorphism could be expanded in the propositions of roaming pedagogy that seek to create spaces for justice, an ethical framework and relational (re)makings. For example, the sticky knot in chapter one explores naming as a practice of relational worlding, including the naming of Animals. A proposition for this could be the naming of animal species so they are never an 'it'. Where picture books, stories and language are reconfigured to integrate Animal subjectivity, animality adopting and personal pronouns for animal subjects.

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(Re)imagining pedagogical propositions

The territory where children and animals dwell assemble as virtual and actual spaces of discovery that are neither romantic, picturesque or truthful. Inquiry Process has walked the paths of invented discovery as a wayfarer, bringing together an assemblage of pedagogical, material, and conceptual thought and actions. As this process draws to a close there are no certainties, but rather a series of propositions to conclude the journey. These propositions leave (s)matterings of those who have travelled and a field guide for those who also choose to walk this terrain. Valerie Plumwood (2009) who sends an invitation for how this could be reimagined:

> *Free up your mind and make your own contributions to the project of disrupting reductionism and mechanism. Help us re-imagine the world in richer terms that will allow us to find ourselves in dialogue with and limited by other species' needs, other kinds of minds. I'm not going to try to tell you how to do it. There are many ways to do it. But I hope I have convinced you that this is not a dilettante project. The struggle to think differently, to remake our reductionist culture, is a basic survival project in our present context. I hope you will join it. (p.12)*

It is hoped that deeper understandings have eventuated that contribute to new theorising of hum(an)imal relatings in the lives of Australian children that shifts the exclusive focus on the 'individual child' to one that attends to ethical relations in the multiverse. This research takes place at a time in history when environmental global concerns are unprecedented and challenging times for life on Earth. Our future is uncertain. Knowing children and animals help us to inherit and respond to the complex and messy legacies of the anthropocene where future generations will have to become worldly (Haraway, 2006) as they face the challenge of environmental uncertainty and learning how to live together with difference. By challenging the structures of discourse and embodiment that so rigidly separate human from nonhuman in ways that serve human privilege, we can locate the potential for a new ethical relation between animal and human. A new relation that attempts to understand the geographical and biological politics of how and why animals are objectified and rendered as products to be consumed and a new understanding of the social structures at play that maintain this consumption. These structures are embedded within the practices and pedagogy of education systems where children experience conflicting messages that their love of animals is consistent with commodification.

Animality expands subject hood intensifying how Animal lives matter and this should be firmly entrenched in the education community and the lives of children.

Reimagining the territory where children and animals dwell stresses an ecological, intersubjectivity that calls for greater compassion to these relatings with fellow earth roamers. Compassion is not known to children. There are no innate ways that children relate to each other with care and compassion as ethical relations are taught and constructed in early childhood and this inquiry has tried to find these pedagogical spaces. Looking beyond the human to the more-than-human, not as a mirror of human lives and imagining but to see how the multitudes are generating affect with otherworldly umwelt where animals and humans relate on more even terrain, "where the interests of nonhumans are not routinely and thoughtlessly trumped, often brutally, in favor of the interests of humans" (Gabardi, 2017). If we are lucky sometimes they may look back at us. A multispecies encounter, an intra-action of both difference and connectedness may take place splintering what we think we know as the "air shivers with newness" (Mcdonald, 2015).

Inquiry Process has reached the endpoint and thankful that the intense partnering and collaborations can rest for a while. Inquiry process leaves the final voices, growls and cackles to Lukasik's entangled proposition that embodies justice. This proposition is not static, but rather provokes the virtual potential of the speculative imagination that also connects with the actualisation of embodied ways of being, knowing and living that invites and unites dualistic ontologies.

> *Out of our ruins, created in the wake of human progress, emerges a new movement, a new critique that unites the creatures of being against the creatures of knowing. These beings seek to comprehend the meaning of a more just existence, a truer sense of being; they invite all voices, growls, and cackles to the conversation. To know justice is not enough, it must be lived, and felt, and bitten. And so at night, the farmers and critics and coyotes stand outside in this hot, dry summer, looking up to the sky, longing and hoping for a deluge. (Lukasik, 2013, p. 10)*

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