

Article

Bodies of knowledge, Kinetic Melodies, Rhythms of Relating and Affect Attunement in Vital Spaces for Multi-Species Well-Being: Finding Common Ground in Intimate Human-Canine and Human-Equine Encounters

Donna Carlyle ^{1,*} and Pamela Graham ¹

¹ Northumbria University, UK.

* Correspondence: donna.carlyle@northumbria.ac.uk <https://orcid.org/0000-0003-4600-3349>

Simple Summary: Children's beneficial relationships with animals are well known. Companion animals, particularly dogs have become an integral part of family life and children's material culture. Aside the proven physiological benefits there is little research about what children say about their relationships with animals and how they describe them. In this paper we bring together both horse-human and dog-human interactions, finding common ground for understanding the complexity of human development, well-being and flourishing. Dogs in schools are fast becoming a trend in helping support and enhance children's learning as well as their social and emotional well-being. Studies have shown that the very presence of a dog can increase children's concentration, executive function and behavior. Also, equine therapy is gaining momentum and empirical studies are showing noteworthy benefits to children and young people. However, the lack of children's voices means that the mechanisms for these benefits are somewhat unknown and unclear. In seeking to explore this, the authors utilize a visual, sensory and diffractive ethnographic approach to illuminate and illustrate, experiment and re-enact, how the children relate, share spaces and multiple subjectivities with their classroom canine, "Ted" and companion horse "Henry". "Henry" is part of a programme in which youngsters care for and engage in activities with horses.

Abstract: In this paper we bring together two separate studies and offer a double entendre as it were, in finding 'common ground' and 'common worlds' between human-dog and human-horse interactions. Appreciation of the process and mechanism of affect (and affect theory) can enable a greater understanding of child-animal interactions and how they benefit and co-constitute one another in terms of enhancing well-being and flourishing. Studies have thus far fallen short of tapping into this significant aspect of human-animal relationships, tending to focus more on related biological and cognitive enhancement (lowering of blood pressure, increase in the 'feel good' hormone oxytocin) such as a dogs mere 'presence' in the classroom improving tests of executive function and performance. Study A details an affective methodology to explore the finer nuances of child-dog encounters. By undertaking a sensory, and walking ethnography in a North-East of England Primary School with Year 6 and Year 4 children (60 children in total), participant-observation enabled rich data to emerge. Study B details an equine intervention in facilitating vital spaces for social and emotional well-being. The important significance of touch to children's and young people's well-being suggests a need for "spaces" in classrooms, and wider society, which open up this possibility further and challenge a "hands-off" pedagogy and professional practice.

Keywords: affect; embodied ways of knowing; inter-corporality; interspecies intimacy; sensory ethnography; movement; rhythm; canine and equine interactions

1. Introduction

“ Life is about rhythm. We vibrate, our hearts are pumping blood. We are a rhythm machine, that’s what we are’ (Mickey Hart, 2015 p74, in ‘The Body Keeps the Score’, Bessel van der Kolk).

The inimitable question posed by philosopher and dog trainer, Donna Haraway “whom or what do I touch when I touch this dog” (Haraway, 2008:4)[1] has been at the very core of both Study A and Study B’s aims. Such an ambitious and pertinent question can be unfurled and answered through affect theory and an affective methodology. As affect can go unseen and uncognitised, (Hayles, 2017)[2] exploring the mechanisms of affect and its role in child-dog interactions must be sensitive to sensory, corporeal and embodied ways of knowing. The research of Gee et al, (2007, 2010, 2012, 2018) [3-6] has provided a valuable contribution to the field of HAI, particularly child-dog encounters, and forged a strong foundation on which to build further meaningful insights of this exceptional and enduring relationship. Gee et al (2018),[6] call for empirical studies which contribute to the field of anthrozoology through consideration of “small theories” and process being at the core of future directions in research which clearly demonstrate the variant benefits of dogs to children in schools and classrooms. In addition, a systematic review of the benefits of reading to dogs schemes have proven noteworthy in terms of enhanced literacy skills, cognitive functioning and pro social behaviours, especially in children with Attention Deficit Hyperactivity Disorder (ADHD)[7] . McCardle, et al (2011)[8] also evokes further inquiry into this emerging field as she suggests the need to embrace qualitative, longitudinal and robust methods. As an Ethnographer and Participant-Observer, becoming deeply immersed in the classroom setting alongside the children and Ted enabled a co-production of “situated knowledge” as purported by Haraway, (2008)[1] and Barad, (2007)[9]. This methodology encompasses sensory, and walking ethnography in order to address the challenges of ‘capturing’ affect. As affect theory has yet to reach a unified definition, this study takes the premise that affect is invisible, unseen, felt, and therefore elusive. It can also escape being cognitised, verbalised and remain unknown. To bring the affect of having a classroom canine to the fore, employing the lexicon of Ingold’s, (2016)[10] ‘lines’, Barad’s (2007)[9] concept of ‘intra-action’ Deleuze and Guattari’s, (1987/2013)[11] ‘territology’, and ‘Bodies Without Organs (BWO’s) are also synthesized. By this we mean that children and young people can flourish by being enabled to explore and expand the various ‘territories’ and spaces they inhabit, thereby enhancing their well-being through unregulated and controlled bodies (becoming bodies without organs as it were) in the creation of greater autonomy and relatedness as afforded by their close and intimate interactions with animals.

This process and synthesis emerged in surprising and illuminating ways in both Study A, child-canine interactions and Study B, adolescent-equine interactions. As concern grows for children’s mental health[12] and a ‘rise in therapeutic education’ ensues[13] it is fundamental that current research addresses not only robust and rigorous design, but also employs affective methods which can reveal new insights and understanding of what has been termed a ‘pet pedagogy’ [14]. Before such claims can be trustworthy, a process model[15, 16] (Belsky, 1984) is foregrounded; as such, attention to movement, touch and inter-corporality is discernable. This exploration, experimentation and enactment of child-dog interactions offers a contribution to the field of human-animal studies which elicit children’s experiences and encounters both as narrative and ‘visual vocabulary’ (Eisner, 2006)[17]. In doing so, its affective nature reveals important new insights around children’s perceptions of what they ‘touch’ when they touch their classroom dog. The disappearance of touch in middle childhood within school settings has been noted by several authors. As touch and its affordances of social connectivity and well-being in child and human development are well documented [18, 19] a need to consider the current classroom landscape, and wider cultural spaces, in supporting growth, learning and children and young people’s flourishing is paramount.

Affective and vital spaces for social and emotional wellbeing are animated and discussed in terms of addressing the current concern, both in schools and wider society, for children and young people’s mental health to be improved.

2. Materials and Methods

Research Protocol Study A.

What are we looking for?

Movements	Embodied Experience
Activity consistent with theoretical framework	
Deleuzian actions	What we do?
1. Rhizomatic, nomadic movement (or thinking)	Mapping, diagramming. Draw lines to show mapping of walking with dog (and without) using classroom floor-plan. Pendulum painting or bubble painting. Stretch, cut, colour, tear, overlay.
2. Territorialisation > deterritorialisation	Marble/ball-bearing paint and box activity. Use of string, ribbon, wool, or dots to map steps and movements (child and dog) from one space to another.
3. Body-without-Organs	Mapping child–dog movements. Drawing and diagramming shared places and space in the classroom. Use of ‘GoPro’ ‘body cam’ to depict lively biogeographical movement of both child and dog.
4. Smooth and striated spaces	Show texture of spaces with use of craft materials such as silk fabric, cotton wool, fuzzy felt, ribbon, foam, polystyrene, plastic (smooth) or beads, sandpaper (striated), glitter, buttons, corrugated cardboard, bubble wrap. Make swirls, waves or splashes with craft materials.
5. Lines of flight	Bursts and bolts of energy through splashing, zig-zagging lines and artwork, doodling, building blocks. Moments of action like walking, dancing, building, constructing.
6. Folds	Folding of paper. Folding or bending of craft wire, pipe cleaner to sculpt body or object.

Study A

Study A was carried out in a North East of England Primary School, over two phases, with Year 4 and year 6 children (60 in total) and their classroom canine, Ted. The study was conducted over a full academic year. In order to apprehend the children's experiences of their encounters and interactions with Ted, a non-representational, visual, and sensory ethnography was employed. As affect often goes unnoticed and uncognitised[2], a way of understanding their experiences and relational process with a dog meant the emergence and development of a robust methodology and protocol that afforded embodied ways of knowing. This is a fundamental aspect of this research. It encapsulates the importance of a post-structural paradigm. Such an ontological and epistemological positioning is no less rigorous than traditional positivist approaches. Significantly, it calls for a re/'turn' to corporeal ways of knowing. Movement comes before language, infants are not pre-linguistic, and language is post-kinetic,[20] (p50). They possess a 'kinetic melody'[20] (p254). They use this fundamental and sometimes forgotten way of communication to initially draw others to us, in eliciting movement, they elicit care, 'good enough care' as postulated by Winnicott[21]. They move their mouth, lips and tongue, along with all four limbs. In this dynamic corporality, this creates a vital energy, a soundscape, a 'storm' as Stern[22] so aptly calls it. Sterns description of the 'storm' of hunger conjures up dramatically and dynamically the infant state of bodily eruption (movement and sound) in his/her quest for sustenance.

But in this instance, primacy is not given to language or words alone. We extrapolate an embodied and corporeal significance to the nature and essence of Human-Animal Interactions (HAI). We attune to movements and sounds, in synchronous and harmonious, mirrored responses from our own bodies. The inside becoming the outside, in affective states of relational attunement and emotion. These concepts help us socially navigate and map our space and place in the world. It creates a score (or lines) like a map on which the sounds and movements encountered and experienced in a territory (or space) are emergent and unfolding as patterns of interaction and interconnection, [23]. We see this in the parent-child's 'dance' of reciprocity is a choreographed display of closeness and distance,[22]. A mutual coming together-coming apart as eloquently depicted by Erin Manning and her unfurling of the tango dance, [24] and refers to this rather delightfully as the dance of individuation, which is 'always more than one'. In resonance with Manning through her evoking the tango dance as an example, Deleuze and Guattari's[11] notion of 'doubling' also resonates with the corporeal dynamics of HAI and how they afford corporeal modulation. The Deleuzian[11] example exemplifies, rather aptly, Captain Ahab 'becoming-whale'- a body coupling and doubling which emerges in Ahab's quest to find his nemesis Moby Dick. What is striking here is how this dance is also created in children's relationships with animals, and through this paper, we endeavour to show and reveal such dynamics which are recited and enacted (visualised) by the children during encounters between them and their classroom dog (Study A) and horse companion (Study B). Like an infant's swaddling or comfort blanket, their dog, (or horse) affords opportunities of deep muscle pressure, which soothe, calm and aid self-regulation of the body then emotions. Ted and Henry can be something akin to a 'second -skin' defence, beautifully manifest by Esther Bick[25, 26], as a way of managing the uncertainties and insecurities we face outside our family system or network. Not just a transitional object[21, 27] but a grounding, animate and dynamic, human- non-human body.

Visual portrayal of the intimacy of humans and animals have captivated scholars across culture and history. Famous artists such as Mary Cassat and Leonardo Davinci have pictured in their respective works, how the boundaries between human bodies and animals can appear and become fused, almost merged and blurred. Cassat depicts children with dogs as well as children and parents. Colours and contours used explicitly seem to marry child-animal and child-parent bodies' together in the sense of a symbiotic whole. Like-wise Davinci's[28] intricate and detailed, often anatomical drawings of horse-riders reveal a rich blend of both horse and rider bodies, where it is difficult to see where one (body) part ends and the other begins. What is evident is the embodiment of the encounter also embodied and caught on canvas. The rhythmic brush strokes belying the very image of thought. Study A's use of 'etudes' (drawing exercises), as a visual witnessing (and recording) of these intimate events also show something remarkable and similar in repeated patterns of child-dog interactions,

observed in the classroom. In the same manner as ethnographer (participant-observer) sketching, as embodied motion with 'fingery' eyes dwelling over the 'unit' of analysis, a unit of wonder and curiosity, child and dog. Visually materialising the intimate and inter-corporeal experience can be seen in both Figure 1 and Figure 2. This coupling and doubling reflects and propels the Baradian[9] notion of 'intra-action' and how child and dog mutually co-constitute one another, that is, they relate in regulatory, rhythmic and sensory ways through tactile stroking and deep muscle pressure.

This is further revealed in the 'etudes' below (Figures 1 and 2)



Figure 1 Jenny and Ted intimately intertwined in body.



Figure 2 Timmy and Ted face to face with rhythmic ear stroking.

We argue, in this paper how we need to make the body an important aspect of discourse, and by exploring bodily patterns and movements we can re-configure childhood ‘attachings’ in both the human and non-human world we inhabit. Cartographic-style inquiry has been utilised by the somewhat obscure and little known work of Fernand Deligny (2015)[23], a great influence on the thinking of philosophers Deleuze and Guattari. Deligny developed a novel way of working with children and young people with autism in order to engage with them ‘outside of language’. He was critical of the dominant psychiatric and positivist educational perspective of his day. He did not see autism as a pathological deviation from a developing ‘norm’ and sought to practice in a way that gave attention to small gestures, arrangements of acting and living, rather than seeing personhood as foundational upon conceptions of agency and sovereign autonomy alone,[23]. Such relational networks were given the Deligny[23] neologism “arachnean”, meaning web-weaving. This intriguing mode of how we consider social organisation is not only taken up by Deleuze and Guattari[11] in their concept of the ‘rhizome’, it also aligns well with Sheets-Johnson’s ‘animate’ and ‘dynamic’ prose to highlight the complex and subtle elements of the body as ‘kinetic phenomena’ (Sheets-Johnson, 209:331)[20]. In bringing the body back into to methodological praxis we can begin to see in new ways and render the idea of movement (and body rhythms) as qualitatively significant to growth and flourishing. Such notions of the ‘lines’ we create through movement, walking and animation (during canter or trot in equine therapy, or walking and stroking with dogs) are further endorsed by the imminent geographer Tim Ingold[10]. It is rather apt that Ingold’s appraisal of Actor-Network Theory by Latour[29] depicted an arachnean-type ant analogy similar to the spider-web of Deligny[23], as opposed to a purely Latorian mechanistic social assemblage. Indeed, ‘wander lines’, the term coined by Deligny’s[23] work in which explored the movements of autistic children, can open up new and exciting ways in which to think about movement, touch, affect and emotion. In aligning and diffracting[30] theory and concepts (reading them apart, through in and alongside one another) we can peruse a “mapping” (diagramming) of the social milieu of child and animal (dog, or horse in this instance). Such mapping can animate and illuminate, by bring in the body dynamically, a visual-material unflattening of the encounter (see figure 10). This affective and tactile-kinaesthetic encounter can be lost translation (cognition) and omit significant understanding ontologically.

As shown in Study A’s protocol (table 1), workshop activities were undertaken with creative multiple media to elicit the children’s voices about their interactions with their class-room canine, Ted. One of these workshops involved pendulum painting to enable the children’s exploration of the ideas of space and place. This process evolved and emerged into a captivating and enchanting narrative related to how the children shared the class room space with Ted. This animation of lines seemed to encapsulate something important for the children during the process, saying how the lines were ‘wild’ and ‘like a butterfly’. It culminated in the creation of a comic story and through various panels the children portray the relationship they share with Ted. These panels were formed by the children from a stock of photographs which they had taken on a GoPro micro camera. Of significance was the highlighting of Ted’s ‘pathways’ (which can be considered similar to Deligny’s wander lines). One boy stated how these ‘pathways bring us together and connect us’ (see figure 9).

Study B

A hermeneutics phenomenological approach was adopted in Study B. Although this initially seem at odds with and in contrast to a post-structuralist methodology, used in study A, what is significant and noteworthy is that we highlight our ‘common ground’ stance that truth cannot sit comfortably within any one epistemology. An example of such is given by the post-structuralists Foucault and Heidegger and their ‘shift’ from hermeneutics and language which could be said to be an important exploration into the very constitutive processes (of research) which produce all kinds and types of knowledge. It is on this basis with which we ‘combine’ our studies (in the sense of revelatory similar, yet different findings) in order to dynamically and epistemologically reveal new

insights and understanding about HAI. In challenging a traditional and purely positivist paradigm, we offer a double entendre, as it were, to our response to a call for studies which are methodologically qualitative and robust.

What we have observed in our separate research studies was a striking 'common ground' in not only the tactile-kinaesthetic movements and rhythms between dog-child and horse-adolescent but also the synergy and synchronicity in movement and 'becoming-with' one another. This is dramatically seen in intra-actions when both human and animal bodies appear to merge, couple or double together in an intimate entanglement of closeness almost reminiscent of a symbiotic and thus, inter/intra-corporeal encounter[11]. These entanglements seem fundamental to child well-being and flourishing, as touch in middle childhood in particular diminishes rather significantly[31] It may even account for something similar to a nature-deficit disorder,[32] tactile-kinaesthetic deficit now given sufficient credence in relation to the concept of biophilia, so poignantly described by Wilson[33] as humans innate need to connect with nature. Therefore, the affordances of animals such as horses and dogs, as explicated in this paper, are crucial to understand in their potential to address this imbalance or deficit at key times of child development and human flourishing. More so, the safe affordances of animals could support children who have been subject to abuse (emotional, physical, sexual) and are withdrawn or tactile defensive (sensory processing and integration difficulties[34]).

In human-horse encounters, horses instinctively recognise authenticity and tune in to emotional and tactile 'cues that may be transmitted by humans through different channels: voice, posture, expression and pheromones' (Hausberger et al, 2008 p. 4)[35]. Rothe et al (p. 375, 2004)[36] assert that in the encounter between horses and humans, each has to recognise the other's perspective in the relationship, which in turn 'can facilitate the exploration of feelings and intuition' and enhance the understanding of 'self, nature, relationships and communication.' Schultz et al (2007)[37] highlight the particular value of relationship-building therapeutic experiences in relation to trust, communication, confidence, problem solving skills and healthier emotional relationships.

Just as Winnicott (1964)[27] used the analogy of a parent's face serving as a mirror to help the child develop their sense of self, the horse can act as a 'mirror', reflecting human energy, behaviours (both verbal and non-verbal) and an awareness of their effects, back to the human.



Figure 3 human-horse 'mirroring' and relating.

Fine (2015)[38] suggests that because the horse is a large animal, in order to interact with the horse, the participant is required to find non-verbal ways to communicate in order to establish any sort of relationship. In effect, the human body uses an array of multi-sensory factors, although with an emphasis on touch and physicality, to promote a feeling of confidence when confronted with a large, moving stimulus such as an equine. For example, when grooming a human develops first-hand experience of the size difference and potential power of the horse. This mutual physical engagement also appears when leading a horse also argued by Schultz et al (2007, p. 267)[37], as the experience of being beside the horse while guiding and controlling its movements, can allow the human to move from feeling powerless, to feeling powerful. The sheer presence of a horse demands respect, and the emotional and cognitive state of the individual responds in attempting to gain their trust and respect. In therapies where the horse is ridden, this includes developing the ability to initiate the movement of an animal so large that it could potentially have the capability to severely injure if it so wanted. Ultimately, riding a horse creates a fundamental change in the positional relationship between the human and the horse. Edwards (2011)[39] suggests that riding interactions can establish and develop communication, balance and trust. These connections with horses may, as Rothe et al (p 80,2004)[36] suggest, encourage the growth of self-esteem, which 'may be increased through a new found ability to positively influence another being'. Once a relationship between a horse and a human is established, rapport begins to grow. This in turn gives a feeling of inner pride, empowerment and accomplishment[40] see figure 4.



Figure 4 Embodied transformation. "...like a legend being on top of them. You feel so big. You feel like a boss because you're so big. I like being on a big horse. I feel massive...I feel better".

The benefits of association with and positive interactions between young people and horses are multi-layered: they include 'care translation, socialisation and conversation, self-esteem promotion, companionship and affection stimulation' (Rothe et al. 2004, p. 373)[36]. It is conceivable that these benefits can be integrated into the young person's sense of self and transferred to other arenas of their lives. This natural ability to attune to others, to observe, evaluate and respond authentically and immediately to non-verbal attitudes and behaviours means that they are ideal therapy and companion animals[41].

In addition, communication between horse-human is gestural and rhythmic, with dressage, perhaps the most significant example of how this process itself, similar to dog walking, is a corporeal inculcation of harmony, synchrony and rhythm. Its dynamic 'rhythmic entrainment' (McCormack,

2013: 48)[42] becomes a repetition of sensory affectedness and kinetic intensities calling for a body (rider or walker) to tune into its senses, transcending the body and mind dichotomy, to become what is termed rather befittingly, a 'rhythmanalyst' [43]. The elusive essence of affect can therefore become materialised in and through these studies by their interplay of both text and image. As seen in figures 5 and 6, the rhythm of riding (canter, trot) can also evoke both hypo arousal and hyper arousal states[34], thus calming and regulatory and as well as improving attention and focus, as also seen in Study A. This 'common ground' is noteworthy as these states are related to affect attunement with the dog and horse both affording a way of relating in an inter-corporeal way.



Figure 5 human-horse rhythm, becoming 'rhythmanalyst' and in tune with one another.



Figure 6 shared and expanding spaces, creating 'territology'.

3. Results

Affect and Rhythmicity

3.1. Re-enactments of individuation's 'dance' and inter-corporeal encounters

By reproducing embodied ways of knowing, new knowledge has emerged. Lupton[44] discusses eloquently the promordial scene and how infants communicate pre-linguistically yet very effectively through gestures, sounds and movements. Results from both Study A and Study B demonstrate embodied ways of knowing through these re-enactments and as Stern postulates, this 'dance of reciprocity' is fundamental to developing a sense of 'self' and individuation in the world. This perhaps also accounts for Mannings[24] reference to individuation always 'being more than one', that in finding ourselves, it is through an 'other'. This other can be non-human, as we have shown in how 'mirroring' is reproduced in both canine and equine encounters. Therefore, the need for

symbiosis or entanglement in our ways of relating is always a physical one, an intercorporeal production of safety, security, reciprocity and wholeness.

3.2. *Creating spaces and territoriality*

The revival of thinking in a vitalistic and corporeal way enables the opening up and expansion of spaces for multi-species well-being. By use of visual-material methods Study A and Study B have demonstrated respectively how qualitative inquiry can allow the essence of experience to be seen and materialised dynamically. Through the interplay of image and text, a fresh and creative element to understanding human-animal interactions is provided. By both researchers being 'drawn to see' [45] and gazing long enough through their very own intercorporeal modes of being, the proliferation of children and young people's itineraries have been narrated and arranged. These seek to uncover alternative and significant aspects of relating which enhance wellbeing and human-non-human flourishing. Tactile, kinaesthetic melodies are brought to the fore [20] and reiterate the need for 'skinship' [24] and touch between bodies and across species. The making of this 'territology' [11] in union with one another brings bodies together as a network which can weave new pathways and patterns for relating. We have demonstrated the significance of children and adolescents not just using space but actually producing space. In terms of relatedness, autonomy and a sense of self, this space and expansion or 'bubbling' [46] of territoriality is relevant to what 'bodies can do' [47]. It is clear that non-human relationships are important to human social and emotional wellbeing and flourishing. By being in synchrony with one another 'body work' [48] can enable multi-sensual flows of affect and emotion, affording mutual co-constitution and wellbeing.

3.3. *Developing alternative, post-human, more-than-human narratives*

As Bessell van der Kolk aptly argues, (2016, p86) [48] "The body keeps the score. If the memory of trauma is encoded in the viscera, in heartbreaking and gut-wrenching emotions, in autoimmune disorders and skeletal/muscular problems, and if mind/brain/visceral communication is the royal road to emotion regulation, this demands a radical shift in our therapeutic assumptions". Therefore, rhythmic ideas of the relational aspects of HAI can offer exciting new ways with which to understand and therefore enhance human and animal wellbeing and flourishing. In becoming 'rhythm analyst' [43, 49] we are attuning to aspects of being which pay particular attention to intercorporeality. By viewing relationships through the lens of sharing a 'common world' together [50] challenging the Anthropocene, we have highlighted the value of embodied ways of knowing through material-discursive practices. In taking such a stance, we have revealed alternative modes of being in the world through the conducting of affective methodologies. Through mapping and drawing out the lines of the event [51, 52] (interactions) we can offer the image as a way of stepping outside of usual assumptions and interpretive methods to new configurations of relationships which encompass non-human beings. These new forms of *seeing* are beyond linguistics and make visible bodily affects. This affect may otherwise be lost in transmission between bodies as merely *felt* experiences and go unknown or unspoken.



Figure 7 Pendulum painting with Ted. Re-enacting movement in class.



Figure 8 Making comic panels with Ted, telling a story with visual-material methods.

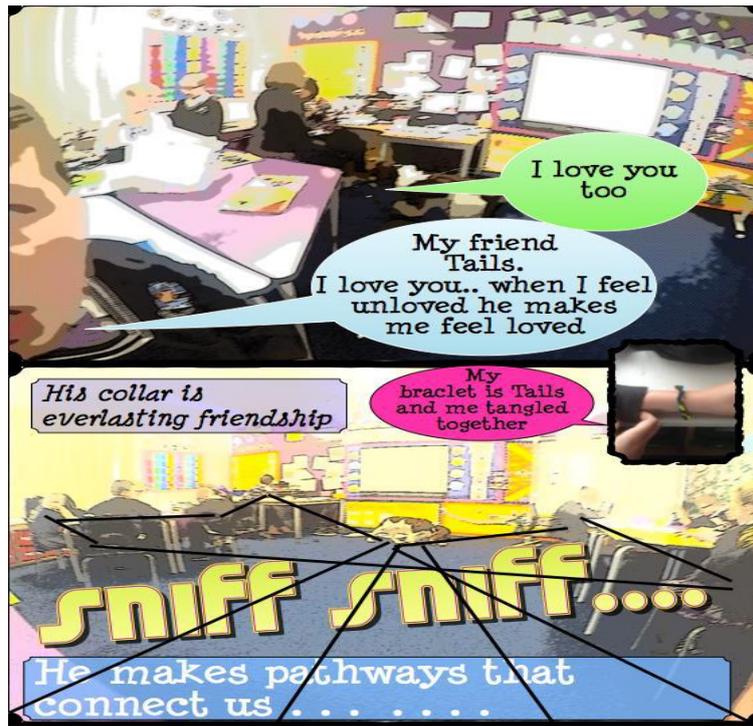


Figure 9 Example comic panels showing "...he (Ted) makes pathways that bring us together".

Figure C: Hyper-arousal ↑

Figure D: Hypo-arousal ↓

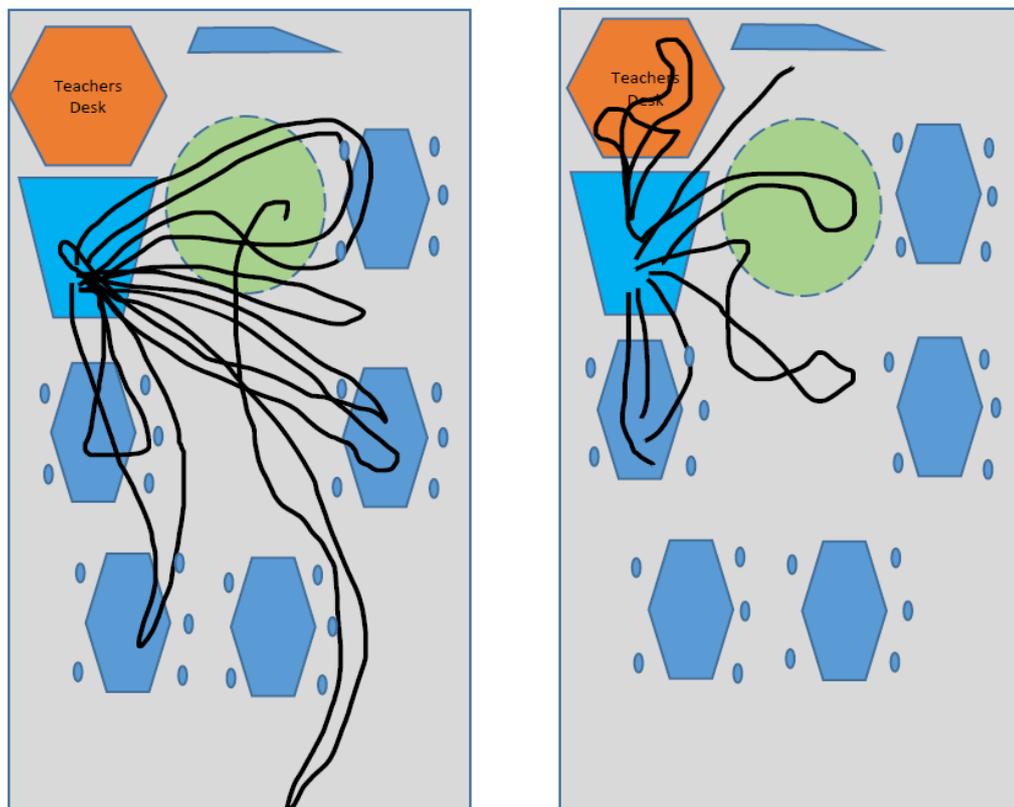


Figure 10 Rhythmanalysis and diagramming Ted's 'wander lines' and movement in the classroom to show affect attunement between him and the children in shared arousal states.

4. Discussion

This paper has attempted to explore and uncover what is encountered and experienced outside of language and cognitive perception. In using an affective, qualitative methodology we hope to have revealed what potentially lurks in the ‘unknown’ and ‘unthought’ dimensions of experience during HAI, thus challenging Platonic and Cartesian privileging of intelligence (human). Our methods cross over and embrace differing disciplines in order to expose how opening up discussion around the politics and ethics of touch and the body can redefine our understanding of HAI. This could offer fresh insights into the significant tactile and sensory potential to mutual well-being (of HAI) for human and non-human flourishing. By mapping, drawing, diagramming and animating human-animal bodies and, viewing them as rhythmic events and encounters we can highlight the mutual co-constitution of benefits such as corporeal modulation (emotional regulation) and deterritorialisation-reterritorialisation, (creation of space). These vital spaces, in which human-animal bodies move and intra-act in harmony and kinetic melody with one another, become vital spaces for wellbeing. In true Deleuzian terms they become Bodies-Without-Organs (BWO’s) in de-territorialized spaces meaning they are not regulated, organized, and static of fixed entities. They are human-animal bodies which are entangled in intimacy and empathy. This inter-species relationship is one of sociality, doubling and inter-corporeal communication on an egalitarian plane. It disposes of power (puissance), thus opening up potential for hybrid[53], common world, relationships.

5. Conclusions

Both Study A and Study B exemplify why children’s bodies matter. In conceptualizing the body as ‘unfinished’, ‘unbounded’ and ‘becoming’ we concur with Horschelmann and Colls, (2010, p 9)[47] that traditional constructions of child development need challenging. The need for studies to bring the body back in to discourse is highlighted. The authors stand with Darwin and his seminal works of illustrated observations of human and non-human development (of emotions) as in parallel we endeavor to find fresh and exciting ways with which to help children and young people alter the ‘inner sensory landscape’ of their bodies following stress, anxiety and trauma, (Bessel van der Kolk, 2015, p 75)[48]. By sharing common ground we have offered an alternative perspective on why HAI are fundamental to both species. In returning to Haraway’s original question of what we touch when we touch a dog, perhaps when we touch a dog or a horse, (or any other species for that matter) we touch our own ‘animality’ in entangled empathy with them. .

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References.

1. Haraway, D.J., *When Species Meet*. . 2008: University of Minnesota Press.
2. Hayles, N.K., *Unthought*. 2017, University of Chicago Press: Chicago and London.
3. Gee, N.R., S.L. Harris, and K.L. Johnson, *The Role of Therapy Dogs in Speed and Accuracy to Complete Motor Skills Tasks for Preschool Children*. *Anthrozoos*, 2007. **20**(4): p. 374-386.
4. Gee, N.R., E.N. Crist, and D.N. Carr, *Preschool Children Require Fewer Instructional Prompts to Perform a Memory Task in the Presence of a Dog*. *Anthrozoos*, 2010. **23**(2): p. 173-184.
5. Gee, N.R., et al., *The Presence of a Therapy Dog Results in Improved Object Recognition Performance in Preschool Children*. *Anthrozoos*, 2012. **25**(3): p. 289-300.

6. Gee, N.R., *Research methods used to consider the impact of HAI on older adults' health*, in *Animals in Our Lives: Multidisciplinary approaches to the study of human-animal interactions*. . 2018: University Sydney, Australia.
7. Hall, S.S.G., N.R.; Mills, D.S., *Children Reading to Dogs: A systematic Review of the Literature*. PLOS One, 2016. **11**(2): p. 1-22.
8. McCordle, P., et al., *How Animals Affect Us*. 2011, London, England: American Psychological Association.
9. Barad, K., *Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning*. 2007, Durham and London: Duke University Press.
10. Ingold, T., *Lines*. 2016, London and New York: Routledge Classics.
11. Deleuze, G.G., F., *A thousand plateaus: Capitalism and schizophrenia*. (1987) 2013, London: Bloomsbury.
12. DOH and DOE, *Transforming Children and Young People's Mental Health Provision: a Green Paper (Cm 9523)*. 2017.
13. Ecclestone, K. and D. Hayes, *The Dangerous Rise of Therapeutic Education*. 2019, Abingdon, Oxon.: Routledge.
14. Heller, E.L., *What animals can teach us about inclusive pedagogy*. 2018, Wordpress.
15. Belsky, J., *The detremnants of parenting: A process model*. Child Development, 1984. **55**: p. 83-96.
16. Endenburg, N. and H.A. van Lith, *The influence of animals on the development of children* The Veterinary Journal, 2011. **190**: p. 208-214.
17. Eisner, W., *Comics and Sequential Art*. 2006, New Jersey: Paramus.
18. Leboyer and F., *Loving Hands: The Traditional Indian Art of Baby Massage*. 1997, USA and Canada.: Newmarket Press.
19. Montagu and A., *Touching: The Human Significance of the Skin*. third ed. 1986, New York: Harper and Row.
20. Sheets-Johnstone, M., *The Corporeal Turn: An Interdisciplinary Reader*. 2009, Exeter, UK: Imprint Academic.
21. Winnicott and D. W., *Through Paediatrics to Psychoanalysis: Collected Papers (Karnac Classics)*. 1975/2014, Abingdon, Oxon.: Routledge.
22. Stern, D.N., *Forms of Vitality*. 2010, New York, USA: Oxford University Press.
23. Deligny, F., *The Arachnean and Other Texts*. 2015, Minneapolis: Univocal Publishing.
24. Manning, E., *Politics of Touch: Sense, Movement, Sovereignty*. 2007, Minneapolis: University of Minnesota Press.
25. Bick, E., *Further considerations on the functions of the skin in early object relations: findings from infant observation integrated into child and adult analysis*. British Journal of Psychotherapy, 1986. **2**: p. 292-299.
26. Willoughby, R., *The petrified self: Esther Bick and her membership paper*. British Journal of Psychotherapy, 2006. **18**(1): p. 3-6.
27. Winnicott and D.W., *The Child the Family and the Outside World*. 1964, Middlesex, England.: Penguin Books.
28. Clayton, M., *Leonardo Davinci: A Life in Drawing*. 2019: Royal Collection Trust.
29. Latour, B., *Reassembling the Social: An Introduction to Actor-Network-Theory*. 2005, Oxford: Oxford University Press.
30. Smartt Gullion, J., *Diffarctive Ethnography: Social Sciences and the Ontological Turn*. 2018, Abingdon, Oxon.: Routledge.
31. Johnson, R.T., *Hands Off: The Disappearance of Touch in the Care of Children*. 2000, New York: Peter Lang.

32. Louv, R., *Last child in the woods: saving our children from nature-deficit disorder*. 2008, Chapel Hill, USA: Algonquin Books.
33. Wilson, E.O., *Naturalist*. 1994, Washington DC: Island Press.
34. Dunn, W., *The sensations of everyday life: Empirical, theoretical and pragmatic considerations*. American Journal of Occupational Therapy, 2001. **55**: p. 608-620.
35. Hausberger, M., et al., *A review of the human-horse relationship*. Applied Animal Behaviour Science 2008. **109**: p. 1-24.
36. Rothe, Q.E., et al., *From Kids and Horses: Equine facilitated psychotherapy for children*. International Journal of Clinical and Health Psychology. **5**(2): p. 373-383.
37. Schultz, P.N., G.A. Remick-Barlow, and L. Robbins, *Equine-assisted Psychotherapy: A Mental Health Promotion/intervention Modality for Children Who Have Experienced Intra-family Violence*. Health & Social Care in the Community, 2007. **15**(3): p. 265-271.
38. Fine, A., *Animal-assisted therapy: Foundations and Guidelines for Animal-Assisted Interventions*. 2015, London: Elsevier.
39. Edwards, S.D., *Interpersonal equine therapy (IPET): A clinical model for equine psychotherapeutic assessment, intervention, and treatment*. Unpublished thesis. 2012.
40. Bizub, A.L., A. Joy, and L. Davidson, *It's like being in another world: Demonstrating the benefits of therapeutic horseback riding for individuals with psychiatric disability*. . Psychiatric Rehabilitation Journal, 2003. **26**(4): p. 377-381.
41. Chandler, C.K., *Animal assisted therapy in counselling, 2nd Edition*. 2012, New York: Routledge.
42. McCormack, D.P., *Refrains for Moving Bodies: Experience and Experiment in Affective Spaces*. 2013, Durham and London: Duke University Press.
43. LeFebvre, H., *Rhythmanalysis: Space, Time and Everyday Life*. Trans. Stuart Elden. 2004, London: Continuum.
44. Lupton, D., *Infants and Objects*. Presentation at the Relational Consumption: Beyond Individuals and Choices Workshop, Monash University, Melbourne 16 August 2013, 2013.
45. Causey, A., *Drawn to See: Drawing as an ethnographic method*. 2017, Canada, New York USA, Plymouth UK.: University of Toronto Press.
46. Sloterdijk, P., *Bubbles: Sphere 1*. 2011, Los Angeles, CA.: Semiotext.
47. Horschelmann, K. and R. Colls, *Contested Bodies of Childhood and Youth*. 2010, New York: Palgrave Macmillan.
48. Kolk, B.v.d., *The Body Keeps the Score: Mind, Brain and Body in the Transformation of Trauma*. 2015, UK: Penguin Books.
49. Lyon, D., *What is Rhythmanalysis?* 2019, London, New York: Bloomsbury.
50. Taylor, A. and M. Giugni, *Common Worlds: reconceptualising inclusion in early childhood communities*. Contemporary Issues in Early Childhood. , 2012. **13**(2): p. 108-119.
51. McCormack, D.P., *A paper with an interest in rhythm*. Geoforum, 2002. **33**: p. 469-485.
52. Ikoniadou and E., *The Rhythmic Event, Art, Media and the Sonic*. 2014, London.: MIT Press.
53. Whatmore and S., *Dissecting the autonomous self: Hybrid cartographies for relational ethics*. Environment and Planning D: Society and Space., 1997. **15**: p. 37-53.