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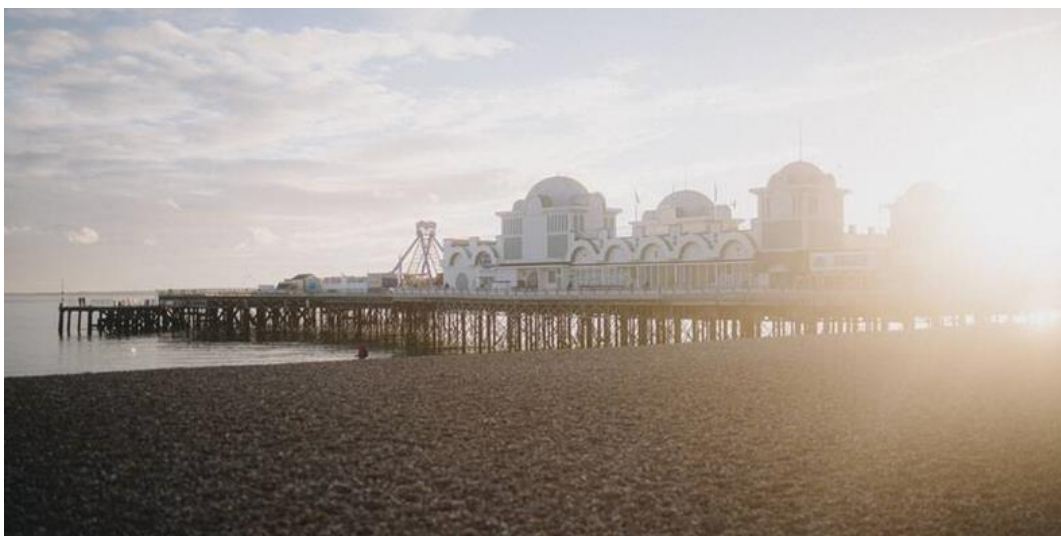
ENQI
European Network
of Qualitative Inquiry



6th European Congress of Qualitative Inquiry

Qualitative Inquiry in the Anthropocene: Affirmative and generative possibilities for (Post)Anthropocentric futures

Congress Proceedings Book 2023



Southsea Pier (University of Portsmouth photo taken by Connor Cleary)

6th European Congress of Qualitative Inquiry: Qualitative Inquiry in the
Anthropocene: Affirmative and generative possibilities for (Post)Anthropocentric
futures.

Congress Proceedings Book 2023

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INTRODUCTION

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We are pleased to present the 6th European Congress of Qualitative Inquiry 2023 Proceedings Book. Our congress theme was “Qualitative Inquiry in the Anthropocene: Affirmative and generative possibilities for (Post)Anthropocentric futures” and the papers in this book reflect the important work that qualitative inquiry offers to develop, share and deliver new potential for resistance and change. This is a pressing concern as we face increased precarity with climate change, war, poverty and growing inequality. What this proceedings book offers is the promise of more affirmative and generative futures for both social and planetary justice for all.

The papers in this book were drawn from both the online and face to face sessions and have been grouped thematically to highlight the various aspects of qualitative inquiry explored during the congress. Our first group of papers are from a theoretical and praxis perspective where Carol A. Taylor questions disciplinary knowledges, revealing micromoments of mattering and bodies with these provocations: how can we work/move together to co-create a more capacious way of knowledge-ing? And, how can we enact posthumanist feminist materialism to become in/disciplined? Ruth Churchill Dower challenges the form of knowledge production using body-listening to engage in a speculative practice of opening ourselves to intervals that might lead to a sense of the infrathin in unspoken languages. Charlotte Marshall, Philippa Isom and Death engage in an epistolary of grief and across time and space, sitting with the discomfort of death and the messiness of grief and loss, finding new ways of shared kinship and positive interventions. Writing conventions are troubled by Mary Garland to reveal intensities and potentials for becoming in writing, offering opportunities and glimmerings of the not-yet-known. Next, Mike Watts engages in kitchen conversations of ‘affective assemblies’ that allow for a greater level of intimacy and immediacy in uncovering happenings in research. Anton Vandervoorde and Charlotte Vekemans remind us of the need to develop criticality when working with post-theories such as posthumanisms and feminist materialism to ensure researchers do not reinforce some of the Cartesian binaries and dualisms they are seeking to undo.

The next group turns to arts-based practices where Belinda Mitchell and Oren Lieberman develop and explore a range of poetic encounters via visual image making, bodily engagement, LiDAR scanning processes, and various improvised means. Joanna Hume explores scrapmapping possibilities via digital data, material artifacts and nature entanglements. Next, Lucy Harding presents a creative and textually disruptive becoming article where anti-method and a visual matrix highlight the incarceration of data in inquiry. Pedagogical possibilities are the focus of the next group where Dorethe Bjergkilde and Pernille Welent Sørensen encourage students and teachers to intra-act with each other and the more than human to produce capacious and creative knowledge that contributes to sensitive and sustainable education. Higher education is the focus for Frank Vonk who asks us to consider new ways of bringing education to professional live and to connect with the issues faced by society. Laura Corbella encourages a focus on improvisation in school teaching that can map how improvisation as a pedagogical attitude can have a greater transformative impact on practice. Finally, Japanese student’s engagement with qualitative research and the positive impacts this has on their subjectivity is explored by Manami Yagi.

Our next group of papers focus on school aged children with Argyro Kanaki highlighting how the use of diaries can support young children's language learning and comprehension. The play experiences of disabled children in a nature-based setting is explored by Sarah Burton who engages with critical disability theorists' views of disability as 'a relational concept' that can be interrogated in order to 'broaden what it means to be human'. Next, Grace Eardley explores the experiences of secondary school children who have been labelled or diagnosed as having Attention Deficit Hyperactivity Disorder (ADHD) and considers the importance of co-production in research with pupils who are part of a project based around a film club. Secondary pupils are also the focus of Tom Fleming's research in Alternative Provision, where physical activity can be a means to build relationships and support pupils' pro-social behaviour. The final paper by Adele Swingewood knots-with neurodivergent secondary school pupils. Adele encourages researchers to follow the threads and embrace the unexpected possibilities during research with neurodivergent pupils.

Animal-human encounters are the focus for our next group of papers where Kay McCrann develops an embodied drawing approach to investigate human-invertebrate encounters with minibeasts. Dog-human relations are part of a wider caring-with and unsettling positionality for Julia Linares-Roake and Antje Jacobs, Karin Hannes and Steven Devleminck co-create via Bio Art with other-than-humans in a multispecies inquiry. This final paper in this group is by Charlotte Hankin, Hannah Hogarth and Other Kin who explore and conceptualize the ethical nature of entanglements and inequity in posthuman doctoral study. Environmental education and sustainable practices opens with Matrona Pappa and Maria Daskolia's assemblages of human and more-than-human bodies that reimagine environmental education for sustainability via new, more holistic models of thought and practice. The focus on waste and environmentally sustainable waste management is illuminated by Lene Granzau Juel-Jacobsen who theorizes waste as more than a 'thing' revealing the complex socio-material practices and discourses of waste management. The final paper in this section is by Sarah Scheiber who highlights the need to develop research with Malta's urban open spaces to address challenges and ensure more sustainable futures where people want to live, work and play.

The final group of papers focus on lived experiences where Marwa Neji considers the intersectional and transnational dimensions for gendered migration that highlights the multilevel discrimination migrant women face and provides critical responses to women's' experiences. Antonella Cuppari and Silvia Luraschi draw on an autobiographical experience of anorexia via a duo-ethnography to reflect critically on social work practices widening awareness on the invisible spaces of the possible in complex and painful life stories. Next Giulia Lampugnani undertakes socio-material research to help educators in training consider the lived experiences of students who have dyslexia. By undertaking simulations of the diverse types of issues students face educators can be more aware of support needed for students. The experiences of the family and caregivers for a relative with Acquired Brain Injury (ABI) is the focus of Louise Cooper's research who produced a conceptual framework proposing creative research methodologies to investigate families' experiences of caring for a child with ABI that can give professionals an insight into families' lives. The final paper is from Lucia Carriera whose project explores how professional educators use the idea and the materiality of 'home' in educating children in Residential care homes to reveal the complexity and nuances of alternative care.

The papers in this proceedings book are a clear articulation of the critical and transformative potentials of qualitative inquiry. They are brimming with movement, flows and potentials merging creative and artistic practices and a range of theoretical and conceptual positions and perspectives. We hope you enjoy reading them as much as we did and that they move and inspire you in your own research. This proceedings book is the formal closure of the 6th European Congress of Qualitative Inquiry. We look forward to the 7th European Congress of Qualitative Inquiry in Helsinki, Finland and hope to see you there so we can carry on these important conversations.

Nikki, Emma, Jessica, Anisa, Jennifer, Megan and Claire

BECOMING IN/DISCIPLINED

Carol A. Taylor

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Abstract

'Disciplines cut and chunk human, more-than-human and other-than-human experiences into separate and hierarchized knowledge fields' (Hughes, 2020), producing a façade that knowledge is coherent, organized and manageable. This micro-moment is an invitation to think/do/make knowledge beyond, outside or otherwise than in disciplines and to find ways to refuse the disciplining of bodiesmindshearts that disciplines so often require. The paper focuses on a speculative intra-action with the questions: How can we work/move together to co-create a more capacious way of knowledge-ing? and how can we enact posthumanist feminist materialism to become in/disciplined? This paper is based on a research-creation event that was part of the Dream Team entitled (Un)teachable micro-moments in post-qualitative research, which focused on how micromoments in the context of post-qualitative research offer exciting possibilities to move beyond boundaries, educational spaces, strict disciplinary discourses, and traditional instructional practices. The micromoment explored in this paper concerns in/discipline through movement. It's focus on objects-bodies-spaces invites learning through relations and relationality.

Keywords: Movement methodologies, objects-bodies-spaces, discipline, becoming in/disciplined, micro-moment

INTRODUCTION

This paper takes off from work that I have been doing with the *Get Up and Move!* collective, a group of academics and doctoral students who have been working collaboratively together using walking, movement and arts-informed methodologies over the past two and a half years. My particular interest in this paper is movement, stillness, the body and the potential of transdisciplinary theorizing. It is inspired by reviewer comments the *Get Up and Move!* collective received on a collaboratively co-authored paper called 'Concept-ing with the gift: Walking method/ologies in posthumanist research' submitted to the *Journal of Posthumanism* (now published). The main aims of this paper were to bring Marcel Mauss's anthropological sociology on gift practices into relation with posthumanist thinking on concepts and embodied walking methodologies. However, one of the anonymous reviewers engaged with our paper in an 'appreciatively expansive' way, encouraging us to think away from and alongside the paper. Their comments asked us to push further with the points we had made about:

- The limits of bipedalism and the new horizons that open up by walking in a less aligned way;
- Embodied cognitive science, enaction theories, the intrinsic relation between thinking, neuroplasticity, and movement;
- The body's sense of movement, which is a non-conscious movement-sensing that we share with all life forms and that can open ways of overcoming the human-nonhuman divide that still tends to re-enter through the back door in most posthumanist thinking.

We couldn't attend to these things adequately in our revisions for the Gift paper as they were peripheral to its central argument. As the *Get Up and Move!* collective continue our work together we will no doubt circle back to these comments and enfold our thinking on them into our future work. This paper is my own initial foray with the reviewer's comments which have continued to roll and roil in my head. These comments have made me itch, made me think; they are seeds germinating quietly and not so quietly. I wanted to move and walk to work out what they mean – more than that, I wanted to move and walk with others to see what they produced. The micromoment that follows is a first experimental 'outing' with movement practices to respond to these comments.

CHOREOGRAPHY

This micromoment works with Erin Manning's (1) conceptualization of 'the witness of body-worlding' and enfolds individual-collective experience. It is an invitation to engage in some object-bodies-spaces choreographic practice-ings and to see what knowledge-ings may emerge from them.

In the Dream Team session on *(Un)teachable micro-moments in post-qualitative research* at the European Congress of Qualitative Inquiry 2023 In Portsmouth, UK, I asked the participants to:

Please stand up. Feel free to move as I'm speaking. Use your senses to tune into what is going on in your body and with your body and with those around you.

Perhaps as you read this you would also like to follow these 'instructions' for a moment. Of course, they are not 'instructions' but rather an invitation: An invitation to continue the walking and movement methodologies emanating from the *Get Up and Move!* collective over the last few years and the walking and moving that occurred in the Richmond 0.10 room at Portsmouth University on 11th January 2023 with Karin and Viv and Mirka and Jayne and Candace and at least 25 other human bodies and desks (pushed out of the way) and chairs (ditto) and window blinds and doors (open for air) and coats (cold and wet outside) and clothes and shoes and bags and pens and pencils and laptops and iPad and mobile phones and hair and skin and jewellery and computer and interactive whiteboard and water bottles and masks (Covid is still with us and some people are masking) and. The specificities are important. What specificities surround you as you read this? Chair-body-table-computer-eye-brain-skin-air-movement. Why not get up and move now? Please stand up etc etc.

Movements are matterings comprising a constellation of human–nonhuman agencies, forces, events, affects, atmospheres, and spaces. Attending theoretically to movement's mattering invites us to engage in posthuman new material feminist theorisations of matter (2), understandings of objects from material culture studies (3, 4), to affect studies (5) and analyses of space from human geography (6, 7). Drawing together these disciplinary threads and weaving them into a transdisciplinary choreography provides a better analytical purchase on the detailed specificity, density and materiality of movement's micromoments. It helps us attend to how actions and relations materialise in human–nonhuman assemblages (8) and apparatuses (2) in ways which complicate notions of human agency and human relationality.

'Choreography starts from any point' says Erin Manning, citing William Forsyth. Choreography is a proposition which produces an 'occasion' to activate relational potentials. Choreography is 'an act that sets into motion a milieu'. Choreography is about letting movement take you elsewhere, of using movement to go elsewhere, of going with movement's tendencies towards new becomings. Choreography is a practice of encounter. It is an arranging of relations between objects-bodies-spaces and an "act of interfering with or negotiating ... an order" (1, p. 75–76).

How – in the space of this room, this conference space, and also in other academic spaces, in your study or writing space, in your classroom, in university spaces – might we get up and move and engage bodies in practical acts of interference and negotiations? How can we create spaces so that we can let movements’ tendencies take us elsewhere? How can we move beyond bipedal uprightism and towards moving modes of dis/alignment?

Manning (1) provides practical guidance to thinking with these questions though what she calls ‘diagrammatic praxis’. What follows are two experimentations. The first is Manning’s; the second is an experiment of my own devising, inspired by the first. Both experimentations were enacted in the space of the conference room and were oriented to engaging the materialities of bodies-spaces-things-thinking-moving in the moment. Their aim was to enact a mode of knowledge-ing (9) that was emergent, processual, sensorial, and somatechnical and to put body-space-movement experiments in contact with feminist in/disciplinarity to move towards an elsewhere of knowing-feeling-moving.

EXPERIMENTAL ENACTMENT 1: RESEARCH-CREATION

1st Activity

The purpose of this first activity is space-body attunement and attention.

Step 1: Lie down on the floor. Close your eyes.

Step 2: Begin to create a diagram of the space. Allow the diagram to settle.

Step 3: Find an open space in the diagram and move into it, virtually.

Step 4: Locate another open space. Move into it.

Step 5: Wait. Feel time’s elasticity. Feel the space shifting.

Step 6: Keep your eyes closed as you continue to keep moving in and through the diagram.

Step 7: Slowly stand up, eyes still shut. In the standing, re-encounter your diagram.

Step 8: Wait.

Step 9: Find another opening within the diagram.

Step 10: Move into it, actually this time.

Step 11: When your movement slows to a standstill and the diagram has solidified, slowly open your eyes.

As a coming out of this activity, you may want to shake or make a noise or jump or move in another way – do it!

DIAGRAMMATIC PRAXIS

Manning calls this experiment ‘digrammatic praxis’. Deleuze’s comment that the “essential thing about the diagram is that it is made in order for something to emerge from it, and if nothing emerges from it, it fails” (10, p. 159). Manning’s diagrammatic praxis is an experiment in space-shaping and body-shaping. This is not about the body occupying space but about becoming more aware of the “quality of experiential spacetime’ and how this ‘is felt most keenly through movement” (1, p. 134). It draws attention to the tendencies of the virtual as they become active in the actualities of the movement. It is about becoming more attentive to movement’s resonances; it is less about an individual body and more about ‘movement’s inherent relationality’. Rhythm, vibration, velocity, sensation. “Choreography happens everywhere, all the time”, Manning (1, p. 91) says – it can be used to provoke different doings but most likely habit sets in and you use the space as you usually do. Erin Manning urges us to use “choreographic thinking [as] an impetus for a mobile architecture in the making” (1, p. 107) – folding in surfaces, objects, landing sites into a moving praxis to attend to differentiated and “distributed relational movement” (1, p. 108). Nothing is rehearsed and all is collective.

EXPERIMENTAL ENACTMENT 2: RESEARCH-CREATION

2nd Activity

The purpose of the 2nd activity is a little bit more directed to exploring and enacting ways to undiscipline bodies-objects-spaces through movement.

Step 1: Individually, devise 3-5 body-shaping/space-shaping movements which are about moving your body in different ways than you normally would when in a university or research space. Keep in mind what I said before about choreography as ‘an act that sets into motion a milieu’, about letting movement take you elsewhere, of choreography as an arranging of relations between objects-bodies-spaces and an ‘act of interfering with or negotiating ... an order’ (Manning, 2013, 75–76).

Step 2: Find a partner.

Step 3: Enact/show your body-shaping/space-shaping movements to your partner. Work out how to join your body-shaping/space-shaping movements into one sequence of movements.

Step 4: Find another pair. Work out how to join your body-shaping/space-shaping movements into one sequence of movements.

As a coming out of this activity, you may want to shake or make a noise or jump or move in another way – do it!

BODY-SHAPING

This activity in body-shaping/space-shaping opens minor gestures, in Erin Manning’s terms, of movement possibilities that point to the dynamics of bodies in relation. This happens all the time, of course, each time we move, but we are hardly attentive to it, it seems so ‘natural’. What is not so usual is using movement to disturb academic life, whose routines and rhythms discipline, constrain and condition our bodies in so many ways. Academic life makes our bodies tighter, smaller, less flexible, less mobile. We sit, we look ahead, our bodies ossify, and our senses wither. Academic disciplines arguably, over time and through their routines, procedures and canons of who to read and who to cite, do the same to the mind. Academic life and academic disciplines rely on the mind/body split. They also rely on the world as seen through human eyes. How can moving academic bodies disrupt this anthropocentric gaze? How can we transgress the injunctions of the mind/body split in our everyday academic lives?

BECOMING IN/DISCIPLINED: FEMINIST PRAXIS, ACADEMIC SPACES AND THE POLITICS OF KNOWLEDGE PRODUCTION

What happened in the room as we moved together, as we shifted shapes, displaced time and space, swirled arms and air, rolled on the floor, swerved, fitted bodies to objects and materialities, walls and chairs, as we smiled, focused, concentrated, as we moved into the unthought time-space-mattering of movement’s unthinkingness?

McCormack’s (11) observation that it is unproductive to explain what bodies are so it is better to focus on what bodies do is pertinent here. And yet ... what did happen? I have no photographs to ‘show’ you. I have no ‘data’ to present. I have memories enfolded with sensorialities and affects that I could summon up into descriptions. But I refuse such nailings down, such after-the-event narrations. *The event unfolded as it did then in that moment*, it lived and breathed as we moved. It was not a butterfly

to be captured in a net and nailed down on a page to be reproduced in the necropolitical mode of representational research.

This refusal partakes of post-qualitative research modes of research-creation (12) which fuses academic research and creative practices. Research-creation produces thinking-in-action (13) via creative practices which activate immanent co-creation of knowledge in the specificities of the *now*. As Fairchild et al. (14, p. 8) note, such “research-creation is speculative theory-practice in motion; its occurrence cannot be limited by interpretation or categorization. It is affective and dynamic and productive in the moment”.

What I re/member is: mobile bodies, still bodies, relational bodies, bodily escapes in the specificities of a co-produced milieu, bodily aesthetics, grace, clumsiness, trying out, smiles, laughter, fingertips and feet tapping rhythms and refrains. A movement of stillness, a moving withness; a micromoment of collective affective effervescence. Here-there-now-then-known-gone.

McCormack (11) suggests that bodies together do three things. One, bodies move physically in all sorts of different ways; two, bodies’ movements entail physical, affective, kinaesthetic, imaginative, collective, aesthetic, social, cultural and political dimensions; and three, bodies produce and generate spaces, in the sense that the “quality of moving bodies contributes to the qualities of the spaces in which bodies move” (11, p. 1832). McCormack (15) brings together these three things bodies do in his notion of corporeal geography which he characterises as an affective, experiential and enactive relation between the moving body and space. This accords with my sense-ing of the two research-creation experiments as an unfolding and enfolding of movements-bodies-matterings within a ‘relation-specific milieu’ which Deleuze and Guattari’s (8) describe as ‘a vibratory block of spacetime constituted by periodic repetition of certain directional components’. But, as Manning (1) reminds us, we never know in advance what directional components might occur nor what vibrations might ensue. The challenge, then, is how to create conditions for something (whatever that might be) to emerge so that we can release the tendencies, to use Manning’s word, in all their variability and potentiality to transgress the enclosures, striations and ossifications of contemporary higher education research and pedagogy.

These two micromoments are small choreographic experimentations that align with Barad’s (16, p. 208) description of experimentation as “[s]tepping into the void, opening to possibilities, straying, going out of bounds, off the beaten path--diverging and touching down again, swerving and returning, not as consecutive moves but as experiments in in/determinacy”. They speak into post-qualitative, posthumanist and feminist materialist urgings to move out of our disciplines and territories to ‘interfere with’ academic order-ings in ways which try to “foster constructive engagements across (and a reworking of) disciplinary boundaries” (2, p. 25)? Certainly, disturbing the academic business-as-usual machine is sorely needed. I wonder, in our own situatedness, what un/disciplining can we do through objects-bodies-spaces choreographies in our academic lives in higher education institutions, in teaching, learning and research? Maybe we could try one act of feminist in/discipline a week, such as standing up in meetings, lying down and thinking in corridors with cushions and a few colleagues, or doing walking-moving-learning sessions with our students.

Acts of feminist in/discipline do effective boundary work by bringing attention to and undoing the presumptions on which boundaries rest. In this, they produce “thick, complex and rigorous forms of knowledge” (17, p. 689) so that we might better attend to embodied and embedded power circuits, entangled complicities, and ethical accountabilities entailed in the relations, connections and dynamics unfolding between human-nonhuman bodies, materialities and spaces. Doing feminist in/discipline means that details matter, that the micro matters, that micro-spaces and territories deserve our attention, and that we have to do what we can in such spaces to undo the ‘god trick’, that absurd, masculinist view from nowhere, and its manifestations in colonialist, patriarchal, racist and sexist teaching, learning and research regimes that valorize ‘objective’ and ‘rational’ research endeavours and the regimes of scientific ‘truth’ they maintain (18). Feminist irruptions of and into in/discipline

through attending to object-spaces-moments-matterings can reveal the efforts that go into maintaining competitive, neoliberal higher education regimes and the affective and physical micropolitical strains they produce: stress, exhaustion, shame, guilt, illness, burnout. This micromoment's experiments highlighted the resonances produced by movements palpably felt, which traverse multiple human-nonhuman bodies, and which hold a "simple but profound promise of contact' between 'disparate forms and realms of life" (19, p. 21).

Feminist in/discipline is a call to action to do the politics of knowledge production differently in academic spaces and places, including conferences. What bodies do, how they matter, and how they move in concerted choreographic matterings with other bodies is a question of the politics of knowledge production – because knowledge production is always a materialization of situated politics and the politics of location (18, 20). Feminist in/discipline, in feminist materialist, posthumanist, transdisciplinary work, matters deeply because it charges "qualitative research with particular ethical, aesthetic, and political tasks" (21, p. 9). The micromoment on which this paper is based concerns in/discipline through movement, focusing on how objects-bodies-spaces can invite learning through relations and relationality. Feminist in/discipline is a moving space of hope – a mobile architecture – that can, when practiced in experimental vein, give life to minor gestures for doing knowledge. Feminist in/discipline can emerge from and help choreograph relational, sympoietic and affirmative alliances across difference, producing new affective entanglements (22).

CONCLUSION

Erin Manning (1) suggests that choreography is about letting movement take you elsewhere, of using movement to go elsewhere, of going with movement's tendencies towards new becomings. With that in mind, here are some questions with which to end:

- How can we best attend to movement's sensory and rhythmic pulses to undo disciplinary?
- How does our sense-ings of our bodies and their invisible and visible movements communicate with/in the wider world in way which can overcome the human-nonhuman divide?
- The limits of bipedalism and the new horizons that open up by walking in a less aligned way;

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BODY-LISTENING AS AN ACT OF ANTHROPOCENTRIC RESISTANCE

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Abstract

Thinking and moving-with a posthuman, feminist materialist curiosity, I will be enfolding the sensory languages of movements, materials, molecules and musculoskeletal systems of under-fives with some alternative notions of creating, perceiving and valuing expression. Research reveals that the majoritisation of spoken language together with the pathologisation of silence (1, 2, 3) casts an opaque veil across spaces that are not yet inhabited by words (4), restraining the possibilities for sensory knowing to become more-than-expressive. This oppression creates centrifugal forces that make the young human responsible for a ring of singular expectations that are all but rosy. This dominant need for talk as a primarily cognitive process that “fl[ies] between lips and brain” (4, p.15) is exemplified in early childhood policy and practice but seems to miss or resist the plural, off-kilter entanglements of expression-exchange that ‘are not quite within the register of the perceptible [...] but are nonetheless felt’ (5, p.17).

Duchamp (in 5) calls this the ‘infrathin’, which values not so much the what/who/how-s lying in the cracks of a multimodal event, but their potentiality; their more-than qualities. These are inklings of something that happens in the interstices of expressions or encounters (5) by which a difference makes itself known and felt (not necessarily by humans), through the marks – or effects - that are left behind (6, 7). I argue in this paper that, by shifting the focus away from centrifugal perceptions of audible, spoken languages towards an indefinable ‘prehension’ (Whitehead’s term for *grasping towards* or *sensing* in 5) of these expressive differences, human *and* more-than-human educators can build care-full ecologies of practice, such as body-listening.

This paper will engage in a speculative practice of opening ourselves to intervals that might lead to a sense of the infrathin in unspoken languages, where we mightprehend the effects of a material difference or an affective process. For instance, in considering the multiplicities of expression, we might notice the taught stretch of the vocal folds, allowing sound waves to be released at a certain pitch, or the finesse of skull-bone conduction allowing us to hear-feel our vibrations. We might consider how these intersectional, and intra-relational parts might shift from human to more-than-human, able to produce more-than the sum of their parts, whilst influenced by quantum, thermodynamic, sociocultural, economic and political forces. And we might ask how this dynamic of expressive forces offers a suggestion of how languages might be received, understood and listened to, whilst resisting the temptation to pin them down in the very language that cancels and refuses their existence. Ultimately, we will ask whether a pedagogy of body-listening could enable educators to co-create, prehend and value the minor key of small languages that are often unexpected and therefore missed/misunderstood within an anthropocentric frame.

Keywords: not-speaking, expression, neurodivergence, body-listening.

SPACES FOR RECONFIGURING REFUSALS TO ENGAGE

Not talking can often *look* like a refusal to engage. However, in my fieldwork, children often removed their faces from the adult gaze exactly at the moment they *did* want to engage, in a bid to reduce the anxiety of expectation and of *getting it wrong*. At three and four years old, they are already aware that their difference is othered and feel that, somehow, their expression is lacking; that *they* are lacking.

The fieldwork for this PhD research involved creating spaces for expression *without words* both on zoom (during the 2020 covid lockdown) and in a large, airy art gallery following the release of lockdown. Expression took the form of movements between bodies, materials and the space, entangled with humming, laughter, sighs, songs and other spontaneous exclamations that articulated nothing in particular other than a joyful accompaniment to their movement. Expectations to speak at any stage were removed entirely from these six research families, whose children struggle to vocalise words when 'required' to do so. In fact, most of the children had already received a diagnosis of selective mutism and some were also being assessed for autism. So, instead of a space full of instructions and expectations, on Saturday mornings over a period of six months, children were invited to move, touch and dance-with particular materials, such as their parents' limbs, teddies, balls of wool, long branches, lycra sheets, feathers, silky scarves, water, paint, torches, cushions, blankets and tents.

As a collaborative parent-arts-educator-researcher, I reduced my talking over the fieldwork period and invited the research families to allow their bodies to become spontaneously entangled in improvised movement. This was achieved partly by modelling a form of dance called contact improvisation (using a large teddy as my child-partner since non-related families were still not permitted to have physical contact post-lockdown) or with the materials I had brought for that week's exploration. As families became comfortable with the invitations to move and the increasing spaces for silence, ironically the sounds emerging from their children's young bodies became more and more frequent until, by the fourth week, every child apart from one was comfortably chattering away during each session, in and amongst their many other vocal and non-vocal expressions¹. It seemed their sense of being othered dissolved quickly in these spaces where their preferred embodied modalities – the very difference that had been labelled as *lacking* in other spaces - was welcomed and enjoyed without the need for justification. It seemed the less the adults talked, instructed or interpreted, and the more bodies attuned to each other's possibilities, the more these children found space for their own languages.

In this paper, I take a posthuman, feminist materialist position of curiosity and invite us humans, nonhumans, bodies, affects and atmospheres to resist semiotics and instead enfold the sensory languages of movements, materials and molecules within our musculoskeletal systems, just like many of our research children do. In this way, by becoming-with our own spaces of silence, we may also experience some *alternative* notions of creating, perceiving and valuing expression, which I will call a pedagogy of *body-listening*.

In what follows, I will set out the theoretical foundations for body-listening that resist anthropocentric tropes of 'child' and 'speaking' and explore some of the thinking behind speculative embodied approaches that can be experimented with in the spaces occupied by young children who sometimes don't speak, whether that might be in the home, the nursery school, kindergarten or elsewhere. In conclusion, I will invite readers to experience a speculative practice of opening themselves to intervals that might lead to a sense of the infrathin in unspoken languages, where we might sense the effects of a material difference or an affective process.

¹ The one child who remained unable to speak out loud nevertheless engaged with his whole body and happily communicated in whispers with his mum. He was the only child in this group who had already started school and had learned how to develop close, playful relationships with his teachers and peers without needing to speak.

SPECULATIVE POSSIBILITIES, COLLABORATIVE BODIES AND ENTANGLED TALES

You might be forgiven for imagining that speculation is about investment forecasting or making some kind of calculated prediction about future gains in order to simplify or minimise potential risks and eliminate historical or emergent troubles. This kind of capitalist, socially constructed version of speculation is designed to imbue a sense of individual power and intelligent thinking behind the (increasingly *normalised*) culture of gambling with the world's finite resources. As if money, oil, knowledge, AI, or any form of currency, belongs exclusively to us. As if we humans were separate from, in control over, or superior to the earth.

I offer another perspective: speculation is about becoming intrinsically open to all kinds of unpredictable risks by acknowledging the intra-agential responsibility of ongoing processes (as opposed to fixed gains or losses) in order to animate all bodies, *including* their historical and emergent troubles, and counter the reduction, suppression or denial of them. Barad (8) suggests this “requires being open to the world's aliveness, allowing oneself to be lured by curiosity, surprise, and wonder” (p.2). As part-human, I take this to mean opening up to dynamic, collaborative, often unfathomable, experiences of being-with, or becoming-together, that are not determined by social, capital or anthropocentric constructs (although the imprints of these are carried in such experiences) and are not centred or dependent on human deity but on worldly relationality.

Like Haraway (7) I would argue that, even in the Anthropocene, by putting on the felt spectacles of speculation (such as listening through touch rather than observation), such a sense of opening up to the world can result in breaking through the embedded notions that tie us in to our highly pressured ways of being and knowing. In so doing, humans may be able to call out the trouble with positivist methodologies and listen-anew to the responses that come from within and beyond its worldly boundaries. This is *important listening* because, as Barad (8) highlights, “Many voices speak here in the interstices, a cacophony of always already reiteratively intra-acting stories. These are entangled tales. Each is diffractively threaded through and enfolded in the other” (p.1-2). If this is the case, then listening must be done with, through and between bodies rather than words. In fact, the theories of Haraway, Barad, and Manning all bring slightly different perspectives that resonate with this research in joyful becomings outside of neurotypical ways of being.

But we don't have to master this body-listening alone, as is required with many individualist processes of the Anthropocene. Haraway (7) provokes an ethical ontology of 'rendering-capable' each partner through their entanglements, i.e. the space where potential (which she calls 'becoming-with') is triggered and comes to the fore through co-production. Haraway calls this “sympoiesis” (p.33), meaning co-creation by collectives with indeterminate boundaries, whose knowledge, agency and power (as in, dynamic forces, not ownership) are distributed amongst constituents, albeit not in equitable shares – hence the need to stay with the *trouble*, as discussed in Haraway's (7) book. This is a good metaphor for the uneven, messy ecology of practices that takes place in speculative inquiry through the continuous relay of giving and receiving (not necessarily on reciprocal terms), merging and emerging, and becoming-with. Enabling the sympoietic in speculative practices invites new relations, different possibilities and vital potentialities that, as Barad (6) states, “opens up the possibility of hearing the murmurings, the muted cries, the speaking silence of justice-to-come” (p.216).

In human dynamics, improvisation could be imagined as a method of speculative inquiry, since it describes processes of experimentation *together* without preconceived ideas or any anticipation of the outcomes. Indeed, jazz musician and teacher, David Lines (9) coins the term a 'pedagogy of improvisation' which he urges educators to “unsettle taken-for-granted, normalised and overcoded concepts of education that close down educative possibilities and differences” (p.53). He suggests this

requires experiential skills such as sensory attunement where “players need to have careful sensitivity to the unfolding play of events, to the gestures of other players, to their own gestures and a commitment to the whole sonic experience” (p.55).

Perhaps if improvisation, or speculative fabulation, were to become more embedded within the methods of posthuman early childhood practices, it might help prioritise greater possibilities for the more-than-human, help humans to resist the seductive, yet reductive, stability of identities and classifications (such as ‘nonverbal’), opening up spaces for different realities to be storied, and for multiple identities to relate.

ON LISTENING TO, SENSING AND OTHERWISE PERCEIVING MINOR GESTURES

We might ask how this dynamic of speculative practices enables even the tiniest of body languages to be expressed, felt and listened to, whilst resisting the temptation to explain (and therefore reduce) them with spoken language. Can a pedagogy of body-listening enable educators and children to co-create, sense and value what Manning calls the minor key of small languages that are often unexpected or missed altogether within an anthropocentric frame? Manning (10) describes the ‘minor gesture’ as “a force that courses through [the “major”], unmooring its structural integrity, problematizing its normative standards” (p.1).

Barad (6) also holds that there is a radical kind of cause-and-effect (or perhaps a cause-and-affect) that happens within the speculative process which is not a case of individual entities affecting each other but where, in an ongoing, improvised, co-creation, “bodies differentially materialize as particular patterns of the world as a result of the specific cuts and reconfigurings that are enacted” (p.176).

In other words, improvisation as a method cannot exist as a discreet, bounded and measured activity because it is always, already embedded within all our speculative, intra-active relationships. All that needs to happen to experience this is to take a particular cut by resisting the oppositions that enable humans and more-than-humans to be open to the affects of alterity and becoming-with, i.e. to experiment with listening to bodies’ minor gestures together.

As an example, the material of human skin is, in fact, immaterial. Skin is always already in an iterative sympoiesis of ongoing decomposition and recomposition with the surrounding molecules of oxygen, blood, nerves, technology, bacteria, electromagnetic interferences, light waves and other more-than-human phenomena. In fact, it is becoming increasingly difficult to know how much of us is actually ‘human’ at all. The molecular constitution of skin is constantly changing, redefining the electromagnetic forces that are experienced between skin and anything else in its vicinity – in fact, not even ‘between’ since those forces (according to quantum dynamics) are immanent and integral to all matter that is constituted within that experience. So that, in every microsecond of a scratching, stroking, cleansing or healing event, there is no separation between human and nonhuman, biology and chemistry, atmosphere and sensation.

Whilst ‘skin’ is – perhaps incorrectly - considered to be the ‘name’ of a bounded, embodied material (constantly purified, highlighted, shaped, sometimes forced into a temporarily fixed, normative representation), it is in fact a dynamic process of speculative becomings. Less a collective of materials sharing (or being denied) their agencies, as if they can be isolated and determined. More a process of agentic collaboration in processual becoming as material and immaterial entities intra-act – a constant state of *doing* rather than *being* - an *agencement* – a skinning.

Speculative method is all about these unclassifiable and indeterminate *agencements* growing from the folding-in of relationships whose expressions can be sensed but not defined, which resonates closely

with Duchamp's concept of the *Infrathin*. Manning (5) introduces this concept of the infrathin as being so immaterial that it barely even registers nevermind being defined in words. Duchamp offers an example of the Infrathin as being the warmth of a seat that has been recently vacated (in 5), where the movement of the seat (the expansion of the foam that has relinquished a weight, the cooling down and contraction of the structure that has lost its warmth, the release of weighty sensations of the former presence) is changing the landscape.

However, this, in its basic form, can be explained by physics. So, it is not necessarily the changes in temperature or shape *per se*, but the residual sense of a prior presence in contrast to the now empty space, always already in relationship to the event (and its histories) that preceded it. So how do we sense the infrathin left behind from a [child-skin-hand-sock-dance-sweat-joy] where so many minor gestures are expressed and felt without words?

Manning (5) holds that it might be possible to set up the conditions to foreground the "minor gestures that [...] make felt what otherwise would not register" (p.1) by attending to what produces felt intensities that make a difference. Like Barad's (6) clarification of diffraction – it is about mapping "where the effects of differences appear" (p.72) not the difference itself. But actually experiencing the elusive 'thisness' of what is left behind seems to be an almost impossible task.

What of the immaterial *experience* of the presence that has just been and is now gone? The singular musical intensity released by the pianist, or the laboured breathing of the elderly reader, or the chatty rhythms of the young storyteller who sat on that seat? The vacating of the seat did not happen in a vacuum, void of molecular movements or intensities. In between the occupation and the vacation, something infinitely resonant, and yet unparsable, happened. As Manning (5) affirms, "Beyond capture, the infrathin is a grasping at the singularity of an interval too thin to define as such and yet thick with the texture of lived relation" (p.17).

RENDERING-CAPABLE OUR DISTRIBUTED BODIES

So, as I see it, we have three key challenges as educators, artists and children...

i As we open up our pedagogies to allow for body-listening, how do we allow space for the minor gestures, the infrathin, the a/effect of those differences, without using words? It is so much harder than we might think!

ii And, if we can stop filling the space with words, how do we render-capable bodies' incorporeal qualities, such as their affects, memories, expressions and partial identities, for intra-acting with other bodies? How do we (more-than-human plural) make space for molecular kin and oddkin to meet, relate and become reconfigured?

iii Finally, how do we spot and sit with these important but elusive textures of lived relations without trying to 'capture' them as if they were data to be pinned down? How do we resist trying to measure growth or progress against reductive, anthropocentric values?

Contrary to popular understanding, Barad (6) explains that 'quantum' actually means "the smallest quantity that exists" (p.108) not the largest leap, as we often think. They confirm (8) that these immaterial, infrathin, minor gestures are simply "quantized indeterminacies-in-action" (p.210). So, perhaps, as human-non-humans, we can create spaces to experiment with finding our quantized indeterminacies-in-action, or our minor gestures, of body listening, and see if we can sense the

infrathin within these. Here are a few starting points to help activate the processes of body-listening (you might even like to activate your screen reader² as you focus on the activity with closed eyes):

- In a quiet space, sit or stand in a comfortable position.
- Close your eyes, relax your forehead... jaw... ears... mouth... neck... shoulders... hands... hips... knees... legs... toes.
- Take a couple of minutes to listen to the sounds around the room.
- Take a couple of minutes to listen to the tiny sounds inside your own body. Many arise but are sometimes hidden and need close attention.
- Slowly shift your weight from one foot to the other (or sway to one side in your chair) and stay still. Continue to listen to the new sounds that arise. Shift your weight back and listen again.
- Look at the backs of your eyelids. Cast your eyes over every millimetre of them.
- Notice the shapes and colours behind your eyelids, and how they change as your eyes move.
- Pass a hand in front of your face slowly. What changes in colour, shadow or texture do you notice?
- Repeat a few times, getting faster, slowly spreading your fingers, using both hands, passing them across in a prayer gesture, then side by side, etcetera.
- Put both hands very gently over your face. Hold them there. Make the tiniest shifts of your fingers to move them into the most comfortable position within the contours of your face. Keep making tiny shifts until your hands and your face are completely attuned to one another.
- Push your hands into your face with more pressure. What is the most pressure you can take? What is the longest time your hands and your face can hold each other in that position? What are parts of the body are taking part in this entanglement of forces? How are they engaging?
- Begin, very slowly so that it is hardly noticeable, to withdraw your hands from your face and release the pressure. Watch how the colours, shadows, light, weight and sounds change.
- What is the least amount of pressure your [face-skin-muscle-nerves-hands] enjoy? What new parts of the body are taking part in this hardly-touching event? How are they engaging?
- Place a fingertip gently on the Tragus – the small, pointy, gristly part of your ear that sticks out next to the cheekbone. Very slowly make tiny, gentle movements on this sinewy piece of flesh.
- Listen to the sounds of the strokes, the taps, the circles or whatever movements your fingertips feel compelled to make.
- Sit and play with those sensations, making them louder, softer, more repetitious, more random, etcetera.

² See https://libguides.csu.edu.au/screenreaders/Tools_for_screen_reading for several options to have different document formats narrated by your computer through in-built or third-party software.

- Reflect on how attending to these tiny gestures triggers different sensations, affects and engagements across your body. Do not try to make any sense or sensibility of them, just sit with these feelings. At the end, you might notice how the sensory and physical parts of you become foregrounded over the cognitive, reasoning parts, and how judgement falls away.
- Repeat at any time, making small adjustments each time, in tune with your playfulness, enjoyment and peacefulness.

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“DEAR DEATH” EPISTOLARY AS METHOD TO EXPLORE THE AGENCY OF DEATH ACROSS TIME AND SPACE

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Abstract

Philippa Isom from Auckland, Aotearoa New Zealand and Charlotte Marshall from Derbyshire, United Kingdom are two Early Career Researchers who became entangled firstly at an Ideas Room and more closely at a Posthuman, Feminist, New Materialist book club. In their shared exploration of Posthuman Theory from similar, hesitant posts, they saw and sought further kinship with one another.

Whilst the idea sat in the background of life, Dear Death letters became a way of saying what was felt. It was a way of extending the kinship to one another – instead of saying something was painful or difficult either Philippa or Charlotte would couch it with “Dear Death”. These letters became markers, signallers of, “this is live in me” - the irony is palpable – and a way of drawing closer together in their shared death encounters.

This paper presents what it is to sit with the discomfort of death, the messiness of grief, the confusion of loss but put those things to work for kinship. It will consider the qualitative, epistolary, line of enquiry that invited positive interventions in an engrained, universal experience.

Keywords: death, epistolary methodology, entanglements

Context

“Life and death live in exactly the same spot, the body. It is from there that both babies and cancers are born. To ignore death, then, is to ignore life.” Yann Martel

Philippa and Charlotte are two Early Career Researchers who, from opposite sides of the globe, realised their entanglement (1) firstly at an Ideas Room (2) and then through a book club. Charlotte studied English Literature at university for her BA and Masters, and currently lectures in Higher Education (HE). Philippa studied Education and is now working as a lecturer in Initial Teacher Education (ITE) at Massey University. We are both PhD students theorising aspects of education with posthuman theory. In our shared exploration of posthuman theory from similar, hesitant posts, and a love of creative writing and storytelling, we saw and sought kinship (3) with one another, spending time reading texts from pools of shared interest to then discuss at mutually convenient times. We both see the value in sharing lived experiences and we recognised that our conversations and messages were enriching to our being-becoming-Charlotte/Philippa entanglement (1).

In the space of a calendar month both Philippa and Charlotte experienced profound loss. One in a very traditional and ‘accepted’ fashion and the other in a more complex and disturbing way; both were able

to relate to the other thus our entanglement deepened. What the deaths had in common was the unconventional nature of their respective relationships to the deceased, the relationships required further explanation in social circles which enacted an agential cut in our being-becoming. "Agential cuts do not mark some absolute separation but a cutting together/apart – "holding together" of the disparate itself" (4, p. 46) which is what the experience of the phenomena of death had evoked. In trying to unpick, disturb, test, respond to the grief that was troubling us; Philippa and Charlotte started to think~with~death. Our initial interactions with death realised that it "insists on shock" (CM, 15/08/22) and that there is an "agency of death" (PI, 15/08/22). Philippa and Charlotte were acutely aware that death is proximal at all times and agreed, "Making friends with the impersonal necessity of death is an ethical way of installing oneself in life as a transient, slightly wounded visitor" (5, p. 132). Both Philippa and Charlotte had experienced close family bereavement before and so the shock that death insists on felt more like a return visitor, initially an unwelcome one, which Philippa and Charlotte were keen to trouble.

Initially Philippa and Charlotte were trying to make sense of the affect (6) of death on their identity as due to a previous bereavement for Charlotte, both Philippa and Charlotte would now be recognised an 'only child', a seismic shift in their being-becoming- Charlotte and being-becoming-Philippa. Philippa was the first to recognise the weight of the conversation and pithily suggested they had a paper, semantically coded (7) as a way of indicating space for further thinking and research. The passing comment caused another agential cut (1) for Charlotte who, influenced by her experience of teaching literature, suggested an epistolary, and would offer another, alternate way (8) of approaching and thinking~with experiences of grief and encounters with death. In taking our epistolary a step further, we then agreed to embody death for one another and answer the letters as Death. From our 'wounded' states, and by seeing death as a personification (9) we started to write to the Death, connecting with the 'impersonal necessity of death' in dialogue with one another and with Death.

DATA-METHODOLOGY

Philippa and Charlotte had previously discussed the difficulty of moving away from 'or' thinking and trying instead to sit with 'and' thinking. To intentionally stay with the trouble (3). Charlotte was aware that embodying and drawing Death forth could be a strain on either researcher's mental health but this was couched in the cultural normative image of Death as an aggressor; **Charlotte: Ha!!! Shall we actually do this? Might be quite cathartic. Or entirely triggering** (15/08/22). Philippa was able to recast that thought into a generative, alternative view; **Philippa: Yes. We will do this. It will be cathartically triggering.** (15/08/22). By changing the adjective to the adverb, Philippa revealed the artificial barriers of Charlotte's anthropocentric thinking in an affirmative way and exposed the difficulty of feeling~thinking~being~with Death as a counter cultural act, a recurring motif in the research and this paper. Philippa's change of word class reveals the malleability of language (7) and how a (re)turn to perceived understanding can be itself affective and generative.

The playful nature of the emerging epistolary through letter-message methodology was another example of challenging anthropocentric thinking. The juxtaposition of the topic of death and the epistolary form of writing against the sense of fun and kinship between the researchers in the first letters revealed a direction and a desire for feeling~thinking~being~with Death that would trouble what dealing with grief might look like;

Dear death,
Words.
Love, Philippa and Charlotte

Dear Death,
Fuck you.
Sincerely, Philippa

Without prompt, both Philippa and Charlotte adopted the standard form of letter writing; addressing death as a personified/embodied being, adding content as the message, and a final, albeit ironic, signature. This almost simultaneous production - these messages were posted in Facebook messenger in quick succession - illustrates the depth of the entanglement between Philippa and Charlotte and our thinking~with~writing. In these first two responses Charlotte shows her loss through the absence of emotive language, 'words' to represent what might be said in future messages, and the impersonal, lower case 'd' in 'death'. Philippa reveals her loss through the propositional swearing (10) 'Fuck' and the proper, personified, capitalised, noun 'Death'. In two short entries both had communicated themselves~with~death and inadvertently tested the nature of epistolary as a generative methodology. Though the messages are indicative of content found on Facebook messenger between Philippa and Charlotte, they present a distinctive difference through the structure applied by both Philippa and Charlotte enhanced further by accepted grammar rules indicative of the epistolary form. The writing of the letter-messages as a hybrid of formality within informality rather than seeing these things as distinctive was the beginning of troubling "time-space-mattering" (1) as part of the ongoing motif of feeling~thinking~being~with Death.

Philippa and Charlotte are advocates of an emerging, porous identity, both seek room for fluidity in their being~becoming~Charlotte, being~becoming~Philippa, and what we started to refer to as being~becoming~Charlippa (11). Philippa and Charlotte participate in a Christian faith which posits; "The last enemy that shall be destroyed is death" (12, 1 Cor. 15:26). Both knew theology was likely to be woven into their feeling~thinking~being~writing~with Death;

Philippa: Can be theological too

Charlotte: I was just thinking the same thing! My opening line was "You're an injured beast that is defeated, lashing out in the last throes of what you've got left." (15.08.22)

In Isaiah 25:8 God promises to "destroy death forever, and the LORD God will wipe away tears from every face" (12) which has brought and continues to bring great comfort to Christians during times of loss, one that was live in Charlotte and influencing her thinking as evident in her message of death being "defeated". As part of our identity, both Charlotte and Philippa address Death with a biblical influence as illustrated in this exchange between the researchers. Interestingly; this piece of scripture also evidences the way in which death is a constant companion but an enemy rather than a friend, that Philippa and Charlotte go on to trouble;

Philippa: Wait, is death the good guy?

Charlotte: Now that's an interesting question. We hurt and so the thing that made us hurt is bad but that sits very much in a binary that hurt is always bad (15.08.22)

Not only is there a challenge to the aforementioned anthropocentric thinking but also to the Christian narrative of death to allow for further feeling~thinking~being~with Death that Philippa and Charlotte would sit with. Simultaneously there is a challenge to the epistolary method with the letter-message method beginning to take shape. In the previous interaction it is clear Charlotte is thinking of writing elsewhere by thinking of her 'opening line' as distant to the message she was writing in that moment and Philippa seems to be doing the same: **Philippa: Oooo... tomorrow I'm gonna write "Dear Death // Bad news, you actually brought life..." just putting it here so I don't forget (15.08.22)**. The epistolary form is present but it is suggested in our comments that both Philippa and Charlotte will migrate to a different, potentially more traditional, space to write these 'properly' both talking about what 'was'

their thinking and planning where they will write 'tomorrow'. Cixous (13) pushes women in their writing to; "put herself into the text" and to "confuse the biological and the cultural" (p. 2039). Confusing the 'cultural' is a distinctive thread through the tapestry of our thinking and in the messages to each other above we are beginning to do the same with our writing. We both offered our slant on what writing to Death might look like but recognised the need for the other as someone to write to. The form of a letter afforded a comforting, familiar mode of writing as an entry point to a culturally uncharted practice; letters often go unanswered, their production does not rely on a response and by their nature expand across time and space. Although Death is a recognised companion and presence to life, giving voice to the personified embodiment had not been addressed which 'fit' with an approach that did not necessarily need a reply. Although we both indicated we would write elsewhere with the implication of cultural norms of letter writing, the letter-messages established themselves on the social media platform as another voice adding our resistance of anthropocentric thinking. Further asserted through our tone as the letter-messages, although revealing of feelings, were laced with humour;

Dear Death,
What are you anyway?...

Dear Death,
And so we meet again. And again. And again. Can you fuck off now?

Dear Death,
I am writing to you regarding your recent procurement. Joke's on you, we are happier now; they were faulty and not suited for life.

Philippa: I laughed cause it's true. Death sitting there like "what the fuck did I get? Is there a return policy?" (15.08.22)

The comedy of death is often closeted but this denial was another feature Philippa and Charlotte were troubling in the embodying of death through the letter-messages. By recognising the likely disappointment Death as an embodiment would feel in procuring this particular soul, Philippa and Charlotte leaned on their shared dark humour, produced an outlet for their grief, and challenged the biological and the cultural concepts (13) of both writing and death. Charlotte and Philippa were putting to work a 17th century trend of writing on a 21st century platform to feel~think~be~with Death. The entanglement across time for methods of communication is symbiotic to our entanglement with a multispecies, universal experience: death. Arguably, letter writing in the way that Philippa and Charlotte naturally found themselves died out in the 18th century, because it was deemed too archaic. Thus (re)turning to a traditional form of writing complimented a (re)turning to death, which has been alongside us since time immemorial (5). Rather than rely on accepted forms of traditional letter writing when feeling the weight of grief, an emotive reminder of death's presence, Philippa and Charlotte would couch their feeling~thinking~being~with Death as a letter-message to one another as a way of inviting kinship (14). In each of the letters, a reader can imagine the context of the message without it having to be said;

Dear Death,
How is it you wipe the memories of the still living when you take a life? Like, people forget what fuckwits the dead person was. (17.08.22)

Dear Death,

If you take the body can you also take the finances, the estate, the family politics, it is a package deal.
(20.08.22)

Philippa was able to use a short letter-message to connect with Charlotte, giving detailed insight into her experience without having to add a backstory or context to the writing. Charlotte could relate and would add her lived experiences of this kind of encounter~with~death. The 'data' organically emerged and although both Philippa and Charlotte were aware that the notes would potentially form part of a paper in the future, their letter-messages to death were time stamps of feeling~thinking~being~with death embedded within their normal discourse, in a generative rather than destructive way. By being able to write letters, voice was given to the discomfort of loss and therefore a way of holding Death accountable in a way that cultural norms do not allow for.

As the thoughts started to reveal themselves, Charlotte suggested that Philippa give volume to Death's voice for Charlotte and Charlotte give volume to Death's voice for Philippa. The "give 'volume to'" phraseology here is important as both ECR's had already embodied and acknowledged Death but realised their respective cultures did not allow the voice to be heard. By writing on behalf of Death for the other, Philippa and Charlotte were able to lean on speculative fabulation (3, 15) to disrupt anthropocentric thinking again by discarding the thinking that Death is an unknowable 'other' but rather a friend to be thought with (5).

Charlotte: Maybe Death writes back and tells us how we've had it wrong all this time and that they're sick of being hated like a dentist when they are only performing their part of the creation story. // Ooooo // How about I write back as death for you and you write back as death for me. // (15.08.22)

A month into feeling~thinking~being~with~death Charlotte had another, intimate encounter with Death and admitted to Philippa that she; "tried to die earlier today" (23.09.22). The shortness of the message and the absence of the pronoun reveals a collapse of formal writing and a movement away from the humour drenched messages the two had shared previously. Philippa continued to message Charlotte over the next two days but Charlotte was uncommunicative until she wrote;

Charlotte: I've collected all of our 'dear death' letters and put them in a google doc. // They make for really interesting reading when they are all in one place!

Philippa: I'm looking forward to getting to them. First I have to do marking due tomorrow (25.09.22)

The letter-messages gave Charlotte a re-entry point to a conversation that previously had halted due to depression. In typing up the notes Charlotte had re-turned to the many ways that death had visited both Philippa and Charlotte over the previous month and affirmed again of the consistency of death, not as something to be feared but as a body to be in dialogue with (5). Charlotte used the Google Doc to write the story of what they had been doing so far, the letter-messages, and a table. There were three rows each for us to populate with our letters to Death and an additional column at the end for Philippa~as~Death and Charlotte~as~Death to use to reply. It was not stated at any time what format the new letter-messages would take in terms of formality, length, style, etc. neither were timeframes agreed upon, the space was available for logging additional moments of feeling~thinking~being~with~death, moments that seemed at this point inevitable and anticipated. Cixous (13) reminds writers that, anticipation is imperative and leaving a blank grid for moments to be captured was an enactment of moving with death. It allowed for Charlotte and Philippa to push back against being 'stuck' with Death and choose to walk alongside Death as the extra person, inviting dialogue with the personification of Death. Although it was a step away from the social media platform, the uniqueness of the format remained. The grid shape forcibly places death as an equal to the

researchers, symbolically side by side in a way that Charlotte and Philippa had been trying to do with their relationship to Death.

In Charlotte's opening paragraph she writes how strange it is to write to a body that she lives her life with, indicating a closeness she is weighted with;

You might be a stranger to some, keep your distance from most, but to me you are a long-suffering companion. One that I know I am going to make a full commitment to, it's just a matter of time.

It's clear from the emotive yet juxtaposed nature of 'long-suffering companion' Charlotte is still in the labour pains of recasting Death from an enemy into a partner, their generative and amiable bond still waiting to be born (16). There are also traces of depression that did not necessarily exist in the shorter letter-messages on Facebook Messenger. It could be because the larger, more dedicated space returned Charlotte to the more traditional form of letter writer, the grid invited the space for inner thoughts to be exposed rather than the letter-messages on messenger that invited kinship with Philippa. The social media messages, although still addressed to Death, their intended audience were Philippa and Charlotte, to enact kinship. In the Google Doc the audienceship had shifted to the very real and embodied Death. Philippa~as~Death responded to Charlotte as an aloof character, dispelling Charlotte's ideas of being too close to death;

You may think my eyes flutter for you but I am looking over your shoulder to another. I yearn for the frail and infirm. Those who do not look both ways - and we both know you always look both ways, it's the rules.

What becomes apparent in the reply is the multiplicity of the author. Philippa~as~Death makes use of the porous nature of self (11); she shares humour with Charlotte through the esotericism of "rules" but leans on the socially expectant "frail and infirm" target that culture expects death to pursue. Philippa, akin to Charlotte, is stretching the boundaries of the cultural norms within the kinship that the researchers nurture but also the position and authority of the author, one more move to disrupt the human centeredness of the Anthropocene. Calling on the work of Barthes (17) both Charlotte and Philippa were happy to accept there was a power to their role as author but they were keen to loosen the grip that the positionality of the author had within their data collection.

RESULTS

To return first to our hypothesis that this project might be triggering or cathartic or rather cathartically triggering, the answer is yes – it has been all of these things. It also remains active as but one node in the rhizomatic structure that is life and death (18). Like a rhizomatic structure, movement through this project has been non-linear and has included human~non-human assemblages each having an affect on where conversation and thinking shift to. The being~becoming~Charlippha node of the rhizome is one where we continue to find ourselves knowing that it is not Death that has united us in kinship but it is life lived fully in the presence of Death.

Dear Death letters became a way of pinning an emotion and saying what was felt; a way of extending the kinship to one another (3). For example, Philippa was 'inappropriate' on a phone call evoking the dark humour of death so Charlotte invited her to see it as an opportunity to write to Death. When Charlotte had frustrations about sorting family affairs, Philippa invited her to write a letter. These letters became markers, signallers of, "this is live in me", Death is live in me - the irony is palpable.

In order to liberate Charlotte and Philippa from Death it was important to get to know Death, and go beyond what death had always been perceived to be through their shared Eurocentric norms (13). The

writing of the letter-messages goes beyond loss and considers what giving agency to death then invites. In dialogue with death, friendship, kinship, entanglements, and research was enlivened.

Death has been unabstracted, addressed, laughed at, and given several stern lectures about the limits of power in our relationship. It is through the emergence of conversation which is two way in nature, enacted through epistolary, that Charlotte and Philippa were able to gain some closure with Death. Death is a distant pen pal who we will at times return to commune with, I am sure. But for now these letters to Death can be tied with a red ribbon and placed in the back of a storage box – like love letters we may return to reminisce with one day. We put ourselves into the text to break free of what were our cultural norms surrounding Death (13). Together with our co-writer Death, we have reinscribed the affect of death.

THE NON-CONCLUSION

In line with a lot of Posthuman frames that there is no such thing as a beginning or end (1) the Dear Death letters have continued and it seems inappropriate to try to conclude the study. Charlotte and Philippa have found the social media exchange of letter-messages a generative vehicle for their kinship and are considering further research in this area, especially with epistolary as methodology.

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ANIMATING POTENTIAL FOR INTENSITIES AND BECOMING: CHALLENGING DISCURSIVELY CONSTRUCTED STRUCTURES AND WRITING CONVENTIONS IN ACADEMIA

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Abstract

Telling the story of the writing of a doctoral thesis written for all those denied a second chance in education, this paper animates potential for intensities and becoming through challenging discursively constructed structures and writing conventions in academia. Echoing the different backgrounds and varied experiences of students joining the Further and Higher Education sectors, the thesis has no chapters, no beginnings and endings, but is created instead with multiple entryways and exits encouraging freedom of movement. With the formatting of the thesis itself always troubling the rigid Deleuzo-Guattarian (1) 'segmentary lines' structuring orthodox academic practice, imbricated in the collection of post qualitative inquiries are attempts to exemplify Erin Manning's (2) 'artfulness' through shifts in thinking within and around an emerging PhD thesis. As writing resists organising, the verb *thesisising* comes into play to describe the processes involved in creating an always-moving thesis. Using 'landing sites' (3) as a landscaping device, freely creating emerging 'lines of flight' (1) so often denied to students forced to adhere to strict academic conventions, this 'movement-moving' (4) opens up opportunities for change as in Manning's (2) 'research-creation'. Arguing for a moving away from writing-representing towards writing-inquiring, towards a writing 'that does' (5, p.127), and toward writing as immanent doing, this paper hopes to animate potential for intensities and becoming in writing, offering opportunities and glimmerings of the not-yet-known.

Keywords: Post qualitative inquiry, academic writing, concept making

My PhD viva took place exactly one year ago today. If I had known then that I would also be talking about my thesis exactly one year later, it might have made clicking on the Zoom viva link easier. I feared the viva would be the end of my dream, and I was not ready for that dream to end. I had wanted to be a PhD student for over twenty years - first in German, and later, in Education; I did not have a burning question, just a burning ambition. The application process, however, did not seem to be designed for someone just wanting to do a PhD for its own sake, because she loves learning: I seemed to be expected to know what I wanted to do, how I would do it, and even what I would find out. Knowing now that, as Erin Manning says, "writing only really knows what it's after once it has begun to make its way into the world" (2, p.ix), it is not surprising that it was difficult to state aims, literature and methodology ... I am experiencing similar issues now thinking about applications for postdoctoral funding: it does not seem to be sufficient to want to use speculative practices, to want to engage in 'creative-relational inquiry' (10), to experiment with writing "ha[ving] an existence in and of itself" (6, p.144), to be curious about what will emerge in the writing ...

Having forced thoughts and ideas into a PhD application form, it is perhaps not surprising that my dream did not initially live up to expectations. Interrupting my studies, I realised that thinking I knew what I would find out was a problem: there was no excitement, I was not enjoying writing what I

already knew ... After making some informal inquiries, my PhD dream was re-ignited some time later, in another part of the UK, and it was not long before my new supervisors asked me what inspired me, what motivated me in the classroom. And so I told them about 'Chloe'. After that supervision, I wrote 'Chloe's story' and 'Mad Mary's story'. I still did not know what my PhD thesis would be about, but I knew that it would be written for all those denied a second chance in Education, as 'Chloe' had been. 'Chloe' is a sixteen-year-old student – one of the first students I ever taught in a Further Education college in England. She has been failed by school after school after school. We are both new, both anxious, and both unattuned to the nonhuman and more-than-human forces acting in creative-relational ways as the event, which would later inspire my PhD thesis, unfolds: hearing 'Chloe' swear, I ask her if she is okay even though she obviously is not – the clapped-out computer she is using has just frozen in the middle of a literacy assessment she is already frightened of failing. She understandably then swears at me and runs out of the classroom; I feel I have to tell my manager who is over-worked, over-stressed and over-tired. 'Chloe' is withdrawn before she has even registered. And I am devastated. Instead of helping students achieve their potential, I have ended one young person's second chance.

At my next supervision after writing those two stories, I am surprised when my supervisors suggest that the stories could possibly open the thesis since they set the scene for the human and nonhuman relationalities to come. I anxiously explain that the stories are not actually true and that, after I had written them, I read the entries in the reflective journal I wrote at the time and there was no resemblance to them. This conversation is actually an axiomatic moment in the life of the thesis: until then, I did not know that data does not have to be collected from participants in the usual ways; imaginary data, stories, storying, are all possibilities (7, 8). I loved writing those stories so much that I write some more. Consequently, 'Chloe' becomes 'Chlo' and there is an imagined reunification ten years' later between her and former English lecturer 'Mad Mary' as 'Chlo' responds to 'Mary's' advert offering help with essay writing. As 'Chlo's' writing coach, Mary, now a PhD student, has an imaginary second chance to support 'Chlo' an undergraduate counselling student at the same university. More 'Chlo' and 'Mary' stories appear including 'Introducing Other Writing Practices', which discusses the different ways of writing 'Mary' is using in her PhD and how they might support 'Chlo'.

As well as writing stories, I enjoyed 'writing to' whatever I was reading with imaginary fellow PhD student 'Paula', and experimenting with different writing practices: Richardson's 'writing as a method of inquiry' (7), Jonathan Wyatt and Ken Gale's 'writing to it' (5), 'writing as inquiry' (9, 10), and writing as immanent doing (6, 11). With Elizabeth St. Pierre, through readings and rereadings, it is possible to "live the theories" (12, p.604) of, for example, St. Pierre, Manning, Gilles Deleuze and Félix Guattari. Consequently, the more I read, the more I wrote, and the more those worlds I read about made sense: usually different sense every time, but nonetheless sense. Those writings 'writ[ten] to' and 'with' (5) other texts include one called 'Writing Post Qualitative Inquiry? 'Intra-actions' with Elizabeth St. Pierre and others', an unsent email to Erin Manning about how her work inspires mine, and even an imaginary viva. After a few years, then, of happily writing whatever I was inspired to write, I had about 150,000 words, but, seemingly no way of connecting them. If only I had been more familiar with St. Pierre's work, I would have known to simply trust my self to "do the next thing, whatever it [was]–to experiment–and to keep moving" (12, p.605). As it was, in the mi(d)st of a pandemic, the only movement was a fast-approaching submission deadline.

Unable, therefore, to simply take everything ever written to my next supervision, I send an email to my Director of Studies. With 'Two theses or none' as the subject, I admit to neither knowing what the thesis is about nor how it will come together. I am relieved that instead of reminding me that he has been advising me to think about how to organise the writing for years, my Director of Studies acknowledges my concerns and arranges to meet on Zoom. We discuss Manning's work, and whether her 'artfulness' chapters might be useful: "[a]rtfulness is an immanent directionality, felt when a work runs itself" (2, p.59). It definitely feels as though this thesis is 'run[ning] itself'! I've read Manning's (2,

13) books but I seem to have overlooked this. Manning suggests spreading all the texts out, letting them overlap, and “wonder[ing] how else they might come together and what else, together, they might do” (2, p.39), and so that’s what I do. With the floor and surfaces covered in paper, I can hardly move for days, but I get out of the way and I let the texts connect with each other, together, with Saffie – my little black cat walking all over them! – and I write to the process, to ‘artfulness’. And, suddenly, there is definitely potential for those texts to become a thesis (there is also yet another piece of writing, and yet more words).

It is during that process that the concept of *thesisising* occurs – the process of writing an always-moving thesis responding to emerging affects, percepts and concepts. At the same time I realise that what I have been doing is possibly what Manning calls ‘research-creation’: there is definitely a sense that “what emerges from [it] will never be an answer” (2, p.13). In ‘research-creation’ there is freedom to create potential for second chances to emerge, “it creates the conditions for new ways of encountering study” (2, p.27). And from ‘research-creation’ emerged thoughts of ‘writing-creation’, but at that point the thesis submission deadline was extremely close and so the Spinozean witch’s broomstick, now a constant “whirlwind at my back” (14, p.1), was threatened with quarantine by my supervisors ...

Another significant concept in the thesis, which also exemplifies its processual emergence, is *footnoting* - perhaps that, with *thesisising* is how the structuring occurred, how the pieces created a thesis. *Footnoting* animated the narrative structure of the thesis and the emergence of concepts. Whilst my thinking with and interpretations of theory, concepts and practices was obviously always changing, I was reluctant to delete those earlier thoughts because they exemplified those shifts in thinking. This actually becomes quite an important feature as, in working with and writing to them, several ‘Marys’ emerge in the writing of the thesis. Using text boxes and *footnoting*, later ‘Marys’ are thus able to intra-act with earlier ‘Marys’ and exemplify how their thinking with certain concepts develops. With structuring emerging in the writing, a first draft, albeit lacking a coherent whole, somehow comes together. However, it is certainly not how the ‘Mary’ starting the PhD ever imagined a thesis to be ...

The original ‘Mary’ did not actually intend to write anything but a traditional academic thesis, but once opened by ‘Chloe’s Story’, once written for all those, like her, denied a second chance of fulfilling their potential, it was obvious the discursively constructed structures and writing conventions in academia had to be challenged. That ‘Mary’, who wanted to write a conventional academic thesis, is thus joined by later ‘Marys’ troubling the seemingly rigid Deleuzo-Guattarian (1) ‘lines of segmentarity’ structuring orthodox academic practice - they actually have some quite interesting conversations discussing the traditional map of an academic thesis in counterpoint with the emerging one. Wanting to move away from writing-representing towards writing-inquiring, later ‘Marys’ are determined to experiment with post qualitative inquiry, with immanent writing processes. Traditional writing that represents would not change things for our Chloes. Writing that speculates, experiments, might, however, offer opportunities and glimmerings of the not-yet-known, which might possibly benefit our ‘Chloes’ by opening up ways for genuine second chances. And, of course, animating potential for intensities and becoming in writing is the aim of this paper, the thesis (15), and the forthcoming book.

In writing in these ways, other concepts are created such as *humanjectaces*, which initially emerged as a simple reminder to my self that Deleuzo-Guattarian (1) ‘assemblages’ include all bodies (**humans, animals, objects, spaces**). In a dream with Deleuze (15), the decision is taken to stop using the concept because of its apparent similarity with ‘assemblage’. *Humanjectaces*, however, refused to disappear and was consequently resurrected in conversation in the viva (the real one not the imaginary one). None of this concept-making was planned. But writing, as Wyatt and Gale (5) exemplify, *does*. Writing is powerful: Brian Massumi encourages acceptance of the risk of writing “sprouting deviant” (16, p.18). Writing’s power, however, is often suppressed: with most educational institutions imposing word limits, structures and specific criteria, which must be met, students are taught to control writing.

Writing a thesis with writing ‘sprouting deviant’ was not easy but it was exciting, and enjoyable. Moving away from a beautifully planned PhD project on the teaching and learning of English and Maths, interviewing staff and students, asking about their attitudes towards these subjects (knowing they would be negative), to writing a thesis for all those denied a second chance, challenging the perceived problems of discursively constructed structures and writing conventions in academia, was not without issues. Having fallen in love with St. Pierre’s (12; 17; 18; 19) post qualitative inquiry, with immanent writing practices, and with Massumi’s (16) practice of exemplification, a non-methodological approach had to be adopted. With literature and (non)methodologies becoming imbricated in the writing, the format of the traditional PhD thesis had to be challenged. There is, however, no map for doing this: “[t]here is no recipe, no process” (12, p.604) for the post qualitative inquirer. There is also no means of forcing writing into the traditional map.

Like the writing, ethics refused to be contained in one place. Fortunately, with Tamsin Lorraine (20), I encountered Deleuze and Guattari’s ‘immanent ethics’. This broadened my understanding of ethics from just being about the ethics of writing about an event which once happened concerning a student and me, to being aware of the importance of “being worthy of the event” (20, p.5); this seemed to include the issue of achieving justice for the ‘Chloes’, the ‘Marys’, and for their dedicated supervisors. Rewriting the imaginary viva when the first version did not seem very ethical also seems connected with this idea: to portray examiners as so disinterested, and in such a rush to finish, was definitely unworthy of a PhD viva, and would certainly have been an unethical portrayal of my gentle, supportive, interested and receptive PhD examiners.

Writing a thesis without knowing what was going to happen made an attunement to ethical issues important – there were no plans, for example, to write an imaginary viva, or to write an email to Erin Manning, but there was definitely a need to respond to the different, ethical issues each event created. With writing emerging immanently, then, an ethics capable of responding to situations as they arise was vital. And so an ethics chapter, like a literature review chapter and a methodology chapter, was impossible. Something other than chapters was needed, something encouraging freedom of movement-between, rather than rigid, fixed, self-containing chapters. The concept of ‘landing sites’ from Gins and Arakawa (3) was adopted. Partly inspired by the students in the first class I ever taught making paper aeroplanes out of the comma worksheets I had so carefully prepared, the thesis already had a paper plane motif and so ‘landing sites’ seemed ideal. Readers could board plane icons at the end of ‘landing sites’ back to the contents pages. As they could then fly off to whichever ‘landing site’ they liked, readers would hopefully be encouraged to read non-linearly, choosing from multiple entry and exit points. This invitation of freedom of movement contrasts with the often rigid structures found within academia, which are capable of acting as barriers to learning for so many.

With post qualitative inquiry encouraging thinking differently about education, then, it is my hope that by continuing to tell ‘Chloe’s story’, by animating potential for intensities and becoming in writing, others too, with St. Pierre, will rise to “the provocation and challenge ... to create different worlds for living” (12, p.604), offering opportunities and glimmerings of the not-yet-known, especially in education, especially for our ‘Chloes’.

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'KITCHEN CONVERSATIONS': AN INTIMATE APPROACH TO THE PUBLIC UNDERSTANDING OF SCIENCE AND HEALTH (PUSH)

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Abstract

I adopt a personal approach to qualitative inquiry underwritten by three propositions:

1. The 'world of science' impacts on people's everyday lives in numerous ways and so - to a greater or lesser extent - people can be seen to inhabit a 'science life'
2. A vast proportion of people's knowledge and understanding is tacit rather than explicit, and both forms of knowledge derive from a multitude of sources and formats
3. In-person research participation is privileged over on-line interviews or surveys. It is considerably more fruitful to engage in 'honest' and relaxed conversation in the comfort of a kitchen or living room, over coffee and biscuits.

My 'science education ethnography' consists, in part, of simply living within two main fieldsites, home and work, getting to know people, observing daily life and taking part in local activities. I use typical ethnographic research techniques: observations, field notes, informal conversations and my participants' own notes and jottings. In this paper I discuss the advent of informal 'kitchen conversations.' Be they issues, for example, of personal health, the environment, climate change, leisure or pastimes, science impacts people's everyday lives in multiple ways, and my conversations have covered diverse issues, from hip replacement surgery to images of the universe. As people discuss such matters, they *assemble*, often ad hoc, explanatory systems to their thinking. These assemblies comprise tacit assumptions, metaphors, fragments and connections derived from multiple sources: radio, TV, magazines, online search engines, doctors, remnants of school science etc. Assembling and then explicating such thoughts are affective processes and accompanying sensitivities can range from doubt, confusion, embarrassment to heated certainty, bullish belief, and die-hard conviction. Kitchen conversations enable the full range of such 'affective assemblies' to be composed – and probed – in ways that more 'sterile' online interviews cannot. In-person presence allows for a greater level of intimacy and immediacy in exploring experiences, uncovering explanations, knowledge and perspectives that other methods miss.

Keywords: ethnography; public understanding of science; science lives; assemblages; cognitive unconscious; metaphoric thought

To begin

The work I describe here trades upon several fields of inquiry. First, it fits within ethnographic studies of the lived experiences of everyday people in everyday settings. None of the terms I use in that sentence is without comment or critique, and I have need to set out my own stall further into the paper. Second, this work fits within the broad sweep of activities known as the 'public understanding of science' (PUS), and with 'science literacy' – again, terms often taken to task. It relates, too, to science education more generally: I am an educator of science and have a mission to make. I also emphasise issues of qualitative methods, aspects of cognitive psychology, linguistic tropes, and I brush with ideas within embodied knowing.

I begin with the lived experience of science. I am interested in the experiences of people as they interact with matters scientific. Science is an entity of enormous scope and size that comprises not just a body of knowledge but also the practices and institutions of science, the workings of scientists, their ethics

and values, their philosophies, discourses and much more. It entails astronomy, bacteriology, climatology, dermatology, electronics, fluid mechanics, to use just the first six letters of the alphabet. Some of these impact upon the lives of people, both science- and non-science-based through the nature of their employment, matters of diet and health, weather and climate, concerns for environmental protection, disease and vaccines, the quality of air and water, hobbies and pastimes, and – again – much more. My standard argument [1] is that science is a very significant part of our culture and so we all – to a lesser or greater extent - occupy a *science life*. My own science life is fairly all-encompassing since I make a living through science-based activities I find wholly enticing and engrossing. Members of my family, all arts graduates, have much less immersive science lives - a common mix of curiosity, wonder, passivity, and patent boredom. My ethnographic study of people's lived experiences of science looks to capture the articulation of their experiences, their reflections and communications, to explore and analyse patterns of understanding and explanation at both individual and social levels [2].

The public understanding of science, and pressures for greater levels of science literacy within the general public, have occupied policy makers for decades [3] accompanied by the common lament that (i) the public largely fails to understand science and (ii) there is generally widespread science illiteracy [4]. In arguing that people do indeed have science lives, I am more interested in *what* members of the public make of science, and *how* they understand it, rather than perpetuating a prevalent model of deficiency. Understandably, a person who has a toehold on a particular area of science is likely to have a greater bank of resources to draw from than one for whom science is low in his/her list of priorities. It is interesting to note that the expertise of specialist researchers, acclaimed authorities, Nobel Prize winners, are quite usually limited to fairly specialist fields of science and they could easily be labelled as scientifically illiterate in many others.

To matters of method

During the course of the Covid pandemic I experimented with using online systems to engage my research participants in discussing contemporary issues, the ways in which science impacts on their lives. My sampling methods are largely 'opportunistic and serendipitous snowballing'. I meet people, invite them to talk to me, provide the usual ethical parameters for what I do, gain consent and then conduct as many low-formality interviews with them as they can tolerate. They pass me on to others who might also be inveigled to talk to me, and so I 'daisy-chain' from one interview to the next. I do frequent my local astronomy society, talk to allotment gardeners, visit photography clubs, chat with model aircraft enthusiasts but I am also an amateur musician and artist and so my contacts spread far and wide. I work, too, at a university of twenty thousand people, and my colleagues and students are prone to indulge me. Systematic statistically random sampling, no. But given that it is impossible to exclude people for NOT being members of the general public, then a reasonable sample, yes. Reasonable, that is within the context of the relative affluence of Southeast England. I exercise no inclusion or exclusion criteria though, as best I can, I do keep an eye on the age and gender balance across the interviews. I comment on issues of positionality later in the paper.

The experiment with online interviews was not a success. Too many occasions were flat and stilted exchanges, clipped transactional accounts that lacked sparkle and intimacy – contra-versations, maybe, rather than con-versations. They were no substitute at all for the warm animation and challenge of in-person discussions and debate. My ethnography requires readings of physical presence, eye contact, gesture, tone, sighs, grins, scowls. When people talk about their understandings of breast cancer, hip replacement surgery, late onset diabetes, detached retinas, the difference between monocotyledons and dicotyledons, the nature of glutens, the degradation of the environment, the size of the universe, the meanings of micro- nano-, they can become tongue-tied, stumble over words, be embarrassed about gaps in knowledge and understanding, be tentative about technical terms, look apologetic for their ignorance, frown at half-remembered school science, laugh at their own naivety, wince at their

own passionate rants. And they watch me in turn to see if I nod, understand, empathise, approve, or feel the need to challenge. While some conversations have been recorded in cafes, local libraries or even in the sunshine on a park bench, the majority have taken place in people's homes, in their kitchens over coffee and biscuits. There are numerous opportunities then for thinking time, cogitation, finding the words, phrases, while making drinks, petting the dog, marshalling children, staring out into the garden. They own the space and so their words are theirs both to think and to say. There is a subset of my sample who seek a second or even a third encounter – "Are you around? I have been thinking about what we talked about. Would you like another coffee?"

To lived experiences and 'lived explanations'

There can be a passive sense to understanding as 'simply' a thoughtful awareness, a glimmer of insight, a dawning appreciation. While this can sometimes be the case, within these kitchen conversations understanding has more commonly been an active prelude to explanation. For example, understanding what exactly children acquire biologically from their parents and what they derive from peers, school and society, the old nature nurture debate, took one participant, Julie, into epigenomics and the role of gene switches. Her older daughter Alice, she said, took after her husband James as an active outdoor, sporty, type, climbed trees, played soccer, was a competitive swimmer. Her younger son, Thomas, though, was a home-bird-sort like herself, had lessons in classical guitar, enjoyed music and reading. All pseudonyms, of course. Answering causal questions of 'why things happen' implies explanations, alongside the arguments that lie behind them. Julie struggled initially to get past 'it's obvious', 'it's natural', 'it's common-sense' to then reach further into her thinking to articulate the connections she saw between genetic inheritance and personality traits, dispositions, motivations. She read avidly and then called me back for a second go. She felt the need not just to understand but to use that understanding to explain just why people are the way they are. How do you *explain* why some people are kind and communal while others are anti-social and downright criminal?

Knowledge derived from lived experience is essentially personal and subjective, arising from encounters, short- and long-term, with the physical and social world [5]. Calculations often ascribe the vast bulk of this personal knowledge to be 95%, being tacit, internalised, and unconscious knowing, with only 5% as openly explicit and articulated knowledge [6]. The 95% has been called the massive portion of the iceberg that lies beneath the waterline, below the visible tip that is consciousness. This preponderance of tacit knowledge and understanding, then, is comprised of impressions, imaginings, intuitions, perceptions, culturally led, socially situated, scenario-based, unspoken expectations, assumptions, conventions, possibilities and probabilities. To this extent, it commonly swims against the tide of science, the first unsystematic and lacking rationally rigorous argument and evidence, the other seemingly unnecessarily distant, arcane and baffling. Julie understood the statistics relating to less-fortunate socio-economic groups. However, to use these numbers as a rationale for certain behaviours sat uneasily with her certain knowledge that some impoverished people were nevertheless kind and considerate, and her deep-seated feeling that some life-time criminals, from whichever stratum of society, were simply bred-in-the-bone evil.

When conversations turn, say, to the role of insulin or sugar in diabetes, to abhorrence at 'chemicals' in food products, to what is a gluten and how it works, to ozone in the atmosphere, or to matters of scale and numbers, it is possible to interpret people's responses as them 'bringing things to mind'. Particular issues or questions seem to initiate a search-and-find through memory or 'cognitive resources' to 'grab hold of', collect together, to assemble, an explanatory response. The idea of assemblages derives in part from the writings of French philosophers Gilles Deleuze and Felix Guattari [7] and has been given greater specificity by others [8]. The items that constitute an assemblage are seen to be mixed and heterogeneous, without neat boundaries or rules for inclusion or exclusion. They are an assortment of words, phrases, ideas and images drawn together, linked, assembled, to meet a momentary communication need. It is not clear in this area of work just how 'worked through' are

these assemblies of thoughts and ideas. It is clear some are ad hoc and assembled at that moment in time, constructed pragmatically 'on-line' or 'on the fly' and may not last, not least in the light of further thought or the challenge of evidence [9]. It is also clear, though, that some gain purchase and stability as they are being assembled – “Well, that seems about right”, “Yes, that’s probably what happens”. Others are relatively stable, having been used and rehearsed over time, and are called upon as ‘stock answers’ to certain situations.

It is possible to trace, too, some of the many sources of the ‘pieces’ that are assembled to construct a response: conversations with others (“My sister is a nurse”, “My next door neighbour had cancer”), materials read (“It was in National Geographic”, “There was this pamphlet through the door”), aspects viewed (“It was on the news”, “I looked it up on YouTube”), common aphorisms (“What goes around, comes around”, “It’s a matter of balance, isn’t it?”), snippets from school science (“Its equal and opposites, isn’t it?”, “I remember MRS GREN from biology, about living things.”). For example, the Southeast of the country has hosted numerous debates about fracking for oil and gas. Official wisdom speaks of enormous reservoirs of available shale oil lying beneath Gatwick Airport and extending well under Surrey and the ‘garden of Kent’ [10]. The pro- and anti-fracking disputes have, of course, been intense. Drilling for oil in the area is not new and it is possible to glimpse occasional small-scale pumping systems dotted discretely around the counties. But large-scale commercial polluting exploitation? Think of the environmental desecration! It is such beautiful countryside and just imagine the abomination of an ugly ‘nodding-donkey’ sitting four-square on the village green, next to the duck pond and the quaint half-timbered pub! Oh, and the earthquakes. Earthquakes? Yes, up to eight-point-five on the Richter scale. Really, Simon? “Oh yes, I have friends up north who told me about the earthquakes. And I read it in a leaflet a neighbour gave me. Serious earthquakes like they have in Japan.”

To metaphoric thought and language

Further linguistic complications surface here. Much has been made of the metaphoric nature of thought and language. It is not just that we often use metaphors in descriptions and explanations, it is that ALL thought is metaphoric [11]. The argument is made that all our linguistic structures are *essentially* metaphoric. For example, I assemble here some uses of the preposition ‘up’. It is common to use ‘up’ in a wide range of physical activities that of themselves do not entail increasing height above, say, ground level. So, if a person *walks up* to me, he or she may well be increasing the proximity between us, but we are neither of us literally levitating above the ground in the process. If I *add up* the bill in a restaurant, I may well be calculating the accumulating cost, but I remain seated at the table as I do so. In this sense, such common uses of *up* imply *more*, *down* implies *less*: ‘prices rise’, ‘wages plummet’, ‘costs are high’, ‘performance dips’ are all variations on the same metaphor. ‘Up means more’, ‘down means less’, are shared social understandings. They are unstated as such, very seldom taken literally and are simply assumed in everyday exchanges. “Please turn up the volume” is correctly understood as please increase the audible output from that device, as is ‘turn up the heat’ or ‘the cost of living is rising.’

A second example is ‘*closer means greater*’. The closer one is to a source, the subjective experience is of greater heat, louder sounds, brighter light. Closer to the Earth, the greater the gravitational pull, the closer to a magnet, the stronger the pull. These common metaphoric uses can be ascribed relatively easily to physical sensations and ‘closer means greater’ works perfectly well for a wide range of everyday experiences. We also transfer these metaphors to other parts of life so that, for example, one might have ‘close friends’ (more intimate) or have ‘drifted apart’ (less so). This does not work, though, for explaining why weather is hotter in summer than in winter. I leave the non-science reader to research why that is so. Nor does it work for Sellotape or glue, where direct physical contact must be made before the effect takes place, mere reclose proximity is not sufficient to produce more adhesion.

'Lived explanations' of lived experience within people's science lives make abundant use of such tacit, assumed, taken-for-granted, cognitive-unconscious processes. The theory is that we acquire a large system of both simple and complex metaphors and associations automatically and unconsciously, simply by functioning in ordinary ways in everyday life [12]. Acquisition begins, it is said, very early in life and these metaphors are then seen to structure experience, language, reasoning and explanatory system from that point onward. They are termed 'experientially grounded mappings' so that *up is more* and *closer is greater* are drawn both from sensorimotor experiences - of verticality and proximity - and then consolidated through communal linguistic practices. Pouring more water into a container causes the observed level to rise, *more is up*, an occurrence that is then strengthened through shared talk around the event. More complex metaphors are formed from simpler, primary, ones so that people can eventually understand weather systems described as a 'high' or a 'low', that the barometer is 'falling' or the forecast is for 'high' winds.

Back to assemblages. When my participants 'bring things to mind', as they collect and fit together an assortment of experiential imagery and metaphoric pieces, they are working to articulate parts of their cognitive unconscious. They do this in response to their own concerns and, in part, to deal with my presence and questions. The clusters they assemble, their assemblages, allow sensorimotor and subjective experiences to be interpreted, for inferences to be made, issues to be weighed, judgements formed, explanations to be derived. Only some of this occurs as spoken words and, as I have generated and studied more and more data, I have become increasingly adept at spotting unspoken assumptions, unconscious metaphors and unstated underlying principles. And querying these.

To my role in conversations

I announce myself as an educator with a background in science and this serves to position me in relation to my participants. I am a 'university scientist' asking lay people questions about science, I am male and white and supposedly middle class; my participants vary considerably in gender, culture, class, heritage and the extent of their science lives. There is no doubt that I am seen to be an expert although in truth, I have a very limited range of expertise. I have a science degree, was once a science teacher, read science voraciously, particularly in physics, have researched extensively young people's misconceptions in school science, and so have a fair understanding of both the orthodox and unorthodox 'conceptual frameworks' adopted by students as they tackle traditional problems in physics. I am a rank novice, though, in so many other areas of science.

I commonly begin by explaining what I am doing and why, recount sketchily some of my recent conversations and invite them to tell me about what science, if any, they have been involved with. I ask about their work, their hobbies, what 'grabs' them on the news and allow the conversations to flow from there. And, throughout, my interviewees read me as I read them. Do I understand 'where they are coming from?' How disapproving am I of their answers? How judgemental about their school grades in science subjects? How dismissive of their contrary views on climate change or plastic pollution? In general, most people are fairly guarded and defensive until they relax, the conversation opens up (up?) and there is a degree of frank 'to-and-fro'. I am sure my studied neutrality deserts me on occasions - I admit to sorely-tested patience with conspiracy theorists adamant that Covid-19 is a man-made plague spread through 5G telecommunication masts, or with flat-Earth NASA moon-landing denials. And their ilk. Mercifully, they are few and far between and the great majority of participants are interested in responding fully and candidly, making as good a fist of their answers as they can muster. And enjoying the encounter as much as I do.

To embodied knowing

Respondents marshal assemblages in response to my questions and their own self-questions. Their assemblages consist of a miscellany of ‘pieces’ brought together to meet the need for an explanatory answer. The pieces are comprised of expressions, images, aphorisms, ideas and much else, drawn from multiple sources as they navigate everyday life. While these pieces form the articulated 5%, they rest in turn on a range of tacit assumptions, the unspoken 95%, formed largely of so-called phenomenological primitives (p-prims) [13]. As with *up is more* and *closer is greater* these are seen to be generated by physical sensory experiences, the experientially grounded mappings I noted earlier, and they are the result our bodily interactions with the physical world. A third example is *more begets more*, the sense that the more effort exerted, the more effect that results. The more in, the more out. The more you push, the faster an object moves; the more you scrub, the quicker the clothes are clean; the more you heat, the hotter the kettle boils. As with many such intuitive constructions, this works in some instances and not in others – at least not as science sees it. Once boiling water reaches 100 degrees, turning up the heat more will not push the temperature higher, the water stays at 100 and turns to steam instead.

Embodiment theories argue that the nature of our bodies, our brains, and our everyday functioning in the world structures our human concepts and human argumentation and reasoning [14]. Some of these structures are symbolic so, for example, we readily recognise signs and emblems without conscious thought. We can differentiate the airport symbols for ‘arrivals’ and ‘departures’ automatically and effortlessly – that is, as part of our cognitive unconscious - even as we are fully immersed in traffic approaching the relevant terminal. Others are essentially physical, so that affection is understood as warmth (“I warmed to him immediately”, “She gave me this cold stare”), stressful difficulties are physical burdens (“I feel weighted down”, “I relaxed as soon as the load was lifted off me”) and so on. The 95% cognitive unconscious is built up from physical bodily experiences and a small fraction, the 5%, is made explicit through ‘metaphoric mappings’.

To the public understanding of science and science literacy

Gluten is found in many cereal grains, most notable wheat, and gives bread, pizza dough and cake-mix its sticky, stretchy qualities. Gluten is a protein that acts as the ‘glue’ to hold the dough together. It is what allows dough to swell and spread when pulled and kneaded and gives baked bread its soft, chewy texture. It can be extracted to produce gluten-free products for those whose digestive systems are sensitive to, and react against, gluten.

It is possible to think of ‘quanta of explanations’ guided by a Goldilocks Principle. That is, there is a certain amount of explanation that is simply just right, it ‘does the job’. It is neither too short to require more nor is it too long to bore. A good explanation is satisfying, creates equilibration in Piagetian terms, fills the gap, provides an adequate steppingstone for the next move to be made. Each quantum of explanation is audience specific, what fits one person may not fit another. And therein lies the art and craft of the communicator of science, the science educator, who has the task of reading the audience sufficiently to determine their capacity for understanding. On a personal note, my mother would have had no truck at all with knowing about glutes or talk of sensitivities. She was not an amazing cook and I recall a moment of teenage awkwardness when I asked one day what was for dinner. She folded her arms, stared at me hard and said “Dinner. Dinner is for dinner”. I pushed it, “What if I don’t like it?” The arms tightened, the stare hardened, her head nodded, “You will like it,” she said. Not much of an explanation but it worked.

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WHEN NEW MATERIALISM LOST THE ARGUMENT

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Abstract

New materialism grew out of a struggle against imperial Cartesian ontology. Rather than starting from a world that exists independently from our minds, authors such as Karen Barad and Rosi Braidotti show how matter and meaning are always entangled. These authors made it possible to think of multiple ontologies, decentering the Eurocentric figure of Man who claims a single, rational point of access to the world. Such a nuanced thinking through ontology has brought with it a rich vocabulary and a variety of new ways of doing research. However, when this movement in the philosophy of science is reduced to pointing out examples of entanglement and noticing a posthumanist world, new materialist scholars run the danger of sinking into a swamp of self-affirming jargon. On the one hand, the risk for a solely descriptive new materialism is that it hubristically replicates a Cartesian world. On the other hand, comfortable internal repetitions neglect the poignant critiques of Black, Indigenous, and anticolonial studies and might end up replicating the imperial violence it sought to displace. We argue that new materialism should ‘stay with the trouble’, as Haraway would put it, by centering anticolonial contestation and putting argumentation rather than self-affirming description central.

Keywords: entanglement, new materialism, decolonization, ontology.

INTRODUCTION

Over the last decades, there has been growing attention for embodied learning methods and physical activities that recognize the connection (and inseparability) of the physical body and cognition. During the European Congress of Qualitative Inquiry, participants had multiple occasions to walk, dance, roll and lie on their back. These methods have been proven efficacious for therapy, education, action-research and all sorts of creative processes – including generating academic inspiration. Feminists studying performance, including Judith Butler, Jane Gallop and Chakravorty Spivak, noted already in the 1990s that it helps to move in the material world one tries to study (1,2). As theory is never objective nor fully abstracted, researchers should let surroundings influence and interfere with theory.

At the congress for qualitative inquiry, however, participants were encouraged to do something peculiar in some sessions. They would walk around and yell “entanglement” to two entwined branches or “nature disrupts” to a patch of grass breaking through the pavement. During such engagements, there was often no discernible goal, except for an ascetic self-transformation intended to help participants “see the world differently.” It seems to us that such apparently superficial and self-indulgent performances of politically sophisticated concepts undermine the radical potential of new materialist thought.

In this paper, we point to some of the dangers stalking new materialism. A superficial new materialism that is only interested in cultivating personal inner experiences as a thing in itself fails to account for real social processes. It becomes an apolitical distraction that obscures dynamics of power. Moreover,

superficial rearticulations of new materialism and its concepts run the risk of reproducing representationalism and Cartesian binaries.

We implore new materialists to play, experiment and break down barriers, but to also stay close to the roots from where the theory sprang, namely queer, subaltern, anticolonial and feminist struggles about inequality and oppression. New materialism cannot be a new meta-ontology, or it runs the risk of becoming a new universalism. It should be an ongoing argument, or contestation, aimed at troubles, to multiply the ways of knowing phenomena and hence deconstruct singular epistemologies that gain power from claims of universality.

NEW MATERIALISM, ROOTED IN POLITICAL CONCERNS

New materialism is part of a broader movement in the philosophy of science. Around the turn of the century, feminists grew uneasy with the lack of attention to materiality in the linguistic turn then dominating the humanities. At the same time, science and technology studies were breaking down the barriers of the disciplines and were reaching large audiences with its critiques on the modern rational Man. Cultural theory was criticized for its representationalism, i.e., the tendency to see cultures as perspectives on a single world, thereby reducing Indigenous peoples' beliefs to the status of curiosity. Many qualitative researchers were eager to overcome the long-standing discussion between constructivists and (post)positivist philosophical paradigms and to acknowledge the inseparability between body and mind. New materialism, posthumanism, post-qualitative research, and the ontological/speculative turn, while having important differences between them, all emerged out of this moment.³ As is often the case with emerging literature, discussions around precise definitions and categorizations abound. In this paper we refer to new materialism literature without neglecting the intellectual branches from the many tributaries that feed into it.

The different branches of new materialism share an evolving vocabulary that aims to countervail some analytically reductionist thinking. New concepts are not used for the sake of the concepts themselves, but to bring out specific connotations. To talk about ontology instead of culture, for example, points to the fact that there is not one single world with multiple cultures and epistemologies. The term 'ontology' carries different metaphysical baggage than 'culture.' The ontological turn argues for a radical openness to other ways of seeing and being and looks for ways to describe these without centering modern scientific Man (3–5). By using a specific term, it is possible to build on the nuances that are embodied in it. Hence, the use of a new materialist vocabulary should not be a form of academic self-fellatio but be related to a specific issue.

The concept of entanglement, one of the exclamations during the walk, fits in this broader vocabulary. Entanglement is used by Karan Barad, one of the academic "superstars" in new materialism. Starting from quantum physics, where entanglement is a phenomenon observed at the level of particles, Barad explores this term to introduce her ontology. She explains:

"To be entangled is not simply to be intertwined with another, as in the joining of separate entities, but to lack an independent, self-contained existence. Existence is not an individual affair. Individuals do not preexist their interactions; rather, individuals emerge through and as part of their entangled intra-relating." (4 p.ix)

Entanglement thus sits snugly at the center of new materialist thinking, reacting against the principle of identity, or objectivity-subjectivity central to analytical thought.

As Rosi Braidotti (7) writes, this fundamental critique sprang from various social movements in the interdisciplinary space between queer, subaltern, anticolonial and feminist studies, to name a few. Each strand is grounded in present-day struggles, taking up different ways of thinking to radically challenge the way scientific progress has been made possible through violence and structural

³ See (3-5) for an overview.

exclusion. In short, she states: “which means that they take real-life events seriously, and by extension, take power seriously.” (5 p.39)

The idea of entanglement functions between different strands of research. In queer studies entanglement challenges the power of gender boundaries and shows how these boundaries are being upheld in very material ways, caught up in bodies and places as well as in scientific and political discourses. Entanglement also functions as a fundamental critique in response to the climate crises, reacting against the articulation of nature as an inert *res externa* on which Man can intervene and exert control. The way of being human is questioned, in studies of the Anthropocene and in studies focused on colonialism. The liberal ideal of Man is explored through its entanglements with colonial science, showing how Man could only function through the violent exclusion of some humans from humanity. Paying attention to the entanglements of Man and science has allowed researchers to trace the discursive materialities that uphold exclusionary binaries at the center of colonialism, capitalism, and ecological destruction.

Especially among Indigenous peoples, as Rosiek et. al. (5) describe notions of entanglement between humans and their material surroundings have been central to their being in the world long before terms like new materialism or quantum entanglement surfaced in scientific literature. Indigenous peoples’ being in the world, grounded in an understanding in the agency of non-human things, has resisted Western Cartesian ontology for centuries. Among scholars of Indigenous studies, concepts like entanglement have never been abstract ideals but rather the material practice of everyday resistance and being in the world. (5,8)

Similarly, the struggle to decenter a Eurocentric idea of Man within Black Studies and anticolonial studies is caught up in a history of slaves and descendants of slaves who challenged colonial demarcations of who might be considered ‘human’ and who not. Deprivation of rights, practices of dehumanization and oppression are very much alive today and thinkers such as Frantz Fanon, Sylvia Wynter, and many, many others have actively been decentering ‘Man’ as an integral part of their anticolonial struggle. The entanglement between structures of racial oppression and conceptualizations of what it means to be human has maybe not always been referenced as such in their work, but the parallels are striking. (9,10)

The concept, therefore, holds a history of struggle and its nuanced use in political contestation and argumentation, should be kept in mind when deploying it. Instead, the exclamations of ‘entanglement’ between tree branches, demonstrates how new materialism is quickly losing its political commitments. The theory is increasingly applied on the individual body and the self. “Looking at the world differently” can become reduced to a neo-spiritual, self-indulgent exercise that co-opts and neuters radically different thinking. To make matters worse, by applying new materialist concepts like muddle, disruptiveness, and entanglement on the self, these concepts are becoming a self-referential, superficial shadow of what they once were and might still be.

A SUPERFICIAL REARTICULATION AND LOSS OF POLITICAL COMMITMENT

Karen Barad, Anna Tsing, Donna Haraway, Deleuze and Guattari, all advocate in their own way against the use of a single-purpose method. A too narrow method leads to blind spots. For example, the decades-long focus on the chemical composition of the soil to increase productivity has neglected the importance of bacteria for soil composition. These authors advocate for a fundamental methodological openness to study the multiplicity and complexity of relations that constitute phenomena. Hence, new materialists have called for a diffractive and post-qualitative turn in research, and research with no method (6,11–14). No-method research, however, should never mean no-argument.

There is a risk that new materialism will follow the footsteps of the hippie movement. Hippie culture grew out of the Beat generation in the early 1960s. It had close links with the anti-war and Civil Rights movement. The hippie movement started off as a counterculture that questioned the traditional and

the taken-for-granted values of Eisenhower's generation in the United States. They reacted against colonialism and the instrumental view of nature that had made the post-World War II economic boom possible. They also criticized the traditional perspectives on drugs, sex, and gender. Slowly, however, what started out as turning their back on society became turning away from society. As the movement became progressively concerned with the individualized self and body, hippie culture became depoliticized. Drugs, which were once the instrument to help to free the mind and to see the world differently, became a space to escape from the world. Eventually, the movement became so centered on the individual that it got co-opted by neoliberalism in the 1970s.

The history of the hippie movement is unsettlingly similar to contemporary evolutions in new materialism. The dangers for new materialism mimic the issues that afflicted hippie culture. New materialism also comes from valid political concerns, but by focusing too much on the individual and individualized embodied experiences, it is losing its political relevance and social commitments. Moreover, like the hippie movement, this political failure makes it vulnerable to co-optation by capitalism.

Adorno (15) had warned the beatniks and hippies for getting their ethics from an individualized existentialism. He warned against elevating personal inner experiences as a means to understand being itself. Existentialists who are too concerned with cultivating personal inner experiences as a thing in itself, he argued, fail to account for the real social processes produced by capitalism that limit our thinking and freedom (16). Adorno argued that the jargon of existentialism undermines the liberation it seeks to produce and only contributes to an immediate personal satisfaction.

A similar critique can be made about new materialism, although some authors go even further. Benjamin Boysen (17) follows Sharon Krause (18) in her assertion that it is the basic tenets of the theory itself that lead it to slide into banality. They argue that giving agency to nonhumans disavows the responsibility of humans. "If everybody and everything are accountable, then no one is." (15, p.238) Slavoj Žižek shares similar concerns in a cynical footnote:

"We can think of Auschwitz as an assemblage—in which the agents were not just the Nazi executioners but also the Jews, the complex network of trains, the gas ovens, the logistics of feeding the prisoners, separating and distributing clothes, extracting the gold teeth, collecting the hair and ashes and so on." (17, p.54n8)

We do not believe that new materialism must lead to such scandalous and frivolous ends. New materialism should be used as a tool, not as an end in itself. To give agency to non-humans is a technique to diffract the observer's cognitive openness for the complexity of relations that influences the phenomenon studied. For example, in Dixon-Román's (20,21) work on social reproduction in education, giving agency to nonhumans such as standardized cognitive tests as well as to the physical body functions as a fundamental shift and critique of existing approaches. It allowed him to see how inheritance and generation are not "teleological cohorts": changes in nature, inert bodies affected by culture represented by objective measurement instruments. Instead, he could trace how inheritance is formed through complex, non-linear intra-actions between standardized tests, the testing environment, policy context, political economic context, sociocultural processes, among others. Seeing the body as agential made it possible to fundamentally critique existing scientific thought on social progress in education, and to "generate new futures of educational equity and social change." (18 p. 444)

The fact that bodies, instruments of measurement, have agency is not the conclusion but rather the starting point of an analysis. Similarly, to say something is entangled is not enough. It contributes nothing to the understanding of the world around us. The question rather is, what is the consequence of something being entangled? How does entanglement influence the phenomena in the making? How does entanglement influence attempts of separation? How is the world made into a simplified ecology? (4) What material-discursive scaffolding made it possible for us to think of science as observing the world without impacting it. What makes it possible to build entire agricultural systems

around the belief that Man is distinct from Nature? How can a human establish a stable relationship of property with certain things, what mechanisms are necessary for us to think of a stable self that can sell their labor, gain, or lose their rights, or have control over a song? (16,22,23)

When we fall into the trap of descriptive ontology, new materialism loses its argument – the point of fundamental critique disappears – and entanglement becomes yet another scientific category with which we describe a stable, identifiable world. When entanglement is used as a thing in itself and not as a tool to understand complexity and the constitutive genealogy of phenomena, then Paul Rekret is right and “the invocation of ‘entanglement’ risks appearing as an idealising gesture empty of content.” (14 p.3)

The most damaging risk for a solely descriptive new materialism is that it replicates a Cartesian world with a hubristic vengeance. For all its anti-Kantian sentiment, Cole (24) might have a point when he asserts that new materialism is basically concerned with the same metaphysical question as was Kant: how to make the phenomenological and the noumenal world overlap. For Kant, knowledge of the world will always be phenomenological, nevertheless, he was interested how phenomenological knowledge could be brought as close to the noumenal world as possible. The new materialists deploy a different strategy. They propose a flat or immanent ontology, a world without the distinction between the real world out there and the worlds of perception. This strategy is supposed to open a multiplicity and diversity that engulfs the established dichotomies.

By assuming that the world is already posthuman and that we should simply be attuned to it, superficial new materialism recreates the metaphysical problems of the enlightenment against which it was developed. Superficial new materialism creates a binary moral prerogative to see the world in the ‘right’ way (16). A new materialism that is aimed at just pointing out the entanglements around us creates another universalism and representationalism. It presupposes “a world out there,” a world that is entangled and complex, but by being attuned to this world, the world can be understood correctly. Like for Descartes, the question is how to look at the world from the right distance (or with the right tools, e.g. walking, creative diffraction, ...). At the same time, there is an idealist fulfillment. For Descartes, to think is to be. To think creates the certainty of being human and to have a place and purpose in the world. For superficial new materialists, to open the mind, to see and think diffracted and posthuman, creates the same sluggish satisfaction. It allows new materialists to juggle with their own jargon while performing academic self-fellatio.

Additionally, a superficial new-materialism that treats objects as individual agential things—and not as always in-becoming as Barad suggests—creates a new fetishization. This fetishization obscures rather than clarifies the constitutively entangled historical and social origin of the object. Moreover, it makes new materialism a good ally of capitalism (17,24). For Marx (25), alienation is the process that makes the product of labor appear as an external thing, independent of the producer and even hostile to the producer. We aspire new materialism to be the force that exposes such alienations rather than contributes to it.

STAYING WITH THE TROUBLE

Anna Tsing (4), following the lead of Marilyn Strathern (26), asks us to patiently sit in the muddle and to slow down. Importantly, however, this slowing down has nothing to do with a decreased sense of political urgency. For Tsing, slowing down “shows a path combining the urgency of action with the attention to complexities” (2 p.5). Slowing down is an intellectual project aimed at bringing back the complexities that are lost in simplified ecologies.

Similarly, Isabelle Stengers’ (27) manifesto for slow science, does not advocate against the scientific method or against the urgency of social, political and technical innovations. Stengers argues for a pragmatic, plural and negotiated dialogue between the multiple types of research and multiple worlds to better account for the complexity of our world and to avoid replicating the power imbalances of the

status quo. Slow science is not an individualized science. Slow science is not apolitical or only concerned with how the world affects the self and the individual body. Rather, it is interested in affect and embodiment only as far as affect and embodiment teach us about the experiences of the oppressed and about the collective living together. Affective and embodied theory should be directed towards a goal. They are tools to raise analysis beyond dry analytical thinking.

To say it with the words of Donna Haraway (28), we should stay with the trouble. The trouble is not the difficulty of the individual meaning making in a complex world. The trouble is not just the complexity of the world that is at the same time more than one and less than many. Staying with the trouble also means actively using our privileged position as academics to study the material-discursive practices that marginalize and oppress. Slow science must study the complex and often contingent effects of reductive science.

We argue that one way to stay with the trouble, is to take seriously the political struggles these different strands of literature are enmeshed in. Most new materialist scholars start from actual political contestation and in this they actively try to displace the idea of Eurocentric Man. They try to change the scientific discourse from one that is premised on violent separations (cuts, as Sylvia Wynter would describe them (29)) to one that starts ontologically from an intra-active, speculative worldview. In an ontology that takes the intra-action between matter and meaning seriously, scholars should not miss the importance of centering practices of contestation and resistance in their approach. As King pointed out in 2017, much Posthumanist scholarship falls in the trap of tackling the concept of the human alone, without looking critically at the scaffolding that it is built upon (9). This scaffolding is, in large part, science. The way to displace the idea of Man is to put anticolonial struggles as its center. New materialism should thus take its position as science intra-acting with the world seriously. This means a commitment to accountability that now runs the risk of being neglected. If the use of concepts like entanglement becomes a performative, self-centered action, it falls in the trap that new materialism was set up to avoid.

A lack of accountability to the political struggles shaping new materialism disregards the fundamental entanglement between science and the world. One fundamental issue is the continued neglect of non-European critiques. If we continue to center European thinkers rather than starting from the margins of European Man, from the places of its contestation, we will again be silencing those who have been fighting the erasure of their humanity through European imperial science. As Rosiek et. al. point out:

“As a consequence, new materialist scholars’ enthusiasm for agential realism could, by failing to acknowledge and seriously engage the Indigenous scholars already working with parallel concepts, end up reinforcing ongoing practices of erasure of Indigenous cultures and thought.”
(5)

Staying with the trouble thus means that we cannot use the vocabulary of new materialism in a superficial, self-affirming way. Displacing a Cartesian ontology takes work—practical, collective activity—not description. Assuming the world naturally evolved to a posthuman reality discounts the historical contestation world-making invariably involves. Rather than assuming an already-posthuman world, staying with the trouble recognizes the need for scholars to contest, argue, push up against the boundaries that constitute much of our world. If we disregard Cartesian entrenchments, we will invariably end up reproducing them - description will therefore fail. As scholars concerned with new materialism, we quickly need to use new materialism to make an argument, or we are bound to lose our metaphysical argument altogether.

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MATERIAL ENCOUNTERS::INTRA-ACTIONS/CUTS

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Abstract

We see that problems in architectural design – particularly those around implicit and explicit adherence to both binary thinking and the speculative, future-oriented instrumentalist nature of spatial design – are indeed the problems which face us more broadly in the Anthropocene.

These problems are sedimented in the design process, specifically in architectural drawing practices and ecologies. Buildings are imagined through abstract thinking and the tip of a fine black line, be it on tracing, detail paper, or the screen, and are produced through distanced descriptions.

In architecture, the twin problems of binary thinking and future-oriented speculations are about remaining in disconnectedness, in separation: the separation of subject and object (and subject and subject, object and object...) and humans and other-than-humans, and the separation of 'now' and 'then'. And it is our view that the 'problems' of the now all result from this adherence to this disconnectedness, be it climate catastrophe, military aggressions, species extinction, or inequalities. Of course, these problems are neither 'caused' nor 'healed' by spatial design; architecture is a *collaborator* in complex ecologies.

But its role is not insignificant, and we investigate modes of engagement, of making, which resonate with the relationality and connectedness of everything, with the 'being-with' of co-existence (with other humans, non-humans, animals, plants, the earth, weather, etc.).

This paper establishes the notion of *poetic encounters* as constituting phenomena – in this case, situated environments. These poetic encounters are construed as choreographic practices, as modes of engagement. Our use of the poetic draws upon its 'first cousin' *poiesis* (1), as making, as 'the activity in which [...] something [is brought] into being that did not exist before.'(p115) For us, this making/becoming is situated within feminist new materialist thinking and practices. The poetic also embodies the political in its inherent relationship between aesthetic form and meaning – here we call upon Jacques Rancière and possible 'redistributions of the sensible' through our poetic encounters.

Encounter is read through various diffractive gratings, including a more distant relative of poetry, *phronesis*, – 'practical wisdom' used in living well –, which is, as Donald Polkinghorne explains (1), 'Knowledge was understood to consist of facts learned from sensory experience or truths about the eternal objects. Phronesis is a different kind of knowledge: one that varies with situations, is receptive to particulars, and has a quality of improvisation.'(p. 115)

This paper explores our making and understanding of poetic encounters through material practices, which include visual image making, bodily engagement, LiDAR scanning processes, and various improvised means. It aims to develop improvisatory methods of practice that engage with the presence of all bodies in space making and their interconnectedness with entangled material assemblages.

Keywords: Poiesis, phronesis, onto-poetics, sensory, cutting-together-apart

Design practices are structured through a sequence of prescribed architectural stages such as RIBA's plan of works. These stages provide a framework for collective space making. A building project starts with a client, architect, and a location; drawings, archival documents and the histories of a site are gathered. Designers will then invariably sit at a table to draw, talk and discuss a design. These are the tools, furniture and materials of the discipline that structure our lived experience; they are the fictions within which we live our lives. These abstract systems significantly participate in how we perceive and understand our world and how we participate and live in it.

Architecture is a collective/drawing/making/constructing/writing practice, a discipline that brings teams of people, technologies, and discourses together to make a space, a building, a city or to remodel an existing site. The working drawing is used to produce a building or space. Layered in these documents are a complex set of actions, symbols, material practices, and cultural, political and historical values.

The working drawing forms a conversation between the design team, the engineers and the many professionals who come together to make a building, where anthropologist Edward Robbins states (2),

...drawing is used to order and structure the social interactions and social relations of the many actors who participate in a design project. It sets social hierarchies, defines a social agenda, and provides an important instrument through which the social production of architecture is organised. (p.4)

These drawings act as the tool through which design intentions become objectified and control the production process through which a building comes into being. They mark a separation of design from making. The architect has not "made" buildings since the inception of Western architecture in classical Greece, he/she has made the mediating artifacts that make buildings possible (3).

Architectural drawing, that which is used in the production of designed spaces, is a mode of separation as the typical types – plans, sections, elevations, perspectives, etc. – are not the 'thing' itself (the lines on paper are not the building) and therefore there is already a duality, as they are in a sense scripts, they are instructions for something to come in the future. They are very limiting as they are anticipatory – so not in the now – and therefore they veil and deny presence. Through their own normativity, they produce the same again.

This production of the 'same again' recalls philosopher Jacques Rancière's notion of aesthetics as that which is always already political. It is both the site, the 'distribution of the sensible' [le partage du sensible, sometimes translated as the partition of the sensible], of the 'policing' of particular ways of engagement, as well as the political. For Rancière (4),

'[...] the distribution of the sensible [is] the system of self-evident facts of sense perception that simultaneously discloses the existence of something in common and the delimitations that define the respective parts and positions within it. [...] establish[ing] at one and the same time something common that is shared and exclusive parts.' (p.7)

The political

[...] consists in interrupting the distribution of the sensible by supplementing it with those who have no part in the perceptual coordinates of the community, thereby modifying the very aesthetico-political field of possibility. (p.3)

Normative architectural drawing modes are policing a particular 'apportionment', a distribution of the sensible, both disclosing 'the existence of something in common' – for *some* – as well as excluding possible modes of engagement and possible participants.

This apportionment of parts and positions is based on a distribution of spaces, times, and forms of activity that determines the very *manner in which something in common lends itself to participation and in what way various individuals have a part in this distribution* [italics ours]. (p.12)

We see our work as political: for Rancière, political is defined as 'relational', and can be found in

[a]rtistic practices [which] are 'ways of doing and making' that intervene in the general distribution of ways of doing and making as well as in the relationships they maintain to modes of being and forms of visibility. (p.13)

The presencing drawing/making work we are involved in is meant to intravene into the normative, policed, closed, dualistic (separating) modes of architectural production.

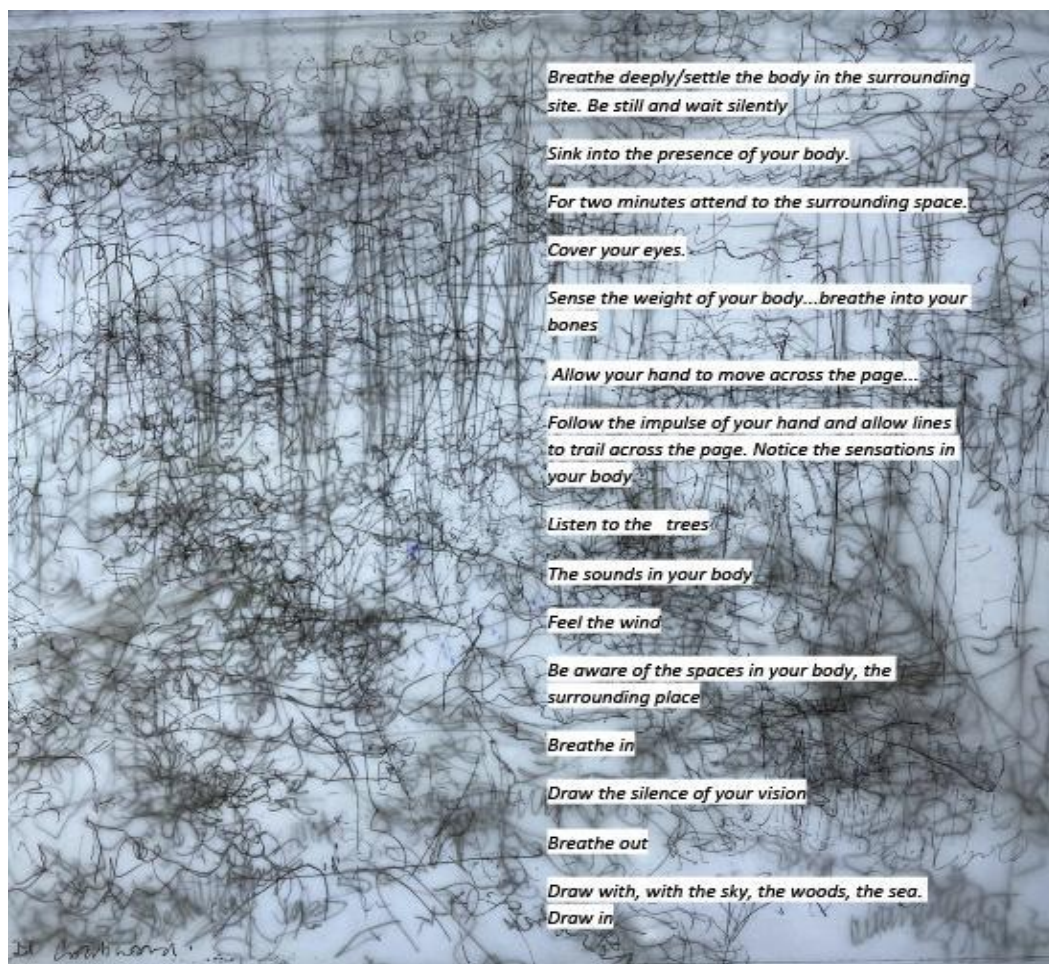


Figure 1, delicate sight, Belinda Mitchell and Eileen White, May 2021.

During the recent pandemic and in response to being contained in the home, Belinda developed a practice with textile and visual artist Eileen White called, *delicate sight* (Fig. 1). The practice recalls the works of artists', such as Claude Heath's (5) *Blindfold* works that he made in 2005 and Sam Winston's (6), *Darkness made visible*, created in 2017. Heath explored drawing through touch and Winston

through a durational work in which he spent 7 days drawing in a dark room. Winston's drawings pay attention to the assemblage of everyday life and its daily accretions; the everyday actions of his body and its relationship to his lived environment. His practice developed through daily drawings and through being present in the site – for days at a time.

Each week White and Belinda would walk in the local woods, with pens, tracing paper, and a flask of tea. We sat on tree stumps with blindfolds on, drawing our surroundings – trees, leaves, movement of the wind, and sounds of birds. This weekly practice entangled us in the environment. It attuned our sensory perceptions and settled us, in the midst of the woods. The practice and our drawings acted as a way to craft a space that *presences* us in the here and now. The language that emerged developed through gestural marks that annotated lines of trees, patterns of leaves and the rhythms of the wind or sunshine as it filtered through the woods.

The *delicate sight* drawings were made on tracing paper made with a free flowing uni-ball pen and layered together. We drew on trace both for its common use in architecture and for its misperformance through its transparency. The paper frames, and collects sensory marks, which also drew in the surrounding environment to create a thick assemblage of time/space/materials. The drawings were made to connect with the landscape and surrounding ecologies, with others, whilst thinking about the material relationships and interconnectedness of the planet as a 'compost of materials'.

Delicate sight drawings create a practice that supports presence, the material of the paper, the movement of the trees. Maria Puig de la Bellacasa (7) argues that to think with touch inspires a sense of connectedness, unsettling subject object relations to create new ways of seeing. (p. 96) Delicate site/sight brings attention to the bodies' sensory experience and a deepened attention to materiality of being with other bodies and the interconnectedness to all things. The drawn lines create a mediating relationship to the fluidity of the body, its gestures and the movements of the encircling landscape - the trees, leaves and the wind as it travels through the woods. The resulting drawings are timeless (without time ... no now and then, just ongoing), proximate, full of movement, both in the drawing and within the body.



Figure 2, the kitchen sink, delicate site/ sight, Belinda Mitchell, Jan 2022.

Oren and Belinda have further developed this practice with the camera of an iPhone, using LiDAR to ground speculative thinking within architectural drawing practices within ordinary and everyday encounters with the spaces we live in, (Fig.2). This iteration of the delicate site drawings and practice includes the use of the iPhone to draw in data through a 3D scanning software that requires the user to move around the space or object being mapped. These delicate site/sight drawings map space through drawn lines – these lines annotate the memory of the site, and draw sensory experiences in an open, available state. The LiDAR images map space through cloud point data, drawing out dots in space. The resulting representations perform as material assemblages where all materials are mapped equally, indifferently, and without judgment (the algorithm behind it notwithstanding), creating a meshwork of points.



Figure 3, under the kitchen sink, delicate site/ sight, Belinda Mitchell, Jan 2022.

The practice of *delicate site/sight* and engaging with LiDAR images attunes us to the situatedness of our bodies in their relationship with the site and surrounding materialities, allowing touch and the sensory to be a radical presence in architecture. The tactile drawings made in the woods and the LiDAR scans that document everyday encounters trouble the distance produced through architectural drawings/vision. The cloud point data dematerialises everyday objects, things, drawing and the concrete world into a digitised space. The resulting images resonate with the viewer through their sensuous sensory qualities (Fig.3). This practice highlights the ‘home’ as an assemblage of materialities, as well as a set of systems such as water ‘infiltrate’ our living spaces. The practice gives value to and highlights the food, waste, water that flows through our homes, connecting us to our watery bodies (8) - to other worlds beyond our human selves. (p.3)

Embodied practices and technologies such as LiDAR scans open a diffraction through the design process – they intra-vene to create a radical presence and a shift in the cultural practices of architecture.

Through the notion of poetic encounter, we see the movement in and with drawing being that which can presence us and develop the embodied felt sense of connection in the now, bringing meaning in our engagement with 'others' in the situated ecologies of which we are participants. But what do we mean by encounter in light of the etymology of the word which carries a distinctly antagonistic tone:

'to meet as an adversary,' from Old French *encontrer* (9) 'meet, come across; confront, fight, oppose,' from *encontre* 'a meeting; a fight; opportunity' (12c.); Latin *in-'in'* (from PIE root **en* 'in') + *contra* 'against'.

For us, whilst encounter recognises difference, these are differences of relational connected entities which are not in *opposition*. As Karen Barad (10) says: "...intra-actions enact agential cuts, which do not produce absolute separations, but rather cut together-apart (one move)." We find resonances between Barad's 'cutting together apart', her intra-actions and phenomena producing cuts, in the simultaneity of encounter's roots of 'in' and 'against'. (p.168)

The encounters - discussed above – which come to be through this cutting together-apart – involve a myriad of different (but not separate) things (including human and nonhuman, mineral, vegetable and otherwise), which are not static but always in relation in motion. As Barad (10) says:

The key is understanding that identity is not essence, fixity or givenness, but a contingent iterative performativity, thereby reworking this alleged conflict into an understanding of difference not as an absolute boundary between object and subject, here and there, now and then, this and that, but rather as the effects of enacted cuts in a radical reworking of cause/effect. (p.173/4)

This understanding of encounter as a cutting together-apart moves it from the adversarial into the poetic. Our use of the poetic draws upon its 'first cousin' *poiesis* (1) as making, as "the activity in which [...] something [is brought] into being that did not exist before." (p.115)

For us, drawing as an 'expanded' form, can be *poetic encounters*, a movement practice (an apparatus) which creates a 'cutting together apart', which embodies the (re)connecting of our bodies and the ecologies of which we are a part. The act of drawing slows us down to craft a space that *presences* us in the here and now. Drawing invites physical and material engagement, the practice demands movement in the body, a conversation with self, and the materials and tools with which a drawing is made. It is drawing's ability to think with the body through movement and to an interconnection of points and lines that enables the creation of new things. Drawing demands the presence of the body and fashions a space as a poetic encounter – it creates an *ontopoetic* encounter.

Ontopoetics (11),

... is a descriptor ... to describe the communicative engagement of self with the world and the world with the self. [...] (p.1) Ontopoetics (12) is derived from the Greek words *ontos* ('that which is' - 'I am' or 'being') and *poiesis* ('coming into being' - 'creation' or 'bringing forth').(p.47)

Through *ontopoiesis*, through this 'being one with the 'object' of drawing' through radical presence, we foreground the entanglements of bodies and space. The process highlights a cutting together and apart as we write this paper. We write at home, sometimes in different countries, connected but apart – we have different histories and situated knowledges – these differences connect and disconnect us. Our different writing practices and embodied knowledges bring this paper into being around a shared desire to bring attention to 'being-with' and our coexistence with other humans, non-humans, animals, plants, the earth, the weather. *Ontopoiesis* brings attention to the paper we draw on, the material of the glass computer screen, the tables we sit at, the tools we use, memories, imagination and the weather in our different locations – the material assemblages that make us up.

Through ontopeiosis, we begin to pull back the heavy curtains of architecture's drawing modes' obfuscation of separation, of disconnection. Understanding our practice as an ontopeiotic one brings us to the 'practical wisdom' of *phronesis*.

Phronesis, – 'practical wisdom' used in living well (1) –, is a

'[...] 'deviant' concept [inserted by Aristotle] into the hierarchy of knowledge. Knowledge was understood to consist of facts learned from sensory experience or truths about the eternal objects. Phronesis is a different kind of knowledge: one that varies with situations, is receptive to particulars, and has a quality of improvisation.'
(p.115)

Whilst ontopeiosis *brings forth* the timelessness (that is, without time) and coextension of meaning and making in the drawing practice, phronesis highlights its situatedness, its 'practical wisdom', its improvisatory resonating particulars. A spatial practice which is ontopeiotic reveals the illusion of the separation, the disconnection, in/of time (now and then) which inheres in the *proleptic* speculative design; the same practice is phronetic with its dissolution of the separation of subject and object (this and that).

The process of writing this paper has developed through many voices, our own, and the materials that we draw together – that in Jane Bennet's terms speak back to us. The slowing down of the body to anchor it into a given site and to engage with the presence of its surroundings is antithetical to the architectural norms of separation, of disconnection. Architectural language is sedimented with productive words, words of action tied into economies of time and money, that tend to fix the world into a future of production and expert-driven processes that focus on an end object. The delicate site/sight drawings imbue architectural drawing with the sensual, creating a reciprocity within the entanglements of the body and the site. The drawings are sentient and create a kind of score – one that draws on the relationality of all things.

To return to the beginning, the architectural production drawing is a collaborative site that gathers the materials through which the built environment comes into being. The *delicate site/sight* lines and the dots of the LiDAR scans create a set of drawings that facilitate the affective dimensions of space making through sensory, haptic and proprioceptive experiences. Reconfiguring – choreographing anew – how the architectural drawing comes into being opens out the potential for the working drawing to present embodied histories, materials as assemblages, the wind, movement, sound, and and ... which comprise the 'site'.

Through our work with such modes of engagement as *delicate site/sight* and LiDAR scanning we are, in Rancière's terms (4), redistributing the sensible. *Cutting-together-apart* in these ways

intervene in the general distribution of ways of doing and making as well as in the relationships they maintain to modes of being and forms of visibility. (p.13)

These drawn conversations, these poetic encounters, diffract through the 'normed' ('policed') design process to recognise and nurture affective, material, poetic relationships. In redrawing the 'cut' through our 'ways of doing and making', we are redistributing 'spaces, times, and forms of activity' so as to include neglected (marginalized) participants, reassembling, reconvening the inseparability of times and of things.

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THE 'MORE-THAN-DIGITAL' SCRAPMAP: EXPLORING THE GENERATIVE POSSIBILITIES OF DIGITAL DATA (FROM NATURE ENTANGLEMENT VIA DIGITAL ABSTRACTION TO MATERIAL ARTEFACT)

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Abstract

Forest school is a practice “which enables children to visit natural sites and engage with nature on a regular basis within the school timetable” (1), and as such is a rich and complex site for qualitative enquiry. Post-human scholars (2,3) have, by repositioning/decentering the human subject, refocused what qualitative researchers ‘do’ with data away from anthropocentric/representationalist methods of enquiry. This onto-epistemological standpoint demands our engagement with critical issues relating to data generation and data analysis. Ellingson and Sotirin (4) summarise contemporary distrust of *data*, sympathising with, but ultimately rejecting notions that negate the concept (or usefulness) of data entirely. Instead, they propose the concept of *data engagement*. In this model data are made (not found), assembled (not collected), dynamic (not complete/static). Drawing on this notion, the present study playfully materializes the idea that data transforms itself into a myriad of potentiality from the moment we engage with it. The process was an affirmative one, generating new ways to view the forest school experience via my own embodiment in the process. The initial data generation drew upon Ingold’s (5) distinction between travelling and wayfaring. Wayfaring as a concept can be applied to my activities as a researcher enmeshed in the forest school space as I followed the children’s activity. Over seven separate visits to the forest school site I tracked my wayfaring around the site using GPS technology. Abstracting the raw data from my GPS watch, the digital lines of travel (representing my muddy, entangled, visceral traipsing through the undergrowth) generated only a clean, linear/synchronic topography of the event. I exported the maps, printed, traced, and embroidered each individual wayfaring route onto a piece of found fabric that now hosted the newly transformed data. Each route was layered on top of another on the scrap fabric like a digital ‘sampler’. Thus I created the more-than-digital scrapmap. The scrapmap presents the transmutation of qualitative researcher engagement with a site from forest path to tactile data, via digital .gpx file, pen, tracing paper and found fabric; becoming an embroidered (re)assemblage. This more-than-digital map shows one way in which human-material entanglements may become material-human artefacts. The scrapmap shows both the lines and negative space temporally and spatially occupied during the research activity. The map communicates new insights about researcher embodiment and the possibilities afforded by playful data engagement.

Keywords: digital, posthuman, material, forest school, generative.

CONTEXT AND BACKGROUND

This paper is a playful exploration into issues of researcher positionality and the nature of researcher-generated qualitative data which arose from my current doctoral research into forest school. In the UK, the term 'forest school' is widely used to describe long-term outdoor woodland-based education programmes which encourage curiosity and independence, and with an emphasis on learner-initiated learning (6). My overarching doctoral study is a qualitative enquiry which explores the unique experience afforded to children by forest school using a new materialist methodology. New materialism is a broad inter-disciplinary movement which problematizes the historically anthropocentric focus of twentieth century theory (7). It aims to address the perceived theoretical neglect of *matter* and considers ways in which such supposedly inert material stuff (such as the trees, rocks and earth that make up the forest school) may be imbued with both meaning and agency. Theoretically, my forest school study is grounded in the broadly materialist ontologies of posthumanism and post-anthropocentrism (3,8,9). Posthumanism overlaps, informs, and shares some "interpretive elasticity" with post-anthropocentrism (10) as both critique the notion of humanity as a centre of power and a species exception. Posthumanism serves as a broad theoretical framework which disrupts the notion of human exceptionalism (both in nature, and in other spheres) (3). Post-anthropocentrism also issues a challenge to anthropocentric thinking, which may be viewed as humanist in the 'human-supremacist' sense of racist, centrist, sexist etc. (11). Philosopher Rosi Braidotti (8) blends and merges these two movements – posthumanism and post-anthropocentrism – and describes the present era as encompassing both (an era she calls *the posthuman*). Both concepts (although they arise from separate historical lineages) offer overlapping ontological biases which blur the accepted subject-object boundaries and place humans in an ongoing reciprocal dialogue with nature; an integral part, not a different order of being. These concepts offer a novel way to explore children's profound experience of *becoming with* forest school (9). For my doctoral study, this new materialist onto-epistemological standpoint seemed well suited to a study of forest school practice which I had begun to consider in terms of decentered human-nature entanglement.

This ontological worldview gave me an exciting lens through which to re-consider existing educational research approaches to forest school. But it simultaneously raised other problematic questions for me to do with my understanding of *what data is*. In a very positive sense, new materialist approaches to educational research enabled me to look beyond traditional humanist theories of education, play and pedagogy (12). Within the field of early education, the insightful work carried out by early childhood scholar Hillevi Lenz Taguchi (13) has shown me how a new materialist approach to understanding pedagogy can work in practice. Taguchi notes that viewing learning events as a materialized, embodied reality "makes knowing just as much a matter of the body and the material as it is a matter of understanding and thinking through discourse/language" (13). Lenz Taguchi draws upon Barad's concept of intra-activity (14) to explain her model of intra-active pedagogy and the way that this notion transforms our understanding of agency (13). She distinguishes between three different types of 'being'; one which remains faithful to a traditional realist/dualist paradigm ("Being-in-the world"), one which considers constructed discourse as the reality which 'counts' ("Being-in-discourse") and one which explore reality as a multi-agentic entangled interdependence ("Being-of-the world") (13 p.51). It is this latter notion of materially being-of-the world that informed my forest school enquiry. However, rejecting traditional dualistic onto-epistemological notions which conceptually separate the human from the forest had implications for my understanding of my position as a researcher. Within such an ontology, the forest, and the humans within it all operate in mutually entangled agency. And clearly *researcher bodies* are just as much part of the mutual forest school entanglement as children's bodies. Thus, as I drew upon new materialist notions of embodiment, immanence and situatedness to explore the experience of becoming with forest school (9,15), this approach troubled my understanding of researcher positionality and the nature of research data itself. Two elements were thrown into question. Firstly, was the notion of generating meaningful objective data within a new

materialist methodology even a valid one? And secondly, how could I, a researcher working within a context of intra-activity, better understand my role as situated within the research activity?

METHODOLOGICAL QUESTIONS/SOLUTIONS

Here I set down my initial solutions to these two questions which arose from my interpretation of new materialist methodology.

Some problems with data

My troublesome question was this: was there any point in generating data at all when all data is artificially generated by the researcher (in the sense of being an artefact knowingly derived from an experience rather than any kind of meaningful representation of reality)? I embraced the notion, as defined by Ellingson and Sotirin (4) of doing *data engagement* as a way of resolving some problematic issues arising from the concept of generating objective data (e.g. as evidence for real world phenomena exterior to the researcher (7)) without rejecting the usefulness of data as ‘something to work with’ (in whatever form it takes). I understand the concept of data engagement to entail that *everything I do with data does something to it* because of my own involvement with it. For example, in the forest school I decided what to film, what to note down, who to follow, what was important, and even what day I visited the woods. Ellingson and Sotirin (4) have usefully unpicked contemporary post-positivist distrust of data. Firstly they note that claiming any version of (post) positivist data as ‘proof’ has long been a contentious issue. Social and critical approaches to data generation acknowledge that data cannot be objective but, rather, co-constructed at specific socio-historical moments (4). Even though very few qualitative researchers now make any claims towards pure objectivity/generalisability (8), the fact remains that “the term “data” continues to bear this constraining positivist legacy” (4 p2) as if it were solid pebbles of objective knowledge that may be discovered exterior to the researcher. Ultimately, what binds these post-positivist responses to qualitative data generation together is an implicit ontological subject-object/ researcher-researched separation. But going beyond this divide, the notion of *data engagement* posits that *there is no data before the researcher brings it into being*. In other words, “data are less like pebbles researchers gather on a beach and more like the beach itself” (4 p.9).

And thus the present study draws upon this generative notion that data are made (not found), assembled (not collected), dynamic (not complete/static) (4). “Data are inherently fluid and remain fantastically unstable” (4). Within this model, messy, (re)generative concepts such as remix and sampling create data assemblages connected to, but not directly representative of, the research subject (one that also, one hopes, contains meaning for the people who experience it). As a multi-stepped process of data engagement, the present scrapmap project embodies the idea that data transforms itself into a myriad of potentiality from the moment we engage with it (before, during and after our experience in the field). This data generation process was an affirmative one, which aimed to generate new ways to view the forest school experience (and extend my understanding of my own embodiment in the research process).

Researcher as wayfarer

My second underlying question involved understanding my own role in the research activity. The notion of clearly defined researcher positionality – so endemic to many qualitative research approaches (for example, in traditional ethnography) – also became fuzzy. Was it either hugely important or not worth trying to define at all? If I accepted that I was an integral part of data generation then my steeped involvement in the forest school *becoming* was also a given. And so my positionality was integral to the process and inextricably entangled with the study, yet also impossible to define within a clearly bounded remit. This notion of deep researcher entanglement is becoming prevalent in contexts that aim to acknowledge more-than-human agentic forces. Within, for example, the field of *childhoodnature*, there are calls for a reconceptualization of what counts as knowledge/data, working

within a framework where researchers ‘become within’ the process (16). It is true that I was fully immersed in the process, and yet it also seemed important to document some aspect of my involvement. I decided that my approach to data generation warranted some reflexive analysis, perhaps venturing into methods of auto-ethnography. How did I make my in-the-moment decisions about what to record, what to notice, what to do, where to go? And was there something about the woods space that acted agentially on me as much as it did on the children? Reflecting upon my experience, the nature of our activities during our visits to the wooded space seemed inherently tied to travel around the site. This was not travel in the normal unidirectional fashion, where travelling involves a journey from A to B. Wayfaring (5), rather than travel, was a more accurate description of the activity in the woods space. Tim Ingold’s ideas about the invisible line traced by a wayfaring walk resonated very strongly with my own experience of inhabiting the forest school space, both in terms of making my own in the moment decisions about who to follow and observe, and in terms of watching the children’s activities within the space (5). Ingold sees the line that is produced by the wayfaring walk as being more like a series of join-the-dots, linking one spontaneous moment with another, rather than a true directional line.

“Like the line that goes out for a walk, the path of the wayfarer wends hither and thither, and may even pause here and there before moving on. But it has no beginning or end. While on the trail the wayfarer is always somewhere, yet every ‘somewhere’ is on the way to somewhere else. The inhabited world is a reticulate meshwork of such trails, which is continually being woven as life goes on along them” (5).

I decided to trace my own engagement and subsequent wayfaring line over a series of seven separate visits to the forest school. I did this by wearing my sports watch to generate my own digital line using Global Positioning System (GPS) technology. Playing with digital GPS data is not a new concept (17). It arises from the present posthuman era of chosen surveillance (or lifelogging)(4). The concept of creating digital art was not built into smart watch technology but arose when humans began to think about their movement with/in the terrain and its relationship to the lens of the digital data file. More-than-digital creativity is a human and deliberate response to the ubiquitous digital data lens (and perhaps a natural progeny of the existing body of work which combines cartography and art (18)). Familiar with this concept, I decided to apply it to track my researcher involvement with the setting, with the aim of decoding my sequential involvement and recoding it into a tactile material representation of my synchronic entanglement.

RESEARCH METHOD

The research setting was a wooded, neglected area within an urban public park, used by two reception classes from a local primary school for weekly forest school sessions during school time. Children in the class were aged four to five years; they were accompanied by a team of educators and parents. Over seven separate visits to the forest school site I tracked my wayfaring around the site using GPS technology. Abstracting the raw data from the GPS watch, the digital lines of travel (representing my muddy, entangled, visceral traipsing through the undergrowth) generated a clean, linear/synchronic topography of each event.



Fig 1.1 A single digital map recorded by my sports watch app from the session 23.03.22

I exported the maps from the sports application, printed onto paper, traced onto dressmaker's paper, then embroidered each individual wayfaring route onto a piece of fabric that I found in my scrap fabric box. I fashioned the scrap fabric into a base map of the woodland site. Each route was layered on top of another on the scrap fabric like a digital embroidery sampler.



Fig 1.2. The process of embroidered route generation.

I wrote myself the following list of digital-material process actions as an *aide memoire*:

1. Walk the map wearing the watch. Turn on when you leave the base camp tarpaulin, turn off when you return back. Then don't think about it in between. At this stage you are recording not making; generating a line as the GPS system makes its digital track.
2. Download the map via Bluetooth which links to the fitness app, which generates a downloadable map.
3. Open the GPS/Ordnance Survey mapping website and upload the file.
4. Download the generated map route and open in Microsoft paint.
5. Print the map route on the same scale as the scrap map fabric.
6. Place the map on the scrapmap.
7. Trace the map route onto dressmakers' paper.
8. Pin the map and sew along the lines. You decide how big the stitches are. Repeat from step 1.



Fig 1.3. The finished 'more-than-digital' scrapmap.

I embroidered all seven GPS tracks; overlaid on a single piece of fabric. In this way I created a more-than-digital map; a material reassembly of the wayfaring decisions I made in the forest, abstracted into digital data, and then reconfigured/recreated as tactile materiality. The resulting creation is not a map in the sense of a representation of the world “imprinted upon the paper surface of the cartographic map, ready-made and complete” (5). Rather, it is an inaccurate portrayal of a messy process, full of accidental and intentional distortions. I began to refer to it as my *scrapmap*. This 'more-than-digital' scrapmap shows one way in which human-material entanglements may become transformed into a material-human artefact.

RESULTS AND DISCUSSION

Firstly, this somewhat playful engagement with the data revealed aspects of my engagement with the forest site that had hitherto gone unnoticed by me. And, secondly, the process of data transfiguration caused me to interrogate my own understanding of the nature of research data itself. In this section I address each of these issues sequentially.

The process of data engagement

The physical sewing task process caused me to consider again and again how the forest school site, rather than being an inert landscape or backdrop, acted agentially upon me. In other words, the physical setting – the living matter-stuff of bushes, veteran beech trees and muddy patches, as well as the undulations of the sloped site itself – shaped my movements and activities. I was entangled with a very vibrant active place. Specific sites and features caused me to spend extended time in them, and this became materially apparent as I struggled by hand to place stitch upon stitch in the same place on the fabric of the map. The reasons for the *stickiness* of certain areas seemed linked to the way certain spots contained place-specific features which guided our activities (a tree that was particularly good for climbing, a mound of earth where dinosaur bones might be buried, a fallen tree trunk that became a boat). Indeed, some of the places which acted with powerful agency upon both me and the other the forest school participants were literally sticky. For example, there was a large patch of deep mud which was most challenging to cross, and much time was spent there watching the proceedings and helping children to extricate themselves from its gloopy depths. Far from maintaining an objective, bounded stance as a researcher, I was instead a living part of the forest school doings and beings. I responded naturally to the space and the activities therein and my tracks betray a certain chaotic randomness. However there is also a sense to my movements which I perceive as a faithfulness to the integral physical features of the site, and the activities that the site generated. *Here* is the mud patch, *there* we hiked up to the climbing tree. Oddly barren areas where children and adults did not tend to linger are hastily crossed with a quickly stitched line. The area around a dangerous fallen tree was never ventured into and the fabric remains untouched. The agency of the space itself is laid out on the stitched fabric where my finger traces the well-worn patterns of doings and wayfaring. I developed an

understanding that, although activities in the woods are child-led and not pre-planned, the forest itself turned out to have some clear ideas about what should happen where. Forest school researchers Harwood and Collier (19) suggest that reconfiguring notions of agency (inherent to the ‘material turn’) can highlight “how children encounter and respond to and with the woods” (19, p. 339). They suggest that forest school offers a unique conceptual and physical space for the blurring of boundaries and the “de-centring of humans” as children and adults jointly construct new “matter-meanings” (19, pp. 336–337) within a shared, living space. In this sense, the process of creating the scrapmap revealed new meanings and agency that the forest itself seemed to generate for me as the researcher, too.

Wait, is it still data?

One valid criticism of the scrapmap itself may be that the data portrayed is so far removed from my research experience in the woods as to be virtually meaningless as ‘data’. In partial defence of this accusation, I contend that this study is an exploration of my understanding of a key concept underpinning the debate about the nature of post-positivist data generation (4) i.e. *everything I do with the data (including the initial generation) does something to it*. Thus I consider this project to be a playful metaphor for all researcher engagement with data. Touching the tactile scrapmap, I considered how many layers (human and technological) I was now removed from my visceral, sensory entanglement in the remembered reality of the woods. I was now a long way from my mud-caked boots in the forest – many distortions and inaccuracies had crept in. For example, satellite technology glitches often caused inaccurate data tracks. I knew that I always began my watch in roughly the same place (at the large tarpaulin where the children congregated at the start of each session). Yet, my watch frequently logged me starting in a slightly different place. Subsequently, the transfer of the route from the sports application to the Ordnance Survey map website appeared to lose some of the finer route detail. It also added some extraneous information that I was unaware of at the time, such as total elevation ascent in metres. This seemed to be an oddly mathematical abstraction, only distantly related to my sluggish, tired legs trudging up the muddy hill or, conversely, skating haphazardly down uneven, rutted slopes. Next, I made pragmatic interpretations when drawing the route (‘do I really need to include all these back-and-forth scribbles?’) and sewing embroidery stitches, inevitably losing detail but perhaps making key decisions about what needed to be included and what could usefully be discarded. All that being admitted, does the resulting map still count as research data? I think so, if I accept that all qualitative data engagement is an account of an experience through the very personal lens of the researcher. And if viewed as a metaphor, I contend that engaging in this process (selecting, discarding, distorting, recreating) is what happens to all data to some extent. What, then, is data? I decided that perhaps it must always be viewed as a mere trace (inscribed in a different medium) of something that *was* (at a fixed and never to be revisited moment in space and time).

CONCLUSIONS

This study materializes the idea that data transforms itself into something else the moment we generate it. The notion aligns with the recent ‘material turn’ in social sciences and education which rejects the idea of a binary subject-object divide. As philosopher physicist Karen Barad notes, even at a sub-atomic level, “we are part of that nature we seek to understand” (2). During this exploratory study I made intentional data transformations, moving from visceral nature entanglement via digital abstraction to the creation of a tactile material artefact. Viewed through a new materialist lens, I confess I am left with a lingering doubt as to whether the digital counts as material or whether digital materiality is a thing. However, the digital was successfully transformed back into physical, and as a result I call my data transformation outcome a ‘more-than-digital’ product. Data was selected, lost, distorted, and recreated in the final piece. However, even after a significant transformational process, such data did provide meaningful insights into my role within a qualitative research context.

Having carried out the ‘more-than-digital’ scrapmap process, I am left with the idea that digital data can be considered as a layer of constructed meaning that sits atop reality. Consider; I can take a walk

in the woods during a moment in time and abstract a layer of digital data (which apparently takes up no physical space at all) that seems to overlay my physical travels rather as if a hovering eagle or drone had tracked my haphazard tracks around the forest. The resulting map is a synchronic rather than chronological representation of my wayfaring choices, or *why I decided to go where I did*. The data file is therefore a digital top layer of meaning. It portrays both the places temporally and spatially occupied by my body during the research activity and also the negative space (i.e. the places where my body did *not* go). Much of the meaning contained in the movement is only vaguely discernible even to me as the erstwhile author of the wayfaring tracks. However, as with all data, my task is then to communicate meaning to others involved with and/or invested in the research context, and the creation of the physical map allowed me to do that. From a personal perspective this process was an affirmative one, generating new ways to view my entanglement with the forest school setting. It seems undeniable that nature itself has a profound agentic effect upon the participants who visit and become with forest school. The agency of nature is fluidly intertwined with our own agency, and this study afforded me an opportunity to explore this concept further and view my intra-actions at a conceptual and literal distance.

In this study I have explored certain methodological issues regarding new materialist researcher positionality, data generation and intra-active entanglement within a research setting. The recent body of work in the field of *childhoodnature* has highlighted the troublesome impact of new materialist conceptual notions upon the role of the researcher and the reframing of methodological enquiry; returning again and again to interrogate “how the... tensions of researcher-researched, and subject-object, and their centering-decentering are engaged” (18 p.230). Here I have suggested that documenting qualitative aspects of researcher involvement during the actual research activity itself may be one way to address some of these tensions. It may be argued that this notion sits on the cusp of two overlapping ideas: defining researcher positionality in qualitative research and the notion of self-as-data (4). Perhaps researchers may continue to draw upon some of the well-established moves made by, for example, autoethnography, to inform researcher positionality in qualitative studies. In this way they can perhaps move decisively beyond the idea of a fixed researcher positionality towards one that dissolves or, at the very least, troubles the boundaries between subject-object and researcher-researched.

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INCARCERATION OF DATA: DIFFRACTIVE ANALYSIS WITH/IN/THROUGH A VISUAL MATRIX ANTI-METHOD INQUIRY OF PRISON TEACHER EXPERIENCE

Lucy Harding

Abstract

This process-paper starts by explaining my post qualitative methodologies in researching prison educator experiences, sharing with readers some of the methodological justifications. But as I wrote, I entangled the experiences of presenting at the ECQI 2023 conference and the listening of other's presentations became part of the assemblage. I then diffracted these experiences *through* the use of textiles within my research analysis; I consider the *doing* of diffractive analysis in this way and how I might move forward with my study.

Introduction

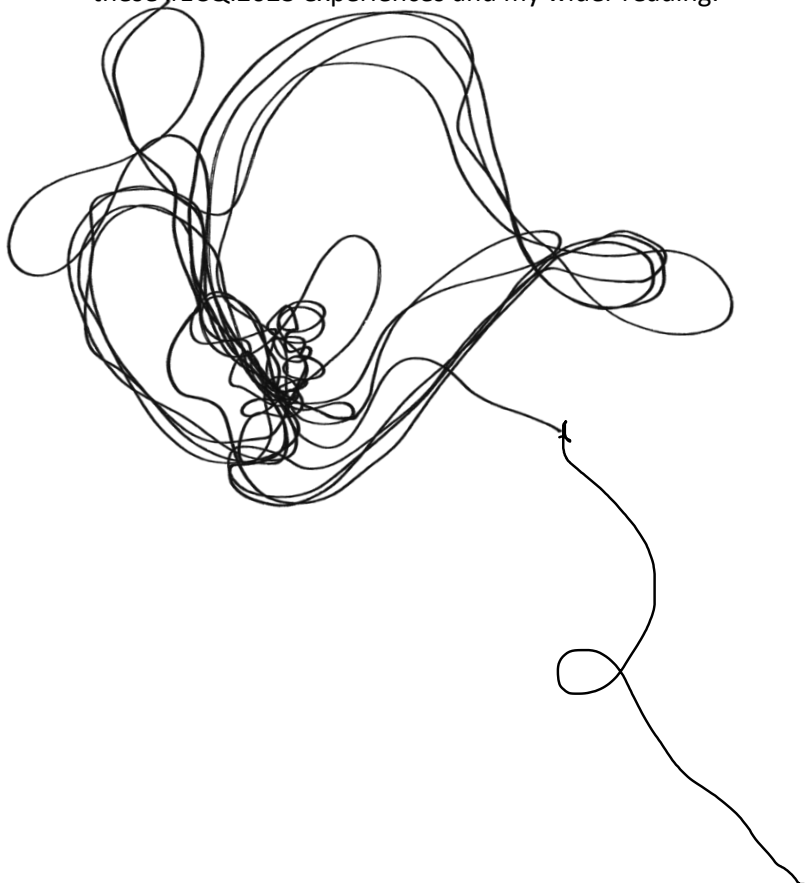
This process-paper or 'think piece' will share with you a journey as I navigate the *doing* of post qualitative inquiry with post humanism and feminist new materialisms as an early career researcher.

My doctoral research sits at the intersection of several fields including but not limited to prison education, social justice, criminology, carceral geography, sociology, philosophy, and textiles. I am exploring the experiences of prison educators within a male prison; considering what affect the space and place of prison has on the perceived experiences of prison educators.

The spaces and places of a male prison can be described as the epitome of the Anthropocene.

Prison education spaces are in the margins, sitting between neo liberalist panopticons (1) and the hope of a (post)anthropocentric future. Carceral spaces in general are not known to most and for those who research and work there, it is transitory, entangled with complex emotions and experiences (2). Research of this phenomena is therefore messy; with multiple ethical considerations, there is a responsibility demanded to choose sympathetic research approaches if we are to imagine the unimagined possibilities (3, p.216).

I will use this paper to think diffractively about the uncertainties of my research methodologies alongside my experiences of the conference. I consider how to approach diffractive analysis through these #ECQI2023 experiences and my wider reading.



Methodologies

Using a range of creative methodologies in my research of prison teacher experiences helps to “resist the familiar, the assumed and the taken-for-granted, and in so doing, opens space for new understanding” (4 p.16). If we are to simply replicate what has gone before, we will be unlikely to find anything new. This is crucial in a place, such as the prison, that lays bare the troubles of humanity, but struggles to be humanistic, and so, an alternate approach was needed. I therefore bring to my research the ontologies of posthumanism, feminist new materialisms and post qualitative inquiry, in an act of resistance against the hegemonic power of the prison and academia.

The choosing, planning, and doing of the methods themselves felt comfortable, pushing against the normative, hegemonic foundations of research but not so much as to question validity. But once the research had been conducted, the analysis of the ‘data’ raised anxiety, as the *doing* of diffractive analysis as an anti-method baffled me. It is in this state of confusion that ECQI 2023 found me, as I presented the beginnings of this paper.



Figure 1: Items collected on the walking interviews and used as stimuli in the Visual Matrix.

Methods

My research methods have included walking interviews within the prison grounds; teachers were asked to map their route around the prison beforehand and to draw or collect non-human 'things' during the walk (see figure 1). I noted the minutiae of the recordings; capturing the pauses, the interruptions of locks and gates, the bird song, the shouts from the cell windows and so on, which are all a part of this assemblage. The collected objects, sounds and images were later used in the second method, a focus group of sorts, termed a Visual Matrix (5). Using images and sounds from the walking interviews as a stimulus, participants shared ideas, eliciting visceral responses, feelings, thoughts, associations, and visual 'imaginaries' (images in our mind) arising from the images shown.

The visual matrix is like sharing daydreams, being in a state of 'reverie', sharing one's immediate visual responses, rather than analysed thoughts or discussions (5). After the event, the participants and I, had a post-matrix discussion of the associations as we mapped them visually (see figure 2).

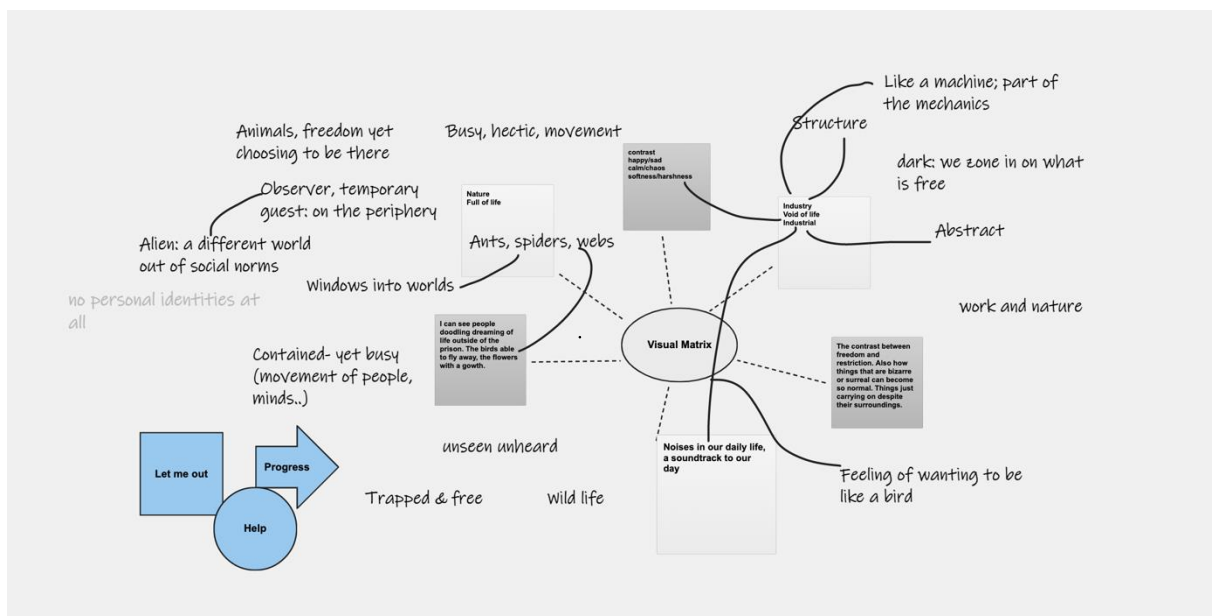


Figure 2: Collaborative mind map of themes emerging from the visual matrix responses



It can be argued that visual representation enables greater affective responses, which are difficult to articulate in logocentric norms of research (6). In qualitative research the requirement is to centre participants, however, in this post qualitative approach, the idea is to ‘cut into the center [sic]’ (7). The visual matrix enabled me and participants to gather a sense of space and place, feeling through the Anthropocene, with the imaginaries. Participants through this process, are enabled to be part of the research, going beyond participatory interaction, to instead think *with* and together during the visual matrix and analysis thereafter. This promotes a rhizomatic enfolding (8) of experience between researcher and participants aiming to ‘acentre’ and question subjectivity, as an interruption of traditional qualitative research practices, moving towards diffraction (9).

What is diffractive analysis anyway?

Diffraction first mentioned by Haraway (10) and furthered by Barad (11) in a research context enables a thinking of ‘difference rather than sameness; noticing what differences matter and consideration of what is excluded from the mattering’ (12 p. 13). Lenz Taguchi (9) describes it as ‘becoming-minoritarian’ (p. 267). But to put it simplistically, it is accepted as the reading of different philosophical texts *through* one another or through one’s research outcomes. Utilising diffractive analyses, as part of the assemblage therefore disrupts (10, 11). I had ‘chosen’ diffractive analysis before I had fully understood it. I knew I wanted to analyse-with the texts of Deleuze and Foucault to ‘diffract’ the findings but had a feeling that this wasn’t quite enough. Gunnarsson and Bodén (13) have expressed that there is no ‘one size fits all’ approach to diffractive analysis but that it is not only about reading texts *through* each other but also about how different theories, methodologies, empirical materials, and so on, can be read through each other. I was wondering if making creative outcomes could be part of this diffraction in a trans-corporeal way.



The pain of *doing* analysis

The prior research of walking interviews and the visual matrix had happened over a 6-month period but the analysis of these was yet to fully form. I had tried to read-with and through Deleuze and Foucault and even tried returning to a ‘thematic analysis’ approach (14), for some sense of order and a ‘knowing’ of what to do. I listened, and re-listened, coded, and themed. But I was not ‘feeling’ the data in my bones, I was losing connection with the words, not getting closer to them.

I was drawn into textiles, returning to my roots, allowing them to plug into a rhizome.

Textiles is my happy place

Prior to entering prison education, I worked in and taught textiles; my happy place is with stitch, sewing, embroidery, yarning, weaving, and making new with old techniques. So, I re-turned to the data with/in/through weaving. I tried many different forms, listening to the recordings of the interviews and visual matrix as I pulled threads. The ebb and flow of the weaving was allowing a becoming-with the data, connecting with my emerging thoughts and allowing slow ontology (15) giving me time to think and feel with that assemblage.

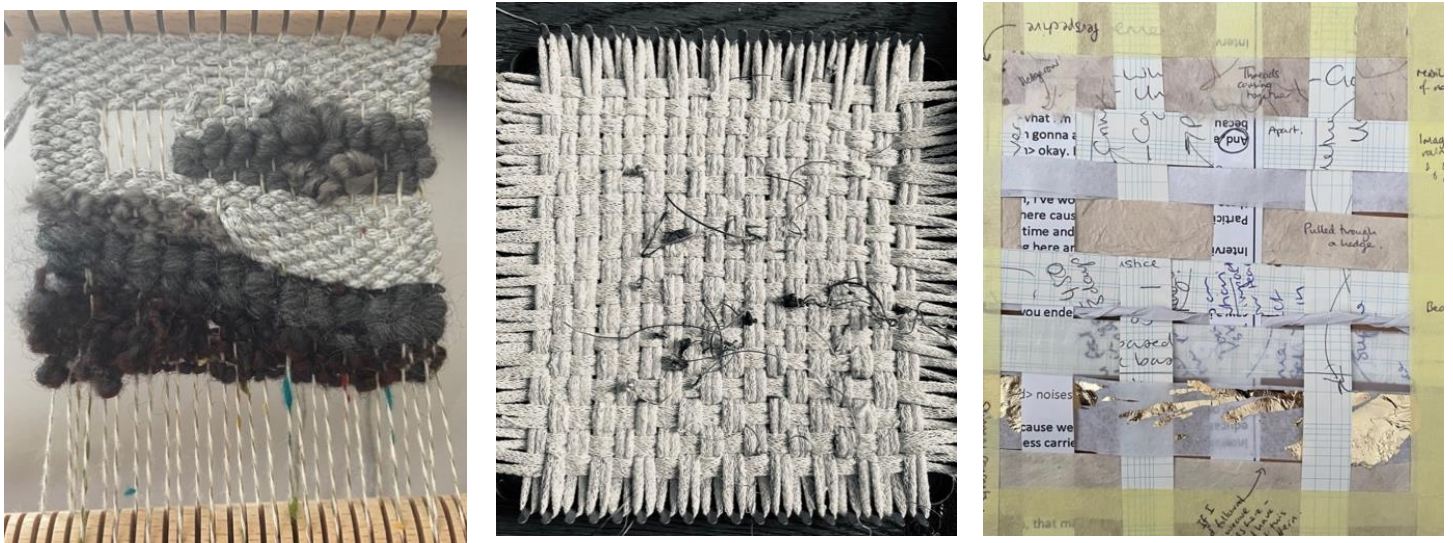
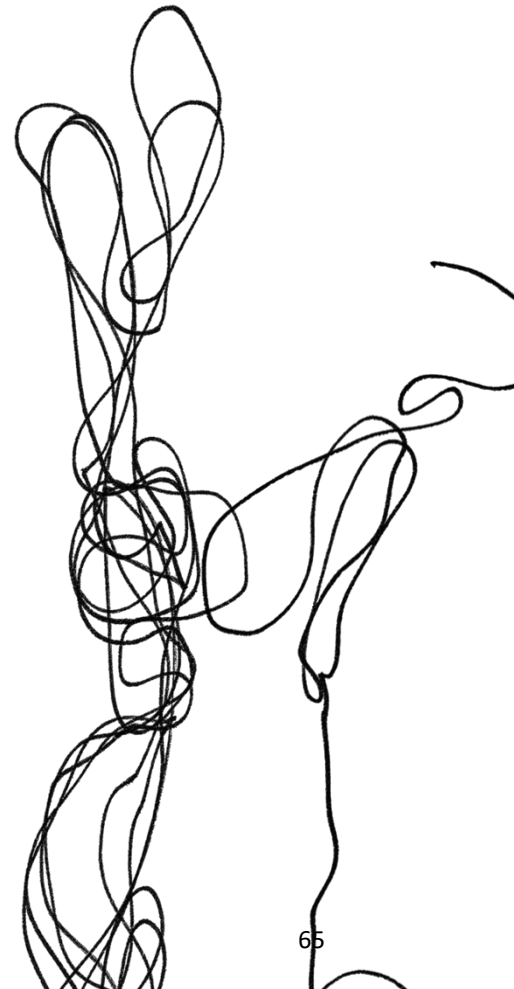
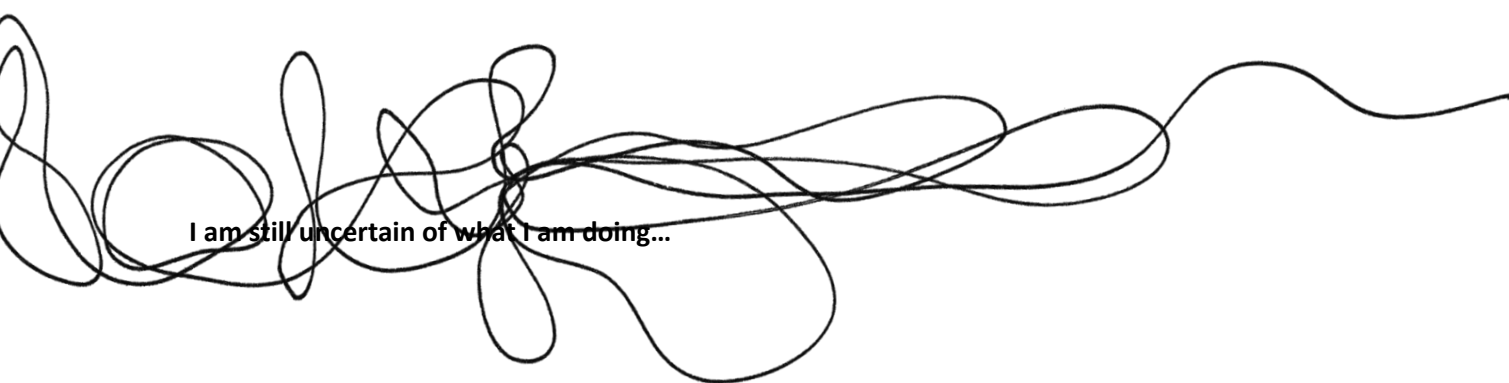


Figure 3: Examples of weaving-with the data

With/in/through

Through these processes, I become part of an 'intra-action' with the material research data, working with/in/through the voices of the participants. Haraway (16) depicts this same experience in string-figuring, where we might drop threads but in this creating-together, this more-than-human action, we find *'something consequential and maybe even beautiful, that wasn't there before'* (p.25). This engagement with the teachers and the prison space is then embodied in textile driven processes, to enable a deeper perspective, utilising my love of textiles to create from *within*. My trans-inter-disciplinary approach has allowed me to listen with participants, rather than interpreting what I 'think' they have communicated (17).





I am still uncertain of what I am doing...

The #ECQI23 experience joins the assemblage

The process of presenting at the ECQI 2023 conference was enabling me to work through the complexities of *doing* diffractive analysis, the difficulties in knowing what ‘thing to do next’ (18). The feeling of using weave as a data analysis method in the realms of normative qualitative methodologies enables me to push the boundaries of academia but leaves me very much on the periphery of what is accepted. In a child-like state of naivety, replicating that of reverie earlier on in the study, I felt both free and fearful of how it would be perceived. However, in the affirmative more-than-conference space of ECQI 2023, I was made to realise the ‘potentia’ of the methods. I was further challenged when asked by an anonymous conference participant why I was not creating the weaving as the *outcome* rather than something supplementary to the written outcomes, leaving me considering this provocation.

Re-thinking data analysis with Saesha Kini

The question of what is and can be data analysis, remained with me into the closing papers of the event, particularly the presentations of Saesha Kini on ‘(Re)Conceptualizing Data as ‘Sediments’ (19). In this analogy, we can imagine data being drawn out through natural forces such as wind and waves. Data, is then entangled with the earth and all its matter, always becoming, sometimes settled but ‘when engaged with creativity and care, the data/sediments (or data sediments) reveal (un)thought and enriching possibilities and show the way for alternate and possible futures’ (19).

Whilst this comparison has contradictions for me, I ponder the notion that data can be stagnant and inactive, being woken when a ‘glow moment’ (20) is sifted out and brought to life through intra-actions (11). We imagine the researcher, cutting or sifting through the data to decide which data comes to matter. But this suggests a reduction of the data, a refinement, where other possibilities might be lost; just as coding, theming and ‘standard’ thematic analysis intends to do. Perhaps through creative acts such as, in my case, textiles, this can *become* more, enabling a weaving-with data to create new and *do* differently.

Re-thinking data analysis with Aaron Kuntz

Aaron Kuntz in the same afternoon shared his emerging thoughts on his paper 'Writing With, Through, and of Thematic Analyses' (21). He discussed the idea of writing as the 'ultimate cognitive act' (21), which linked to my challenge of using textiles instead of writing, questioning my thinking.

He discussed researchers use of writing to filter and reduce data into themes, through its differences and sameness. But, in using this process, Kuntz recognised that this then will only ever resonate with what we already know, an echo chamber of analysis. Instead, Kuntz proposed that as well as writing through themes (standard), we write *with* themes (playfully), using creative approaches such as poetry, philosophy or perhaps art. I align this to the understanding of diffractive analysis as reading data *with* others, be it key philosophers such as Foucault, Deleuze or the researcher themselves to diffract the analyses through alternate views and ideas. Does this then legitimise my use of textiles?

Kuntz (21) explained that writing *with* themes aims to embrace a 'peripheral resonance, one that feels different' and this is the point for me, the materiality of weaving, stitching, or creating, enables an *affective* response to and with the data, trans-corporally the act becomes part of the assemblage. The creation of something new, opens the mind, and the body to see and *feel* more, creating new potentiality. We are therefore not writing, theming, and analysing to 'make sense' but instead to 'make new'.

Weaving, stitching, and creating as *other*

Coogler and Guyotte (22), discuss the use of stitch as a methodology to 'rethink both *what* we thought and *how* we thought it' (p. 232) using the ideas of Erin Manning in a diffractive opening of inquiry, they recognise the messiness of embroidery backs as an opportunity to *see* phenomena differently, the back of the textiles enabled (23). This creative act of messiness is a concept I had already been using while stitching with my initial experiences of prison space (see figure 4), I had not previously acknowledged the connection of this creative mess with my research analysis processes.

The knots, loose ends and frayed matter of these pieces can be compared to the messiness of research, embodying the research as material affective textures or diffractive knots [*nœuds*]. These textures then become part of the research as non-human objects, therefore 'thinking *with* matter' (24).

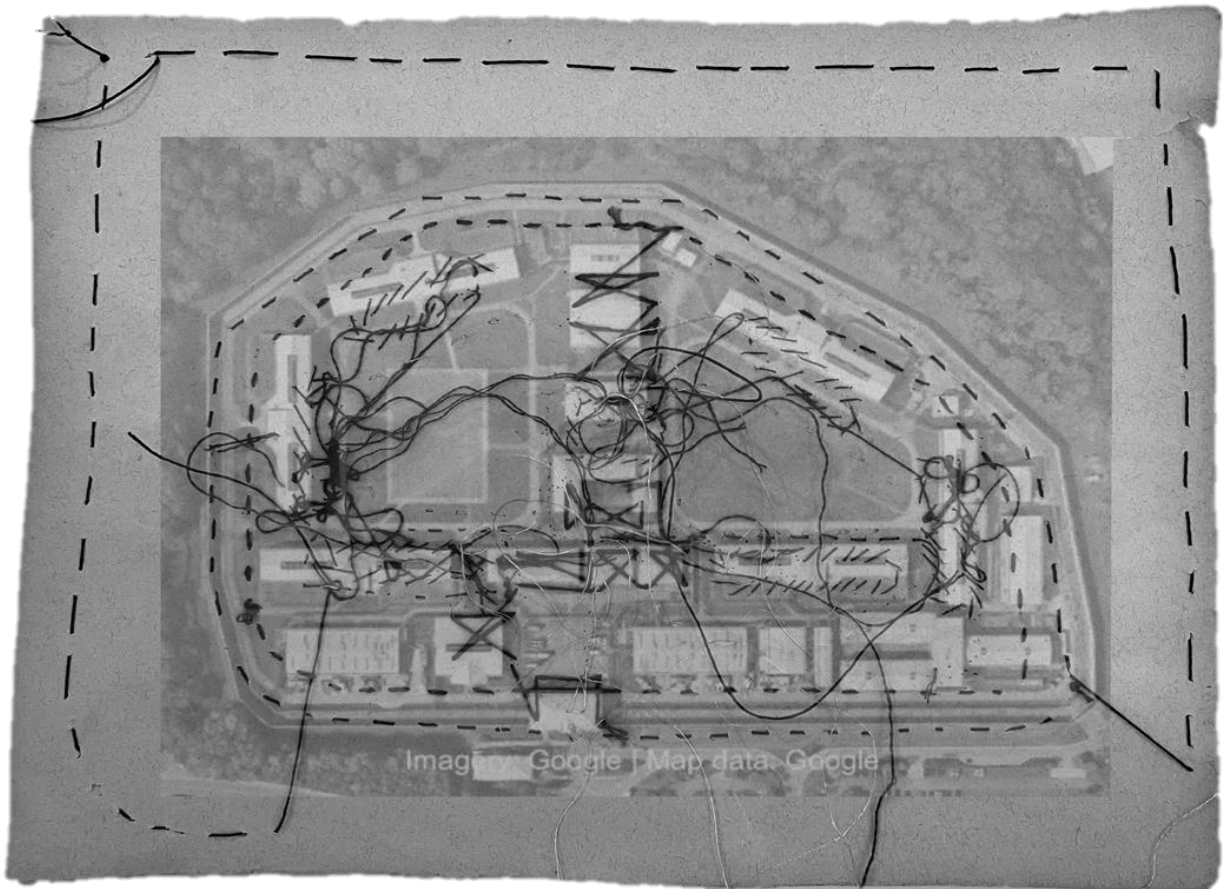


Figure 4: Textiles piece documenting my first week in the prison.

The old words don't work anymore

(18)

Philosophers often use language to create *neologisms* to re-present known terms. I have struggled calling information I gather as 'data'. This word is bound in humanist, positivist explorations and objectifies participants. Therefore, an alternative term is required. *Data* can be viewed as a knot, left tied, or unravelled.

'(knots) are a strange doubling of opening and closing, possibility and rules, the enabling constraint/knot resists binarization while still pulling the event towards its becoming' (25 p.243).

The French term for knots is *nœuds*, using language and writing as thinking; the term in French further exemplifies meaning. The French pronunciation of *nœud*, mimics the English word 'new;' reemphasising a newness and the œ ligature, of the two letters linked together substantiates denotation.

The term **da-nœuds-ta** (26) instead of data, then creates new perspective, recognising the knots entangled in the centre of the research. The term also links to Deleuze and Guattari’s *nodes* of a rhizome and the concept of multiplicities as ‘and, and, and’, using the ampersand in replace of this, it also forms multiple knots; &, &, & (26).

Da-nœuds-ta

Haraway (16) makes it clear that it is important for us to consider the ways in which we conduct research, the tools we use and the methodology we utilise, using the analogy of a knot, she expresses “It matters what knots knot knots” (16, p. 2) and in this way, we must consider how we connect ourselves to this matter, how we are knotted to each other, to these spaces and these stories. If we view all these entanglements of da-nœuds-ta, as ‘matter’ in a feminist (new) materialism perspective, all these elements are monist, enmeshing nature and culture, bodies and thinking, self and other. As Barad (11) states, ‘matter’ is an entanglement of relations. The materiality of weaving, stitching, knotting alongside thinking & writing, creates new ways of analysing, to ensure the matter of all humans and non-human participants are considered.



Figure 5: Image taken post-ECQI 2023 conference at Portsmouth beach.



Ebbs & flows

Post conference on a Friday afternoon, the ideas of diffraction, sedimentation, writing with themes, weaving with data, or *da-næuds-ta* are all spinning yarns in my mind and I am compelled to walk with it. I felt drawn to Portsmouth beach, walking along its banks before sitting for a few moments on the pebbles. I contemplated these ideas as the ebb and flow of the tide (see figure 5), brought me clarity and recognition of the creative outputs of my research.

And so,

I come to realise that the knotting, the weaving, the stitching, the writing all come to matter.

They are part of the assemblage; representative of my thinking and of what is coming to be.

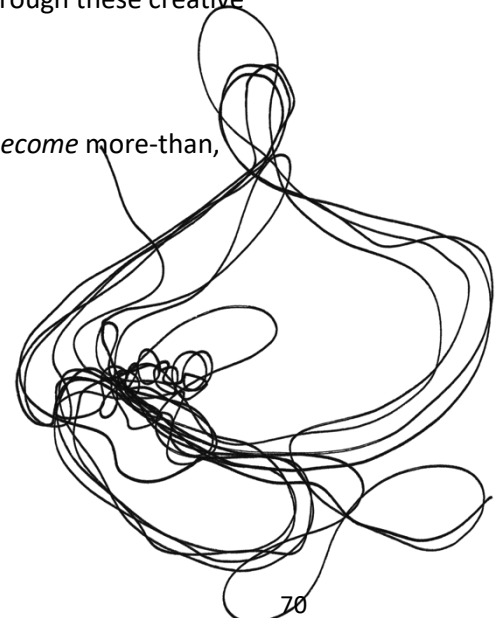
The anonymous participant at my paper presentation was right to question why the weaving cannot be the end outcome, instead of the prescribed, dialectic 'outcomes' of analysis. As yet, I am not sure of how far the creative outputs of the research analysis will take me. I appreciate the entanglement of these pieces as neither 'art' or 'textiles' or 'method' or 'process' or 'product' (22) but they are simply part of the fold, becoming-with the analysis. As Manning (23) has suggested:

"The object is not the goal, but the activator, the conduit toward new modes of existence"

(23, p.460)

Why must we always have an 'outcome', a final solidification of data as a product to 'add to new knowledge' but instead, we can create new ways to *become*. The weaving and stitching are enabling the thinking of the *da-næuds-ta*, allowing me to unravel the knots and entangle myself further. And my thoughts will emerge through the text/ile practices of writing with/in/through these creative processes.

I realise that I need to step away from the 'doing' of analysis and just let it *become* more-than, through these material processes, trusting that 'next thing' (18).



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EXPLORING *OTHER* WAYS OF BECOMING IN THE EDUCATIONAL SYSTEM

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Abstract

Inspired by the diffractive and performative methodology of Karen Barad (1,2), this paper explores how students and teachers become in the intra-actions with each other and with the more than human – such as bricks, trees, rooms, the student’s work place, etc. We argue that more capacious and creative knowledge making methods can contribute to more sensitive and sustainable education. In this paper, we show that new ways of seeing, touching, experiencing, and expressing allow new ways of learning, but also raise new ethical questions and considerations for students and teachers. This leads to considerations around how teachers, students, and student practices are entangled.

Keywords: Diffractive methodology, performativity, becoming

Introduction

The context for this paper is set at University College in Denmark, where leaders (Diploma) and social educators (Bachelor) are instructed. We are both researchers and teachers at this place. Our research focuses on how *ethical awareness in different creative methods can provide other ways of becoming a student and a teacher in the educational system - in order to create other connections and knowledge contributions that have sustainable effects in the world* (1). We argue that more capacious and creative knowledge making methods can contribute to a more sensitive and sustainable education. This is what we mean by *other* ways of becoming in the educational system.

For us, this is a great opportunity to explore and challenge the sometimes more ‘traditional’ relationship between educator and students. We are part of an educational system, where we are obligated to follow study plans and learning goals as well as make the teaching application-oriented. This approach points to a more linear didactic, which can also be useful and necessary. However, we are also interested in opening up creativity and engaging with the ‘yet to come’ in an ethical matter. What we do matters and how we respond matters. We are responsible for how the world comes to matter. Inspired by Barad, we can say, we are not in the world but of the world, and our becoming of the world is a deeply ethical matter (1).

Barad points to ethics as a matter of justice. A justice that requires openness and presence in relation to the details of the moment, so that “new life” can arise. We, as teachers, cannot stand outside the world. We become in the intra-actions with students, rooms, study plans, praxis, etc. Our ambition is to develop an “ongoing practice of being open and alive to each meeting, so that we might use our ability to respond”, to be responsible, and “to breathe life into new possibilities” for an educational practice (1).

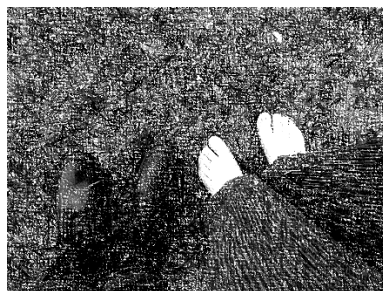
Methodology

Empirically, we want to explore our educational practices within a diffractive methodology inspired by Barad (1), Hvenegård-Lassen & Staunes (3), and Lenz Taguchi & Palmer (4). Diffraction means the bending of waves upon encountering an obstacle and transforming new patterns or disturbances (1).

Working with diffraction as a methodology means exploring *the effect* of the difference which emerges from the intra-actions between our research technologies, our teaching practices, the classroom, and the students. We are interested in what possibilities and impossibilities gain agency in the dynamics of this intra-activity and for who (1). This methodology also implies a performative approach – meaning our performance of education and research emerge in the same movement as the students’ becoming in the world. It is in these intra-actions (between us, students, classroom, etc.), where troubles, cluttering, possibilities, diversions, or enforcements occur, and which coalesce in events that may set off new directions in the educational learning process (1,5). This also implies an open-ended student-teacher relationship, where positions are entangled - shifting and shaping each other.

We wish to do a little affirmative re-tooling inspired by Haraway’s “I do not want to throw away the category formation skills I have inherited, but I want to see how we can all do a little re-tooling” (6). We are interested in students and teachers’ mutual becoming by doing a little re-tooling and affirmative reconfiguration. Our ambition is to create room for other connections and learning processes in the intra-actions between students, teachers and educational practices. Therefore, we are interested in reorienting perception towards new ways of seeing, hearing, listening, feeling, and exploring (7). In terms of methodology, this requires that we ‘in the making’ pay attention to the intra-actions of subjects, objects, technologies, and practices in the classroom, what diversions and cuts emerge, and what is the effect for students and us, as teachers. In this paper, by experimenting with different creative methods we hope to: develop the students' practice as leaders and social educators; develop our own practice as teachers/researchers; and, as well, contribute to the development of performative and ethical qualitative inquiry.

Case from “Pedagogical environments and activities”



(Photo: Sørensen, P.W. 2022)

First, we would like to present a case from the bachelor’s degree Educational Pedagogy that contains a module called “Pedagogical environments and activities”. During the module, the students work with e.g. nature, movement, music, aesthetics, art, and craft in pedagogical environments and activities.

The participants are full times students, ranging from 18 to 50 years old. Some students have work experience, while others have none. This module is a week long, and has a focus on senses, body and movement and the case presented is from a normal teaching day. There is no room at campus, so Pernille is finding an alternative room for teaching.

Pernille, 53 years old, is a researcher and teacher, with a background in performing arts for young people. Teaching that is inspired by the performative and new material turn in order to explore relationships, sustainable movements and a more eco-centered approach to the world’s becoming. By reading the text “WE BECOME FOREST – BECOME WE” (8), by Helene Illeris, and by Pernille’s own participation as an audience member in the performances *Grow Forest!*, made by the Danish performance group Seidlers SENSORIUM, Pernille invites students to re-think their relationship to the forest.

Instead of thinking of the forest as a resource that humans can use to meet their own needs, this is an invitation to think and act from a more sustainable mindset, where all lifeforms on the planet are seen as equal, and where biodiversity and the earth's ecological cycle are considered in our actions.

By paying attention, educators and students may be able to create pedagogical environments and activities, introducing children, young people and other citizens to re-thinking the relationship between humans and the world (forest), experiencing other species as friends instead of resources.

The class takes place in the forest of Boserup, near Roskilde in Denmark. Twenty-four participants are present on the day of class. It is a beautiful and cold winter day in November 2022, with a blue sky, and is about eight degrees Celsius. Pernille tells a bit about the forest and how it has changed over time, entangled with humans and non-humans during history. It is a culture-nature forest, wild because it also has its times and life, but not wild like the wilderness would be.

Pernille wants to be with students in the forest as a friendly (class) place for exploring senses, body and movement while thinking we are visiting a friend (the forest), to challenge the anthropocentric (human-centered) approach and to explore our relationship and becoming with the environment and each other. She invites the students to be present in the forest in different modes, and to open up the senses to start to listen to the forest in an emergent way (9).

On this day, the mode requires walking and moving slowly, walking in silence and bare footed.

After walking slowly and in silence for about thirty minutes, Pernille stops by a big tree and starts to take off her shoes. She asks the student to do the same with a body gesture - to join walking barefoot on the cold forest path with sticky leaves, fallen branches and small wet puddles. Some students take their shoes off and start to walk slowly. The rest, she asks to walk gently (with their shoes on), and to be aware of their feet and feel the soil, its stickiness, its curves, softness and changes. Before entering the forest, she has a concern whether the students would join the barefooted walk and decides to listen in an emergent way. She lets go of herself as an entity and becomes a part of the interconnected flow that has its own knowledge of what to do and how to do it (10). She lets go of the ambition that everybody will join the barefooted walk.

Pernille feels an attachment to the forest path they are walking on. A concrete attachment, as she has mud, leaves and small branches under her feet. She feels the shift from warm to cold and back again by taking her shoes off and putting them on. It is not the kind of attachment she associates with romantic notions of being in the moment or putting all sorrows behind, but a physical presence associated with togetherness, surfaces, temperature, textures, and movements, and also with the awareness that some do this with the skin contacting the ground and others in shoes or boots.

Later that day, this is a point made by a student. The student comments that it is a part of the experience that she sees others going barefooted, getting mud on their feet and seeing their toes turn red from the cold. She becomes more aware of her own toes being dry and warm in her boots. It also leaves her with a feeling of "should I have done it, and then being able to feel as the others on bare feet". Another student feels it is a very intimate way of being with the forest and with the other students. Because it is special to take off one's shoes in the cold winter weather. A bit crazy, perhaps, but also a way to feel the forest sensuously and slowly, he says. Several students have a conversation about whether it is something that they would do with children in wintertime. Opinions are divided on this matter. Many feel this would be a careful way to explore and become with the forest, if it was summertime.

The class are here as part of an educational system that fosters special relationships, trying to move in the forest with a special slowness, solidarity and tenderness - which in many ways is very different from the modes we usually perform in education and how we daily move around at Campus. There, we are often in a hurry, going from one location to another with fixed routes and positions, and with clear questions and answers.

Listening and wondering can help interrupt unquestioned human dominance in the forest or in the teacher-student relationship. However, to open up the open-ended becoming with more-than-human, requires thinking in 'becoming-with (1), sympoietic (11), and sensuous enchantments (9). It is about letting go of the desire for identity (and of oneself) and opening up for the possibility of experiencing oneself as part of materiality – part of many things intra-acting in the world, such as power, education and eco systems in a Danish cultivated forest.

Now, you as a reader are invited to connect with the moment – with bare feet or in shoes – with different experiences and by emergent listening, by listening to the other, by sensing being part of the world, and with the ground under your feet.

Case from a teaching course (Diploma of Leadership)



(Photo: Bjergkilde, D. 2022).

The following case is from a teaching course (Diploma of Leadership) where Dorethe teaches. The participants are twenty leaders from many different parts of the public sector, who are working full time at the same time as they attend school. The course consists of eight teaching days, and the present case is from one of these days.

The day starts at 8:30am at the University College with a check-in exercise, where everybody stands up around a table in front of the classroom. Many different pictures are lying on the table. The students are told to pick a picture, which for them illustrates what they are occupied with at work. On their turn, they explain about how the picture illustrates their work challenges/possibilities at the present moment. One student says, "I have so many job tasks. I am quite stressed". Another student says, "My workers are more concerned about their own issues than taking care of the old people". A third student says, "I have decided to quit my job. I need something new". The chat goes on until Dorethe stops it.

When Dorethe starts teaching, she notices a student who seems upset. After the presentation, the students are supposed to go for a walk and talk about their experiences with feedback. Dorethe goes over to the student, who seems upset and asks whether she is all right. The student replies a bit sharply: "I am furious and stressed. I understand nothing here, and I cannot keep up at work". Dorethe lays a hand on her shoulder and they start talking about her problems at work. Afterwards Dorethe suggests, "Maybe you could go for a walk and get some fresh air and just have a chat about your work with someone if you feel like it". When the students come back, Dorethe runs into the same student in the hallway. She asks, "How are you?" Tears come to her eyes. She replies, "I had a chat with the other students". When we are back in the classroom, she says "I like we have a trusting space here, where we can share difficult things as well. At work, I have to be on top all the time".

After a break, Dorethe gives a presentation about data and leadership followed up by discussion. Then the students do an exercise using bricks. They are building, presenting and discussing present and future data culture in groups. Afterwards, different responses come from different students. One says,

“It is interesting that the bricks inspired us in different ways. You can actually influence people in different ways through different bricks”. Another one says, “I was thinking that you can select the bricks you want people to work with. E.g. if you want to do the same process with your employees”. A third student says, “There was a brick like a skeleton. It symbolized a ghost to me, so I was able to address issues that haunt my organization”. A fourth student says, “I was able to reflect on why my praxis look like it does. When I was building a future scenario with bricks, I realized what was not possible. I would not have been able to do that only by reflection alone”.

Several things strikes Dorethe the day she is teaching. She performs in a room, which opens up for thoughts connected to the students’ present work experiences. The students express stress and busyness, as well as carrying a big weight on their shoulders etc. They are issues they need to share in a confidential room. Especially for the one student, work experience overshadows other learning matters. The intensity of her frustration is bigger than her interest in learning new leadership skills. She addresses her frustrations before anything else. As a teacher, Dorethe has to put her ambitions for a learning process on hold. However, by giving room to what really matters that day – challenges at work – Dorethe unexpectedly opens up for learning or engagement in the course later on. It becomes a matter of becoming with stress, not just leadership. It makes her wonder how to facilitate a comfortable room, where information does not travel and you can reveal your inner thoughts, as without, it becomes a therapeutic or manipulative room.

Regarding the brick exercise, by facilitating a room which enables senses like touching, visualizing, seeing, or expressing themselves through their hands, the students are able to learn and experience in new ways. On the other hand, Dorethe becomes aware of the performative effects she is co-producing. Different bricks produce different effects and, of course, you cannot foresee which ones. However, we can incorporate some ethical questions about our own and their choice of bricks and what possible actions and consequences it might have for their practice, for whom and how. E.g. the skeleton can invite an explorations of ghosts and absent presences (2), which haunt the organization. It can be useful for leaders to listen to excluded and apparently absent voices, especially if they want to address possible marginalization. But they can also open up for unforeseen troubles and difficulties like e.g. stress, conflicts, and are they ready for this new awareness?

What also puzzles Dorethe is that the tools and exercises she presents produce a possibility for the students to copy those exercises into their own workplace. It is worth thinking about the consequences of different bricks when used in different settings, and what possible effects can be produced, when methods used in one context are applied into another context. Inspired by Barad (1) we can ask - what things come to matter through our teaching practices? What possibilities do we produce and perform or exclude, or how can we pass this awareness on to the students, when they consider possible ways of leading employees? What effects are produced, when learning exercises in a classroom and new ideas for changing the workplace become entangled? The answer is not predictable and straight forward. But we can open up the discussion of taking responsibility for role we and our students play in the educational system and the work place (1).

Conclusion and discussion

What puzzles us both while working on this paper, is the awareness that creative methods are, but not only, playful and exiting experimenting methods, which open up for new ways of being in the world. They are not innocent and clean. The new and the different also produce performative effects and are not rinsed of power and inequality. Each intra-action produces agency and has consequences for everybody involved.

New ways of seeing, touching, experiencing, and expressing allows new ways of learning, but also raises new ethical questions and considerations for students as well as teachers. It leads to considerations about how teachers, students and student practices are entangled.

But to engage with the “yet to come” in an ethical matter, is not to stop acting and just claim that everything is entangled, because we cannot separate our own becoming from others. For us, it requires being sensitive and responsive to the performative effects of our teaching practice and to students’ responses and becomings as well.

In our teaching practice, we want to allow ourselves to be moved by others and to open up for new ways of becoming as a teacher, as well as orchestrating that possibility for our students and colleagues as well. Encouraging this sensitivity is not the same thing as encouraging sameness (we should not all feel obligated to take off our shoes). Rather it is about being responsible and able to respond in the situation when possibilities and foreclosures arise.

We want to continue practicing ethical considerations about the intra-actions between teacher, student and materiality, e.g. when the student opens up and cries, how can we as teachers facilitate room for this with an ethical awareness. Or when the students feel inspired to use bricks with their employees, what ethical matters are then produced, when activities in the classroom become entangled with a student’s work practice. Likewise, what intentional or unintentional effects are produced when the students decide to take the forest exercise into a setting with children (it is too cold for you to go without shoes in cold weather).

Practicing ethical considerations and being sensitive are not done to avoid trouble, but to stay with trouble (11). Sometimes it is hard to remember that stress, unwilling students, learning goals, cold weather, or campus environments are not enemies but important things which, in maybe unforeseen ways, enable a way of breathing new life into the present moment.

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POST-ANTHROPOCENTRIC REFLECTIONS ON HIGHER EDUCATION

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Abstract

The (post-)Anthropocene has (not yet) begun, so it seems. The remnants of the human impact on the geological era we live in, still needs a future where it can be shown that the beginning of the industrial era, the era of digitalization and robotization were key to what is now called: the Anthropocene (still a fictitious concept, looking for an adequate definition, cf. 1, 2).

The main question concerning the (post-)Anthropocene is, whether it has, as a concept, any impact on the way(s) we, on Earth, nowadays (re-)arrange our externalized worlds of thoughts, like: institutions (education), mobility, nutrition, politics, collaboration, etc. In a way, (higher or professional) education might be the umbrella or a wormhole towards uncovering the relevant elements which need to be re-arranged or re-formulated to finally overcome the Anthropocene, ending up in a post-Anthropocene world offering unconventional (or post-conventional) solutions for an Anthropocene world in trouble, or better in transition. Post-Anthropocene society offers general possibilities to lead “the good life”. The good life as it was outlined by Aristotle seems to be the future outcome of a re-arrangement of Anthropocene aspects from a post-Anthropocene perspective.

Thus, if one takes (higher) education into account, it seems that not the traditional curricula, the traditional subjects as such but a multidisciplinary challenge concerning the “big” questions today are at stake, ending up in new conceptualizations. It will no longer be useful to stick to the age-old adages of our pedagogical cages but to shake up the elements covered by age-old umbrella’s and to see if it is possible to give names to the issues at stake which could be part of a new curriculum, of new ways of bringing education to professional life and to connect new elements with the issues which corrupt current society as well as our geological and geopolitical strategies (cf. 3, 4, 5, 6) . It is no longer a matter of puzzle-solving but a matter of cleaning the table and to re-cover a non-existent “paradigm” for the near future as to surpass the era of the Anthropocene and to prevent the Anthropocene from really becoming a geological era which will last for many centuries.

Keywords: higher education, the post-Anthropocene, the good life, deconstruction

In a world of interconnected economies, ecosystems, and weather patterns the local can no longer be productively separated from the global; both are messily entangled. The real challenge of the Anthropocene, therefore, is that it has introduced elements of uncertainty into particular, regional, cultural and, indeed, all narrowly constructed areas of human knowledge. In higher education, we therefore need to rethink what constitutes appropriate ‘knowledge’, engage with uncertainty and foster new forms of transdisciplinary learning that are not just about ‘facts’ but which encourage anticipatory, uncanny and transferal forms of thinking. (7, p. 266)

Introduction

'We are in the Anthropocene!' exclaimed Nobel-prize winning atmospheric chemist Paul Crutzen (1933-2021) in frustration at a conference in 2000. Why were his colleagues still calling our time the Holocene? Humans had so clearly reshaped Earth since the last Ice Age ended, the beginning of the Holocene Epoch. From this moment on, the proposal to rename Earth's current interval of geological time after us, the *Anthropos*, has been gaining extraordinary traction – and critics – both inside and outside the academy." (cf. 1, p. 1).

"Considering these and many other major and still growing impacts of human activities on earth and atmosphere ... it seems to us more than appropriate to emphasize the central role of mankind in geology and ecology by proposing the term 'Anthropocene' for the current geological epoch." (in: 8, p. 129)

This impact on geological and ecological systems is considered to be a metaphor for how we grasp the human dominance over planet Earth and the impact on not only nature but also on ways in which human beings are connected to different scientific approaches towards our world, being a symbiosis of nature and culture (in a material sense, what we create, but in a humanistic sense as well). Thus the impact upon current higher education and education in the post-Anthropocene is a challenge to reflection, innovation, change and in general "becoming" without burdening the balanced ecosystems in a disproportional way.

HIGHER EDUCATION AND THE ANTHROPOCENE

The human impact manifests itself on many contemporary effects of what we seem to need from our planet to lead a rather comfortable or happy life (food, mobility, holidays abroad, energy, housing, temperature, etc.) but also anticipates what the near and further future will bring us – thus making Earth a patient which cannot survive if we continue to exploit it the way we do right now. We still have to deal with today's situation – the now and how it emerged from the past and what it has brought us, including our educational system educating our future professionals at universities. This past and present situation has mainly been man-centred – concluding from today's global crises - in a way which is not really helpful to a future still far away and not quite relevant yet – although global symptoms of future life are already visible, leading to many unhelpful political and not to decisive ecological discussions and conclusions.

What is the position of higher education here? It is at least the final step to professional life, but if professional life is just educating students in a way we have done up to now, nothing will probably change, whereas all crises we encounter call for realistic and feasible solutions. Study programs should take these urgent topics into account and find ways to fundamentally change the current state of professionalization – where the position of knowledge is overrated and social and personal skills underrated. Therefore, "could universities be places where posthuman imagination could thrive? Universities and universality are deeply rooted in the Holocene" (9, p. 29).

Nevertheless, if the impact of our ways of life on the one and only earth shows a rather grim future if we assume that our planet is not but our global needs are inexhaustible. Today, it is still unclear in what way the crises we experience (and which are often the product of human needs and human actions) cause a disbalance: there will be no longer a kind of balance between what over 8 billion earthlings need to survive and what the earth, our nature or environment or in general: our ecosystem, produce to enable the continuation of our lifestyle in a sustainable way. The concept of sustainability might be a relevant cue to not only showing the problem of this disbalance and the ultimate consequences of the exhaustion of the earth as a source for a happy life and a source for human and animal life and the conditions for adequate functioning of vegetal life.

“[...] a globalized system of capital accumulation has induced humanity to foul its own nest. The result is a planetary emergency that threatens all present and future generations, throwing into question the continuation of civilization and ultimately the very survival of humanity itself. Only by addressing the social aspects of the current planetary emergency, exploring the theoretical, historical, and practical dimensions of the capitalism’s alteration of the planetary environment, is it possible to develop ecological and social resources for a new journey of hope.” (10)

Not only “(global) civilization” is at stake, when discussing the Anthropocene and what comes beyond, but also “moralization” as has been addressed by Immanuel Kant (1724-1804) in his posthumously published lecture notes (by Friedrich Theodor Rink (1770-1811). As a global citizen education in general has to take into account that man is a moral being which means that he does not accept norms and values which come from the outer world but it is all about “character development”: this means that man is able to take responsibility for his or her own actions. It helps man to develop a civil society to which he/she belongs and is reflected within a bigger cosmopolitical ideal. Thus man is able to take initiative based on his moral sense which alludes to the community, a bigger world he lives in. However, this community develops itself based on the character formation of the child, the student, the lecturer, which in fact creates new responsibilities and to dissociate itself from the parents.

“Because parental education confirms the societal status quo, parents cannot realize the primary goal of education, i.e. that humanity [the global citizen or *Weltbürger* – fv] is realized in the child’s development and it thus develops competences to improve society. For that reason Kant is sceptical about parental education”. (11, p. 24)

Thus, children become responsible for the effects of their actions, creating a different moral society - compared to that of their parents. In fact, “moralization is not to continue a particular culture or civilization but to move forward humanity *itself* within a civil society shaping the cosmopolitan ideal.” (11, p. 24)

Because of the artificial boundaries we encounter in our cultural world (educational systems, nations with politically motivated boundaries, artificial provinces, areas, etc.), it is obvious that from a natural point of view these are not real – as has already been proposed in social contract theories. These boundaries not only shape our states or nations, but also the conditions making, for some people, life “easier”, healthier etc. (e.g. considering the temperature, floods and storms, poverty or wealth.

“Other learning opportunities [which might go beyond what we nowadays see happening in higher education in different countries – fv] are already available – via the new knowledge networks, invisible colleges, not-school and so on, and preparation for the world of work is unlikely to remain a key function. [...]. What *should* education’s goals be, as we transition to the Anthropocene? How, if at all, could education support people to work well with complexity, uncertainty and contradiction? How, if at all, could it support people to work well with *each other*?” (4, p. 14)

In a way, the question is: “how to deal with the unknowable and novelty rich future.” (12, p. 40). This professional attitude towards the unknowable is part of our daily work but could, if compared to Thomas Kuhn’s work on scientific revolutions, become part of the professional work we do in higher education. However, it seems necessary to create some leisure time to play with ideas concerning the unknowable or preferably: what has not yet been conceptualized and exists in a discipline of anticipation (DoA) within our daily work (we come across boundaries which need to be crossed, not yet physically, but by using our capability of imagination). Therefore, disciplines like art, philosophy, literature or architecture should be part of an interdisciplinary approach towards this anticipated future: “the future does not exist outside of the present. The future is a presently imagined ‘later in time’.” (12, p. 41). In the present anticipation includes contingent futures, optimization futures, and novel futures, which all interact and are interdependent and thus make up a discipline of anticipation: “[this discipline of anticipation] is a way to use the future to learn (creating knowledge) [...], a form of research or cognitive engagement/construction. Consequently the discipline of anticipation as

practice consists of activities that always involve narrative (sense- making), collective intelligence, and framing/reframing. This is a scientific meta-framework for sensing and making sense of the present that ensures that the way we use the imaginary future is consistent with [a defined future, anticipatory systems and categories of the potential of the present- fv] ." (12, p. 43)

Therefore it seems urgent to define what the Anthropocene means to what we do right now and what higher education should take up at this very moment to continue human and nonhuman life on planet earth as it still should be: the number of current crises is a sign that man is, worldwide, not able to cross the boundaries to synthesize shared interests, focussing too much on the human interests and less on the interests of non-human actants.

CONNECTING PAST AND FUTURE IN HIGHER EDUCATION

We have to think further to look for the ingredients which go beyond the contemporary Anthropocene topics. Anticipating the specific problems in the Anthropocene will no longer be the problems of today. An interesting view on today's challenge to achieve the sustainable development goals (SDG's). It is still uncertain, unknowable what this challenge exactly is and how to re-arrange world-wide problems facing a future in which ecological thinking is dominant but still different from what the "Anthropocene" asks from a transition towards the post-Anthropocentric.

Higher education thus has to address a global concept of ecology or environmentalism where humans, non-humans and the more-than-humans fit in in an equal way (cf. 5).

"Environmental education [...] has a participatory orientation [...] to provide social groups and individuals with an opportunity to be actively involved at all levels in working toward resolutions of environmental problems [in a broad way: concerning the impact on society and human life in it as well – fv]. [...] : 'are schools relevant to the complex realities of a changing planet? Or, do they mainly serve an outdated vision of an industrial society that is turning rapidly into a complex mix of decline and transformation' (5)

In recent literature on higher education in the (post-)Anthropocene this dimension of higher education and anticipating a different educational system, a different way of teacher training and different topics and problems to be addressed is at the centre of discussions concerning what we should change or transform. A new paradigm with new concepts which reflect the interdisciplinary mode of higher education is at stake, so it seems, for all those involved in "educating":

In fact, education needs to cha(lle)nge its curricula, leaving education in our industrial age, leaving the classrooms and confronting itself in practice with the specific questions and problems we meet today anticipating as well new bodies of knowledge and skills and using the creativity over the generations to give answers to the questions and solutions to the problems a new post-Anthropocene era should (in a normative way) ideally bring to us from a near and far future, where the (im-) possibilities of planet earth will bring us in the end; encompassing the human, non-human and more-than-human dimensions of the post-Anthropocene, thus creating new scientific approaches and interdisciplinary subjects and topics like the "earth system science", combining and integrating global biological, chemical and physical processes with human activities (cf.13). All human and non-human actants as Bruno Latour would call everything to be encountered in our world that can have impact on other things and actually do form a kind of network which connects relevant dimensions, aspects or parts of the earth system science.

Gilbert (4) refers to initiatives taken by higher education to come to grips with educational goals which still lie beyond today's ideas about higher education: "'future-focused' education, '21st century learners' or 'digital natives'." However, "today's schools are not adequately preparing young people for the increasingly complex, uncertain, and fast-changing world of the future, and that the need for change is urgent now." (4, p. 6). Gilbert outlines the main trends in "future-proof" higher education which should contribute to a paradigm shift:

1. The digital revolution,
2. Globalisation,
3. '[N]etworked' forms of knowledge,
4. A shift in world order,
5. Developments linked to the Anthropocene.

"These trends represent a strong challenge to the current order, and to 'known' ways of doing things. [...]. Schools have failed to response to these trends, as being inert, outdated, obsolete, and no longer 'fit for purpose'" (4, p. 6f.)

Focusing on (higher) education, it seems that not the traditional curricula, the traditional subjects as such but a multidisciplinary challenge (or: blend) concerning the "big" questions today are at stake, ending up in new conceptualizations. It will no longer be useful to stick to the age-old adages of our pedagogical cages but to shake up the elements covered by age-old umbrella's and to see if it is possible to give names to the issues at stake which could be part of a new curriculum, of new ways of bringing education to professional life and to connect new elements with the issues corrupting current society as well as our geological and geopolitical strategies (cf. 3, 4, 5, 6).

TOWARDS A POST-ANTHROPOCENE CURRICULUM

The aim of this contribution is to address the "new or 'not-yet' elements" within a serious alternative to the educational paradigm of 2023. Let's say that it aims at a new paradigm of higher education in 2123, 100 years away and taking into account the acceleration we experienced from World War II onwards (cf. 14) because only then it becomes a challenge to rule out the ways of thinking which at this very moment already have become more or less problematic like focussing on fossil fuels, (economic) growth, migration, natural resources other than the sustainable ones or the mobility standards we now are familiar with but perhaps make obsolete better solutions to sustainable mobility - and which might have some impact on travelling from and to work.

The possible outcome of this is a collage of elements which might unexpectedly form the backbone of possible experiments in (sustainable) educational settings in higher education. Thus the participants will look in collaboration for creative, qualitative ways to address aspects of (post-) modern or post-Anthropocene education as they do not (yet) exist, also in an ideal form, in 2023. The ultimate outcome of this session will be the structural conceptualization of a post-Anthropocentric and postmodern curriculum of higher education showing the "new elements" it needs to be sustainable and keep the balance between nature and human beings and animals (being non-natural as such) in an integrated way.

We will have to find ways (scenario's) to go beyond these boundaries and to imagine or visualize future higher education in a way which excludes the principles of current higher education, like final qualifications (because these are overridden by new demands which the post-Anthropocene will require but still seem to be beyond the qualifications of educational institutions, lecturers, researchers, study programmes, etc.), learning in current professional practical settings like: hospitals, schools, manufacturing companies, research institutions or care, to name just a few institutionalizations of professional activities – and of course there are many more.

The question is, whether "Anthropocene skills" are needed when looking at the Anthropocene as an era in which the balance between mankind and nature in its broadest sense is lost and higher education does not contribute to survive the Anthropocene when sticking to skills which seem to be aligned with it: "The idea that human beings have become the dominant force shaping the geology of our planet should give us pause. Entering the Anthropocene has put unprecedented responsibility on those currently alive for the fate of our planet, with educational institutions in the spotlight" (cf. 15)

If we look at a “potential” curriculum in higher education Gough (5) suggests the following, which can be considered as moments of curricular innovations:

1. Living in a more than human world,
2. A new role for the humanities in education,
3. Learning to negotiate with non-human actants (cf. 16, 17), and to reflect the modern concept of humanity which is still rather exclude concerning the impact of gender,
4. The socialisation of human beings in society, education, families, media, employers, etc. and to critically reflect this social reproduction of cultural values and the knowledge of groups,
5. An ecologisation of education (cf. 18),
6. An intersectional approach to learning and teaching about humans and non-humans in educational contexts,
7. confronting the future (cf. 5, passim).

“Transformation education [...] focuses on factors and causal relations for transformation processes, on learning from history, as well as on the interaction between society, the Earth system, and technological development, and above all on human preconditions for change” (cf. 19).

THEREFORE,

what we need to rethink and re-construct in post-Anthropocene higher education is a potential openness towards the fundamental issues which determine education for still non-existent professions or non-existent discoveries, which as such can be imagined to be relevant in post-Anthropocene times.

An example is “interdisciplinary teaching” (cf. 19), where all traditional subjects become fused and can be implemented in our curricula, if we address in our classes the political, societal, environmental problems we are faced with today and will be faced with in the coming centuries, *if* we do not decide to take these rigid steps in present educational developments:

“Implementing new courses, interdisciplinary modules, or entire institutions in order to teach research transformation and transformative issues requires substantial bureaucratic and structural changes that will take time” (19).

What we need to achieve is deploying all means to accomplish the complex tasks waiting for us in a near and far future.

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IMPROVISATION AS A PEDAGOGICAL ATTITUDE OF SCHOOLTEACHERS

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Abstract

Hitches and unforeseeable events in teaching/learning processes are witnessing the aliveness of the pedagogical encounter that is still surviving in schools, despite the controlling and standardizing instances that surround them. Improvisation as a pedagogical and professional attitude of schoolteachers can be the axe for protecting school inclusion, democracy, creativity, and participation. This paper is about the methodological and ontological journey I took in the effort of bringing to scientific light the theme of improvisation in school teaching. After discussing the main stages of my empirical research, I argue how improvisation can't be conceptualized as an isolated phenomenon but is rather emerging in the intra-action, in the classroom scene, of entangled agencies. I conclude that stepping away from an outcome-oriented research process to map instead what situationally promote or undermine improvisation as a pedagogical attitude can have a greater transformative impact on school practice.

Keywords: improvisation, school teaching, methodological breakthroughs.

IMPROVISATION AS A PEDAGOGICAL ATTITUDE

My object of study is improvisation as a pedagogical attitude of schoolteachers. In between the great set of norms and structures of the school system, the standardizing pressures under which teachers carry out their daily work, improvisation is still likely to happen on the classroom scene. There is always something that can't be planned in pedagogical encounters, and sometimes teachers see it as a treasure that can build original and creative teaching/learning paths that involve students in a more authentic way than any technical teaching tool can do. My hypothesis is that this uncontrollability is a desirable sign of vitality in the classroom setting: a trace of resistance, maybe rebellion, towards the controllability and standardizing tensions of our late-modern society (1). Still, improvisation can't find its space both in teacher education (pre-service and in service) as in pedagogical theorizations, as it seems to be an unwanted guest which always shows up in the teaching-learning process. That is comprehensible, in the light of a social pressure towards controllability in every aspect of human experience (1): involving improvisation in the pedagogical discourse would signify to assume that education is uncontrollable, and this would be very unsettling for our scholastic and political systems.

The next of my research is a discipline named *Pedagogia del corpo* (2), which I translated in other occasions with "Embodied Pedagogy" (EP). Its body of knowledge is built upon the overcome of the dualism of mind and body, in the effort to make the learning process obtained within body practices visible, integrated and ennobled with what is normally conceptualized as "learning". It investigates different practices and theories of body, reading those insights through one another both through theoretical and performative work (3), with the underlining pedagogical purpose of "healing the fracture between body and mind". This branch of research aims to raise the awareness of educators and teachers towards the embodied experience of education. When it comes to school instruction and education, EP refers to the classroom as a theatrical scene and to the pedagogical relation as an interaction of postures, timings, sensorial aspects, and rhythms. The principal reference of EP is Massa's work upon the pedagogical *dispositif* (4,5), which is an elaboration of Foucault's theory in the educational contexts, and the theatrical metaphor to understand education (6). In this field of

research, improvisation is conceptualized especially as a quality of presence of teachers and educators and as a development of the theatre/education metaphor (2,7).

Improvisation relentlessly happens in classrooms every day. It moves between gestures, timings, crackling emotivity, gazes, and sometimes its presence make teaching-learning paths unique and unforgettable, deeply integrated in one's biography (8). Teachers have different attitudes towards those hitches that can cause improvised journeys: they don't know what to do with them, or they treat them as a treasure and search for teaching methods that foster their flourishing. For this reason, teachers are catalysts of the flow of events in a classroom. In my study, I wanted to grasp those improvised moments in daily classroom life and investigate teachers' attitude, in its embodied aspects and not merely cognitive, and investigating with teachers themselves about improvisation in their professional experience. Methodologically, I needed a set of tools for bringing me closer to the lively components of classroom events and grasping teachers' insights. Ontologically, I felt very close, initially, to phenomenology (9,10): I wanted to find the characteristic of the phenomenon of improvisation to make it visible and conceptualizable in pedagogical theory. However, I also wanted to investigate teachers' experience in a performative way, drawing from theatrical knowledge about improvisation. I had two main questions to begin with: how does improvisation happens in the classroom scene? What do teachers think about improvisation in their teaching process and what are their insights about it as a professional attitude after experiencing a theatrical training?

APPROACHING THE ALIVENESS OF THE PEDAGOGICAL ENCOUNTER

Witnessing classroom events

8 teachers working in the Italian public school system participated in my research (4 primary school teachers, 1 first-grade secondary school teacher, 3 teachers second-grade secondary school⁴). I had four different scholastic contexts to walk in and several classrooms to put myself into⁵. The greatest set of methods I found to enter wisely in the scholastic context was the one drawn from ethnography (11). I combined the ethnographic methodologies, especially for the writing of the field notes, with the tool of videorecording (12–14), because, to grasp teachers body movements and embodied presence, I didn't want to rely only on my visual memory. The ethnographic method helped me to keep my perception open towards the material conditions of the scholastic contexts and to notice (and not be drawn into) the discourse activated towards me by each teacher I met (also casually, in schools' hallways) and by the students (this happened more rarely because students never had the opportunity to be alone with me). I chose to be a participant observer: before entering the classroom, I met the teachers, discussed the research design with them and collected their consent; and my first steps in the classrooms were the ones I presented myself to the students as a researcher, I explained briefly why I was observing their teachers, and I took some hours to acclimatization when possible. My aim was to fluidly become part of the classroom and to make my presence visible but not relevant for the teaching-learning process.

My approach followed a strategy of zooming-in the phenomenon of interest. During my writing process I followed ethnography's directions of making visible what were my observations, my interpretations, the backtalk of teachers (their comments and explanations explicitly directed to me) and keeping an eye on what was I feeling while going through the context. I wrote during the observation and after, watching again the recorded scenes, with the perspective of the fixed camera.

⁴ In Italy, primary school welcomes the ages from 6 to 11. The first-grade secondary school, from 11 to 14. The second-grade secondary school, from 14 to 19. Schools were located in Lombardy, in the province of Lecco (3 of them) and 1 in the province of Lodi.

⁵ One of the teachers is an IRC (Catholic Religion teaching), which means, because of the Italian scholastic system organization, that he meets something like 20 groups each week. I followed his activities for 6 hours in 6 different classrooms.

This made possible to not overtighten my attention on a preconceptual idea of the phenomenon: also because of this initial diffused attention I discovered that the improvised events are not something punctiform but are more similar to a wave that comes to life combining different set of conditions. The writing process represented the first wobble I encountered in my phenomenological convictions. My need of using and developing a research method to get inside the scholastic contexts had opened to me a different kind of knowledge, rooted in how teachers embodied their role and their pedagogical actions, and the material aspects of the physical environment. I discovered myself really interested in those complex, layered, situated events (for each observed teacher, I gathered from 2 to 4 events in 6 hours of continuous observations) instead of the conceptualization of one general phenomenon.

I used the tool of video-cued interviews to triangulate my observations with teachers. Together we recognized and selected the events that regarded improvisation on some level, and we investigated the lived experience, their embodied presence, and the meaning they gave to those fragments of school life, with the aim of understanding better improvisation as a pedagogical and professional attitude. During the interviews we dedicated a special attention to the embodied aspects of their teaching, following the EP aim to make the body participant and visible in teaching conceptualizations.

Making teachers play

Since improvisation is quite ostracized in common and professional teaching culture, I decided to propose three sessions of improv theatre training to teachers, to see what insights were possible after an authentic experience and how the understanding of the phenomenon grew in a cooperative setting (15). In the same schools that guested my observations, I organized three research/training groups. Following the guidelines of an improvised-theatre training scenario for teachers (16) I proposed teachers to play a selection of games of improvised theatre. My proposal had the aim to solicit, through the lived experience of the improvisation game, aware connections with the teaching profession. Each playing session was followed by an hour of discussion, in which I also collected desires for further explorations to personalize the proposals to do in the following session. In retrospect, listening back to the recorded discussions and reading the verbalization, I found out in teachers' feedback that the mere proposal of playing improv's games had an incredible strength *per se*. The set of rules that improv requests, based on the principles of listening, accepting, being expressive with the body, and its specific configuration of space and time (circles, couples, audience) made possible for teachers to reflect upon the particular attitude they performed *inside* the game and, on the contrary, what was constraining, materially and culturally, the improvised flow in the classrooms. Each setting (the scholastic one and the improv game one) attracted different kinds of attitudes. Teachers reflected on their ideas of role and recognized some contradictions between those and the pedagogical aims of improv theatre. The density of these contents and their critical nature towards the scholastic system represents collateral evidence: teachers seemed to benefit from the opportunity of discussing together after a common experience their beliefs upon their role.

The nature of the improvised theatre proposal, with its games, enlighten a contradictory aspect of improvisation. Improvised theatre is a game that is possible only inside a set of rules that define the boundaries of one's freedom and protect the fragile illusion that collective creativity makes possible. Improv theatre is a regulated system but also a space for creativity and fantasy, which is a common characteristic of playing (17). The discussions of teachers opened questions about how they felt engaged differently in the setting of a game. There were material aspects of the improv game *dispositif* that enabled to embody a more open attitude towards collaboration, non-judgement and creativity. In different ways, but in every group, the discussion touched on the counterparts in the classroom physical environment.

Another relevant aspect is the unexpected power of this proposal. Adult persons engaged in games are generally perceived in diffidence and it is not so common to play in teachers' groups, because games in teaching profession are usually functional to a learning objective for students. In teachers

education, if present, playing is subdued to professional aims. The different framework in which games were proposed made possible for teachers to play freely and to discuss openly and critically about their profession. Playing has an a-productive and gratuitous nature (17), which is often contaminated when used in working environment for training purposes: my hypothesis is that in this research, probably thanks to a combination of different elements (the composition of groups, the voluntarily the participation, the research aims, the fact that we were not playing to perform a show...) games preserved some of their purposeless nature, and this had a positive impact on the research process. For these reasons, improv theatre had a greater impact on my research than I expected. These unexpected and collateral outcomes contributed to make me critique the set of results I ended up with.

Improvisation can't be harnessed

After these two phases (observations + training groups), I addressed my efforts towards the thematical analysis. The process consisted in the repeated reading and a thematization of clusters of meanings with the support of NVivo software. The outcomes described the phenomenon of improvisation on three levels:

- *The modalities in which improvisation happens.* This family of concepts gathered the relevant aspects of embodied teaching; the theatrical quality of school teaching; the kind of presence (attentive attitude in the here and now) teachers embodied. Also, I identified that teaching methodologies used were a recurrent theme.
- *The circumstances under which improvisation happens.* This family of concepts gathered the interactive dimension involved between teachers and students and between teachers. It also involved the category of the *hitch*, developed in the characteristics of unforeseen events which determined improvisation in the teachers. Another group in this family was about the emotional aspects involved while improvisation happened. Moreover, the material conditions of classroom teaching had a relevant role in this family of concepts.
- *The conditions that promote or undermine improvisation.* The co-presence of teachers, the values connected with teaching profession, the use of particular teaching methodologies, the willingness to lose some control, the integration of a playful attitude towards the profession (e.g. the use of humor, provocation of changes, acts to enlighten the mood...), the constraints of school organization.
- I gathered in another thematical family the perceived needs of the participants in professional training for pedagogical improvisation.

This coding reveals something important: while we can identify events in the classroom that can be described as “improvised”, it seems that improvisation is not a punctiform phenomenon, but it manifests more like a wave of a layered and combined components that interact and, in some situations, give birth to something that is pedagogically significant. The events I collected seem to confirm that improvisation as a pedagogical attitude is relevant for an inclusive, democratic, participated, and creative teaching-learning process, but the thematical analysis shows that we can't rely on any isolated aspect of it to promote it. Keeping the vision too narrowed on the teacher could mean to oversimplify the phenomenon, which on the contrary seems to be a combination of teachers/students/environment. Regarding the research's impact, it could also mean to foster an individualistic vision that pressure teachers in the direction of being the only ones accountable of the transformation of the scholastic environment. Those layered outcomes started telling me that my purposes were neither crop one conceptual phenomenon, nor defining a training program.

FROM NEW MATERIALISM, POSSIBLE BREAKTHROUGHS

When I entered the ECQI2023 conference, I was in the peak of this relentless questioning the outcomes of my research, as something about them was not completely satisfying my research purposes. The contribution I prepared for the conference addressed the results of the thematical analysis. The awareness I was growing was that during the analysis I had lost touch, at some point, with the reality of school classrooms and the phenomenon I was investigating. This was screeching with my original purpose of developing a study that could be helpful, useful, and transformative for school pedagogy in a democratic, participatory, and inclusive way. I must admit that I did not have a deep understanding of New Materialism at that time. Before the conference, it was one of the many frameworks hinted at during my first PhD year: at that time, no spark lighted up, also because I had no reference studies that used that framework (that I knew of). Interestingly, a couple of months before the conference, I heard again of performative approaches to overcome the barricades between STEM and Arts at a congress, from the director of a circus company (18). The ground was preparing to an illuminating turn: improvisation was conceivable as an intra-action of the scholastic context, which I could only understand as entanglement.

Coming back again to the beginning of my research, I realized that it was possible to recognize the following characteristics of EP: a philosophical take that is anti-cartesian; an approach to study that has similarities to the diffractive method (19) (in the matter that it reads insights from body theories and practices through one another to build pedagogical knowledge); a sensitivity towards the material aspects of the educational contexts. In this framework, the new materialistic paradigm helped me seeing how I could de-center the teacher and conceive improvisation as an entanglement of human and more-than-human components intra-acting between each other. In this sense, it is possible to read back the outcomes of the thematical analysis and, from the events I collected in my research on the field, mapping what aspects of the material scholastic contexts and teachers' agency were intra-acting in favor or in contraposition of improvisation. This move is still in process, and it has been possible thanks to the scientific dialogue, begun after the conference, with Aaron Kuntz (20).

Another important enlightenment the conference provoked has its core in the practice-based proposal of Vicky Hunter (21), in which improvisation had a great and precise role. While engaging in intra-actions with the materiality of the physical environment of the University, I realized that the same playful attitude experienced in the training sessions by the participants of my research could have a counterpart in the improvisation happening while teaching. In my data, hitches corresponded to the sign of students' presence inside the education process expressing in a way that was original and unexpected, or the sign of aliveness inside the teacher/teacher relationship, or some kind of crossing of mainstream institutional or material constraints. The engaging of the teacher in an improvised attitude was conceivable as the effort of having a playful and creative take on what was happening and upholding a pedagogical aim. That is what, in a new-materialistic lexicon, we could define as a *worlding* of relations with humans and non-humans. In this sense, improvisation can be seen as a resistance-resilient practice for changing the scholastic contexts.

Coming back to the teachers: non-representational feedback

These discoveries and intuitions are prompting me, right now, in finding a way to return the results of the research to the participants that is not simply representational but performative. I've started engaging the data in an art-based and poetic way, and, coming back to my field notes, interviews and recorded discussions, for each improvised fragment of school life I collected, I am producing a wrote storytelling that gives the impression of the layers of the improvisation wave. In parallel, I'm organizing three events, one for each group that worked in the second part of the research, that will take place in the schools that hosted the research. I'll briefly expose here the draft that I'm working on: in a set-up room where some materials (desks, chairs, blackboards...) are disposed, with images and words drawn from the data on the walls, I'll propose teachers to engage in relations with different parts of

the exhibition. Their choices of movement in the room will be connected to the exposition of related outcomes of the research. I warmly hope to have the opportunity of keep you updated on how it goes.

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HOW DO POSTGRADUATE STUDENTS WRITE QUALITATIVE RESEARCH PAPERS? RESEARCH AS EMBEDDED IN LIFE AND SOCIAL CONTEXTS

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Abstract

Qualitative research in Japanese language education has become widely recognized since 2000. Recently, the number of graduate students who used qualitative research methods in their dissertations is increasing. However, this is a difficult research method; therefore, this study, administered semi-structured interviews to a graduate student who had just completed her master's thesis to identify factors associated with the research process for postgraduate students and define the research thesis to a research participant. The results showed that a complex combination of factors influencing the postgraduate research process and indicated that factors involved in the dissertation writing process of postgraduate students may provide new insights into the training of future researchers.

Keywords: qualitative research, methodology, postgraduates, research process.

Introduction

Phakiti *et al* (2018) reported that “awareness of and concern over methodological issues has greatly increased” in Applied linguistics. Especially, qualitative research in Japanese language education has become widely recognized since 2000, and several books and papers have already been published in Japan. Various methodologies have also been introduced, namely, Narrative Inquiry, Life History, and Grounded Theory Approach. Yagi (2022) analyzed 315 articles on *Japanese Language Education (JLE)*, *Studies of Language and Cultural Education (SLCE)*, and *Literacies* that were published from 2004–2021 in Japan. The results showed that the proportion of qualitative research in the major journal, *JLE*, from 10% in the 2000s to 23% in the 2010s (Figure1).

Correspondingly, the number of graduate students who used qualitative research as a dissertation method has been increasing in recent years. As novice researchers, they learn the ideal research plan in college. However, the qualitative research plan does not always work out that way (McKinley & Rose, 2017).

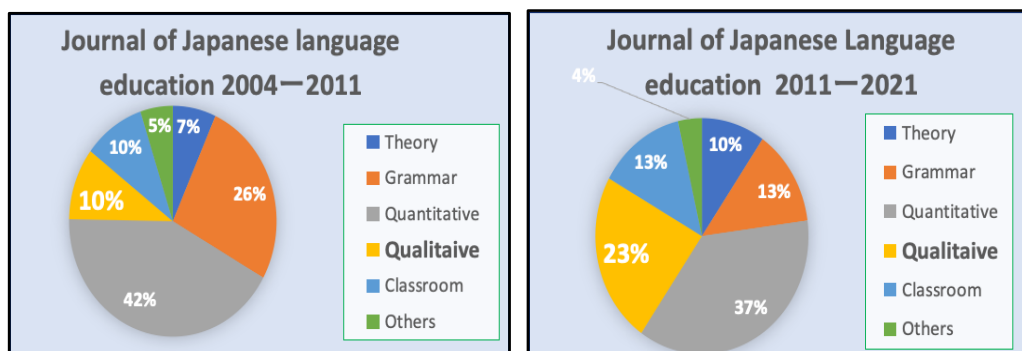


Figure1. Number of Approaches and Methods in the *Japanese Language Education* journal.

Furthermore, qualitative research is remarkably not a simple approach because of the following reasons:

- (1) Qualitative methods is not only methods but constitutes a structured methodology that involves philosophical issues in ontology and epistemology.
- (2) There are no established procedures, and each researcher must create their own research design.
- (3) Careful consideration of ethical issues is required.

The qualitative research process involves struggles and dilemmas even for experienced researchers; thus, graduate students are having difficulty writing their first dissertations Therefore, this study administered semi-structured interviews to graduate students to determine the research process for postgraduates and define the research thesis.

METHOD

Three procedures were followed in this study. First, I invited Ms. K who had just completed her master’s thesis. She agreed and signed the informed consent form. Second, I asked her to write down her reflections on the relationship between her research and herself chronologically, from the past to the present and into the future. Finally, based on this reflection note, semi-structured interviews were conducted. The interview lasted approximately 4h, information regarding her research and master’s thesis, as well as her childhood history, and her plans after the completion of graduate school were obtained. Then, interview data were transcribed and coded using MAXQDA. In the next section I shall explore the factors influencing the research process and her understanding of the what the research thesis.

RESULTS

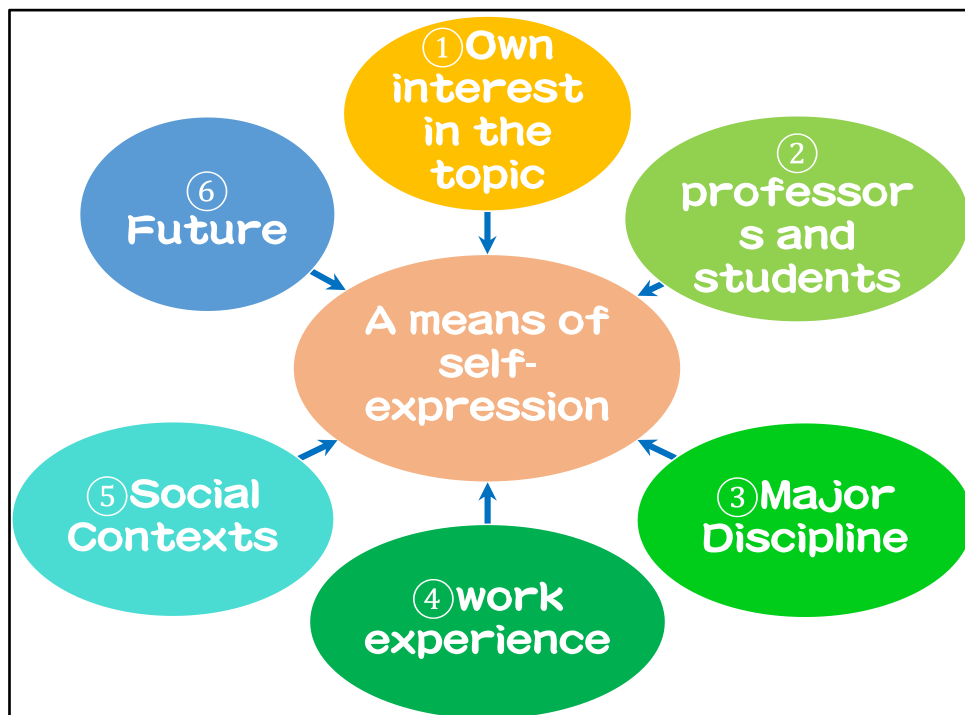


Figure2. Components of factors influencing the thesis approach

Figure 2 shows the six categories extracted from the coding and at the center, with the significance of the thesis.

The participant research thesis as a means of "self-expression". She stated that she loved writing since she was a child, sometimes even creating stories. She always won writing awards in school. She stated that:

- "When I was in elementary school, I always wrote stories in my research projects."
- "I think writing is the best method of expressing myself."

Figure 2 shows the six factors influencing her master's thesis.

(1) Own interest in the topic

She has a great interest in people and likes to listen to people's stories. She stated that:

- "It was interesting and enjoyable to meet different people."
- "I applied to graduate school because I was very curious about the different students I met at a Japanese language school."

(2) Professors and students

During her postgraduate studies, many people are conducting qualitative research, and she reported that her postgraduate peers influence her choice of dissertation method. She stated that:

- "Graduate students tend to conduct qualitative research interviews."
- "They tend to conduct qualitative research in Japanese language education."

(3) Major discipline

She felt that she had to use the theories used in her thesis on Japanese language education and made efforts to make the content relevant to teaching Japanese people. She stated that:

- "I also struggled with making my paper an article on Japanese language education."

(4) Work experience

She emphasizes the importance of extending her previous experience and knowledge when selecting field sites, as she believes that she can extend her experience and knowledge before conducting the research. She stated that:

- "I am equipped with the knowledge required in the field because of my previous employment."

(5) Social context

She reported the low social status of Japanese language teachers and refers to some similarities with a worker under neoliberalism. She stated that:

- "I wanted to include the underlying difficulty of those who are forced to work under neoliberalism in my research."

- “Japanese language teachers are also involved in neoliberalism.”

(6) Future

Although she is unsure about the future, she considered her master’s thesis to be very valuable.

She stated that:

- “I think I can contribute something useful in this field as I have received a degree in it.”

The results show the following complex combination of factors influencing the postgraduate research approach: childhood experiences, previous employment, expected future opportunities after the completion of graduate school, professors and other students whom one meets in the university, limitations of the central discipline studied, social context, and setting of the research topic with the investigation method. Therefore, in qualitative research, learning, for example, the format, procedures, and skills of a dissertation, is not enough; reflectively understanding how one’s historical and social context and values influence the research is crucial.

SUGGESTION

The results indicate that assessing the factors involved in writing dissertations among postgraduate students may provide new insights to support the training of future researchers. Today’s graduate students will become tomorrow’s teachers and researchers. When they do, the understanding of individuals and deep insights gained through qualitative research will hold them in good stead in their development as not only teachers and researchers but also human beings.

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DIARIES IN EDUCATION: THE USE OF DIARIES AS A TOOL FOR STUDENT FOCUSED AND STUDENT-LED QUALITATIVE INQUIRY

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Abstract

This paper aims to present diaries as an important tool for student focused and student-led qualitative inquiry. As the theme of this congress is linked to the ways in which qualitative inquiry can offer affirmative and generative possibilities for (Post)Anthropocenic futures, diaries in educational settings can offer a potential for qualitative inquiry to open up theory-praxis opportunities for more meaningful and sustainable education. An ethnographic, longitudinal research project in Applied Linguistics with P6 and P7 pupils in a Scottish primary school is taken as an example. The research aimed to explore manifestations of Language Awareness in primary school pupils who were learning French. They were engaged in writing a diary after each of their French lessons during an academic year. In these diaries, they were asked to verbalise their thoughts on language, and their learning experiences after each language input. The research showed that pupils consciously demonstrated Language Awareness, expressing detailed reflections on language analysis, and that they compared French with English, demonstrating multilingual behaviour. This recorded coexistence of first and second languages in the diaries, allowed students to use their own available resources 'cross linguistically' in their efforts to be more efficient in language learning. Implementation of diaries simply as a tactic for retrospection in the process of foreign language learning has shown that the reinforcement of language learning in a diary narrative offers a more individualised understanding of language teaching and learning procedures. The research project with diaries has demonstrated that primary school pupils take the responsibility of their own learning and become self-aware about their own learning procedures, their understanding, and their language skills. They consciously use their all linguistic and no linguistic resources to make meaning and to critically reflect on language and on their own learning. Collecting their reflections in their own diaries becomes an important aspect of their education process as they qualitatively inquiry what and how they learn. The paper concludes that the use of diaries in educational settings can promote student qualitative inquiry and it can enhance student knowledge making practices, engagement, critical reflections, and responsibility for their own learning.

Keywords: Diaries, Student Qualitative Inquiry, Language Awareness

INTRODUCTION

This paper aims to present diaries as an important tool for student focused and student-led qualitative inquiry. More specifically, students collected their own narratives of learning using diaries. As the theme of this congress is linked to the ways in which qualitative inquiry can offer affirmative and generative possibilities for (Post)Anthropocenic futures, diaries in educational settings can offer a potential for qualitative inquiry to promote theory-praxis opportunities for more meaningful and

sustainable education. First the paper provides some information regarding the use of diaries in Applied Linguistics, and more specifically in language learning is presented, and, second, study's methodology and findings are explored. The paper concludes that the use of diaries in educational settings can promote student qualitative inquiry and it can enhance student knowledge making practices, engagement, critical reflections, and responsibility for their own learning.

DIARIES IN APPLIED LINGUISTICS

According to Rose et al. (1), the use of journals/diaries, although widely used in some other social science disciplines, has not been very popular in the mainstream of applied linguistics research. This underutilization is declining because scholars are beginning to see diaries as straightforward opportunities to gain insights into learners' practices, thoughts and feelings. According to Dörnyei, (2), learners' practices are difficult to elicited through other types of data collection instruments. However, Porto (3) claims that diaries could be considered as a valuable tool for reflection and introspection for promoting autonomous learners. Dörnyei (2, p. 157) goes a step further when he emphasises that "participants become co-researchers as they keep records of their own feelings, thoughts or activities"; the diary method is about "an insider account" (2, p. 157) that provides meaningful and contextualised information about language and its users with minimum interference from external researchers and their biases (1).

Gabryś-Barker (4, p. 54) points out, "in language studies, in practical terms, it means that subjects are asked to verbalise all their thoughts and emotions when performing a language task". Diaries bring meaningful information about learner experiences as expressed in their narratives, as well as their learning processes and particular their cross-linguistic influences that can emerge either in the form of thinking aloud, or retrospection. In other words, what we are learning is an internal narrative that we can verbalise by writing a diary.

DIARIES IN LANGUAGE LEARNING

An ethnographic, longitudinal research project in Applied Linguistics took place with P6 and P7 pupils in a Scottish primary school. The research aimed to explore manifestations of Language Awareness (LA) in primary school pupils (see 5). Primary school pupil LA was explored in an environment where English was the first language (L1) and the dominant language of the society, and a second language (L2), French, was taught in the primary school, as a minor subject, with no specific time allocation in the timetable, although it was part of the curriculum. The school operated '1+2 Language Approach', which is the Scottish language policy (see 6, 7). LA is defined as "explicit knowledge about language, and conscious perception and sensitivity in language learning, language teaching and language use" (8, p. 288). Conscious analysis and explorations of language can be manifested as reflections on language. These reflections of LA can have the following aspects (see also 9 for further discussion of the following key aspects):

1. Contrasting languages in a framework of cross linguistic awareness
2. Building on prior language knowledge
3. Perceiving languages in use
4. Expanding language learning strategies.

METHODOLOGY

A learning diary was used as the main research tool for eliciting pupils' internal narratives of their French learning. Diaries were kept for almost the whole academic year, from October to May 2016-2017. Guidance was given to teachers before their pupils started completing their own learning diaries. Pupils were asked to fill in their learning diaries every time they had a French input. They answered

the same two questions: “What have you learnt in your lesson?” and “What are the differences, and/or similarities, between your first language (L1), English, and French?”. It was up to the teachers of each class to decide how many French inputs they could include in their busy class curriculum schedule. The researcher did not impose, or participate in, specific numbers of inputs over specific schedules.

The use of a learning diary gave pupils the privacy and the safety of the known school environment without presence or oversight of intruders. The diaries were written in English with some French examples given. In the study, pupils were considered as autonomous human beings and learners, co-ethnographers effectively, as well as auto-ethnographic actors via their diaries. For this reason, the decision was taken not to edit or correct participant language mistakes either in English or French. The term ‘sic’ was not used to indicate errors coming from the participants. Correcting errors would have blinded the heterogeneity and authenticity of participants’ voices (11).

FINDINGS

The research showed that pupils consciously demonstrated LA, expressing detailed reflections on language analysis, and that they compared French with English, demonstrating multilingual behaviour (10).

Pupils contrasted languages in a framework of cross linguistic awareness.

Like Vent ... you have air vents in your house so il y a du vent means that it is windy, so that helps. (Primary pupil 9)

I recognised the numbers especially the frst one. Quatre is like quarter which has a lot to do with four. (Primary pupil 5)

Pupils built on prior language knowledge and used the knowledge acquired in previous inputs in order to understand new language.

I remember from before ... we learned to introduce ourselves and where we lived in French and stuff like that... Écosse and that and I knew that was Scotland. (Primary pupil 11)

Well I got the bottom one because I remembered vaguely when we did where you live and what your name is ... I remembered ‘j’habite Dxxx en Ecosse’... and that’s how I found it. (Primary pupil 10)

Pupils perceived languages in use and demonstrated their own beliefs about self-confidence and right language competences. According to Muñoz (12), pupils often do not feel confident enough to learn languages. “Their perception of relative difficulty or easiness in learning the languages, often suggests a conception of language as an object of academic study” (12, p. 55).

I don’t like French ... I’m not very good at it, and I would prefer to learn other languages such as Spanish as I go to Spain for holidays. (Primary pupil 2)

Pupils expanded their own language learning strategies. In their diaries, they verbalized their own experience of learning a modern foreign language that enabled them to familiarise themselves with learning strategies, adapt them according to their needs and use them (13).

I found the second activity quite easy because after being taught about the masculine and feminine rules it was quite easy to see which words stood out and how you could tell which ones were masculine and feminine. (Primary pupil 3)

Again it is very similar in French to English, it doesn’t occur to us when it’s our first language. The main issue for me is the masculine feminine aspects that English doesn’t deal. (Primary pupil 3)

The research project with diaries has demonstrated that primary school pupils:

- take the responsibility of their own learning.

- become self-aware about their own learning procedures, their understanding, and their language skills.
- consciously use their all linguistic and no linguistic resources to make meaning.
- critically reflect on language and on their own learning.

This retrospection on language learning using diaries opens new possibilities perhaps for building a comprehensible picture of classroom learning. In diaries, their narratives of learning are verbalized, and pupils qualitatively inquiry what and how they learn as they reflect on their language learning and focus on linguistic elements and how languages work. Linguistic reflection is a means of mediating our thinking. Diaries offer the space, and enable the process, through both of which pupils express their thinking, and thus make this thinking visible to others as well as, perhaps more importantly, to themselves. Pupils are co-ethnographers as well as auto-ethnographers of their own LA which is considered as an internal narrative of language learning.

CONCLUSION

The diaries offer us insight into a series of interpretations, connections, affiliations and adaptations around language learning. These are the things that happen in learners' minds: they take into account the social, spatial, temporal and embodied dimensions of language learning (14).

The learners in their diaries "become interpreters and authors" (15, p. 28) of their own conscious language procedures, their own language awareness. As Ros-i- Solé (15, p. 36) points out, "self-reflection and heightened awareness of subjectivity are key in humanised language learning".

Diaries with their ethnographic approach allow alternative ways of thinking about foreign language learning, because of their individualised framing of language teaching and learning procedures, and the way they actively encourage reflection and motivate language learning, both of which provide useful insights into learners' thinking. As Pennycook (14) notes, the ethnographical study of cognition, and therefore language learning, opens up wider understandings of second language development as a complex distributed process. Language learning through diaries can offer meaningful insights of that distributed process for both educators and learners as it can be considered as a qualitative inquiry with affective and generative possibilities. Sara Ahmed suggests that "affect is what sticks, or what sustains or preserves the connection between ideas, values, and objects" (16, p. 230). Pupils are doing the same by using diaries to verbalise their own learning narrative as 'it sticks in their heads'.

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YOUNG CHILDREN – PLAY – DISABILITY – NATURE-BASED EARLY YEARS SETTINGS: AN ETHNOGRAPHIC INQUIRY

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Abstract

The climate crisis is forcing us to rethink human relationships with nature and in doing so we need to consider how social justice aligns with ecological justice to find new ways of living in the Anthropocene.

In the early learning and care sector in Scotland, promoting play in nature-based settings has government support. Such settings are seen as places that promote health and wellbeing (1).

While the number of nature-based early years settings in Scotland is increasing, research by a Scottish learning disability charity (2) indicates that families of learning-disabled children struggle to access their entitlement to early years spaces. Nature-based early years settings may not be socially just and inclusive spaces.

In the late 19th and early 20th century impairment was bound up with ideas about poverty, disease and disorder in ways which continue to permeate our thinking in the UK (3). Nature continues to be used to define childhoods and potentially exclude and silence those who are perceived to be different to unspoken societal ideals (4).

My professional doctorate research will explore disabled children's experiences in a nature-based setting, with a focus on what is important to children - play.

Critical disability theorists see disability as 'a relational concept' that can be interrogated in order to 'broaden what it means to be human' (5). By focusing on play experiences informed by posthuman, new materialist thinking, I aim to consider the ways in which play comes into being in relation to the human, more than human and material world, in ways that challenge us to find 'new humanisms' (6).

I will be using an ethnographic, participant observation approach that draws on posthuman ideas of being and knowing as entangled (7).

By paying attention to human experience often positioned on the margins of mainstream society and likely to experience intersectional injustice I hope to encourage reconsideration of how we create opportunities to connect to the natural world in socially just ways.

Keywords: early years, disability, nature, play

INTRODUCTION

In this paper I set out the context for my professional doctorate in education currently titled: 'An exploration of the play experiences of (a) disabled child(ren) in nature-based mainstream early years settings(s) in Scotland'. I explore how my positionality has determined my methodology and methods. I discuss my approaches to creating and analysing data as part of a pilot study, in which I explore

different ways of representing a child's experience, emphasising my uncertainty about analysis and interpretation.

THE CONTEXT AND ITS TROUBLES

My professional education doctorate is strongly connected to my practical experiences. I work part-time in a large local authority nursery in Scotland and I teach on an early years module with the Open University. Before moving into early years practice I worked mainly in policy and in communicating research. While the urge to work in practice came out of frustration with policy's lack of direct impact, the everyday impact of practice brings its own challenges. My experience of working with a disabled young child made me want to look more closely at the experiences of young children with additional support needs and/or disabilities in outdoor and nature based settings in Scotland.

Additional support needs is a legal term within the Scottish education system (it has a meaning broader than England's terminology of special educational needs) (8). Disability is a legal definition but can also be self-determined (for example, (9)) I use the term disabled in my writing at this stage, but recognise that it may not, for parents of young children, be a term they would consider using. I intend to be guided by the language research participants (parents and practitioners) use to describe their children.

The motivation for my research comes from having experienced challenges in enabling a disabled child to access outdoor experiences, combined with having noticed the absence of disabled children in wider forest kindergarten practice and in promotional material and research narratives in Scotland, the UK and worldwide. I am motivated by a social justice perspective, wishing to explore why some groups of people are not part of particular social or cultural experiences. Given that Nocella II argues (10) it is not possible to have social justice without ecological justice I want to avoid taking a social justice perspective that positions the natural world as a backdrop to human experiences or as something that humans consume unequally. While my study is not primarily about environmental education or the climate crisis - its focus is children's play – I consider it necessary to think and research with these issues in mind, a rationale and challenge I explore further below.

The trouble with policy

Having campaigned for policy change in early years provision and made use of research as evidence for my arguments I recognise both the power of government policies to change our everyday lives, but also its constraints and unintended consequences. Policy can divide children into parts – parts that match adult policy concerns.

While the cycle of research, information, policy and intervention has positive intentions it can lead to negative impacts, whereby children receive interventions that make wider assumptions about what they are lacking and exclude them from experiences. Historical and contemporary examples demonstrate this: Thyssen (3) in his account of a sensory history of health and outdoor education initiatives in Western Europe positions modern day UK forest schools as inheritors of open air schools movements designed to "deodorize" childhoods of children living in urban poverty in the early twentieth century. (p.181). He refers to the process of sanitising and 'saving' children from "urban imaginaries of filth, disease and moral vice" replacing them with the smells of fresh air and soap aligned to promote "self-control, order and patriotism". Thyssen notes the way impairment and early childhood are aligned historically as conditions that need special attention, with nature providing order and regulation.

Harju et al's 2021 study of "mobile preschools" in Sweden (4) found a "fluid and subjective interpretation of nature" in relation to childhood that was in danger of romanticising one group of children's experiences, allowing their free movement and play, while positioning "'other' children (e.g. migrant children from multi-ethnic neighbourhoods) as having different needs and needing a different

education” that requires more ordered physical activity and guided appreciation of the environment (p.249).

Nature can be used to define and regulate childhoods and potentially exclude those who are perceived to be different to unspoken societal ideals.

STAYING WITH THE TROUBLE

With this context and history, undertaking research in this area feels both urgently needed and troubled. I want to respond to the climate crisis and avoid consuming nature to achieve human goals (assuming such separation between nature and human is possible) and I want to avoid doing research that could lead to interventions based on categorising children. I have other concerns which relate to the power of the researcher adult over the researched child, which I outline below. A connecting thread in these concerns is one of power relations. Seeking a way to avoid smoothing over these issues and to stay with the trouble (11), has led me to taking a posthumanist approach.

The researcher presence

Children are often positioned by researchers as experts in their lives and invited to be participants in research. However, drawing from my practice experience of having worked with a child with multiple disabilities I am cautious about how I, an adult new to their world, might attempt to involve a child in research about their life. As an adult closely involved in a child’s care, I developed a viewpoint on the child’s preferences, their likes and dislikes, but I often remained uncertain of my interpretation. My day-to-day interpretations resulted from a relationship of trust built over time, which a researcher is unlikely to achieve in a short time.

I am mindful of the way disabled children encounter multiple adults in their life – each with specific supportive interventions, such as physiotherapists, occupational therapists, or speech and language therapists. My presence as an additional, observing adult might be harmful, as indicated by author and academic Grue in his memoir of living a disabled life:

“I was an indignant child. I am indignant still. This was the source of my indignation back then: someone else knew best. Near-stranger adults, the presence of whom I cannot shake off of me. This is still the source of my indignation: intentions I am unable to call good, unable to accept as anything other than a desire for power, desire to control. I was a child who was almost never alone.” (12) (p.42)

Considering the limitations of my relationships with children and the impact of my presence is crucial to approaching my research.

Representing the child’s ‘voice’

Post qualitative researchers express concern about the concept of certainty in the process of representing others. Jones et al (13) ask: “How can I write about what I am seeing?” to highlight the many choices made in the process of turning observation into written words. They reflect on how an ambiguous field note about children’s play prompts them to think more deeply about the subject matter, while a more coherent narrative account reveals how judgements and assumptions can be used to smooth over uncertainty for the sake of a clear narrative.

This is a concern expressed by a mother of a disabled child I interviewed for an online module on early years and additional support for learning. Tasked with completing extensive narrative accounts about her daughter in preparation for her starting nursery, she says:

“And as I sat down to write them, I just couldn’t. It just didn't translate into paper, who she was as a person ... How Eilidh read on paper was so different to how she presented. ... when you met her, it was very obvious what she could do. “(14).

This parent resisted the requirement to translate her daughter into the certainty of words preferring instead to support staff to develop a relationship with her daughter as a way of getting to know her.

Both examples show the value in troubling our reliance on words to express a 'voice' or a person.

This is a concept explored by Simmons and Watson in their research with children with profound and multiple learning disabilities (15). Like the parent above, Simmons and Watson conclude that: 'Voice' is "something that is enacted or comes into being through relationships". They suggest caution in the way that: "Individualism locates voices "in" children and leads researchers to the view that either children with PMLD are too cognitively impaired to speak for themselves (e.g. they lack a point of view and are incapable of being consulted) or researchers lack the skills and methods to "listen" to children with PMLD."

Interdependence

Working in early years is a physical and sensory experience for children and adults alike. You can be covered in paint, snot or sand. You can be climbed on or sat on. In thinking about how I have experienced the 'voice' of a young disabled child I am drawn to think of physical and sensory encounters and the supportive, postural chair she used that I manhandled over bumpy surfaces, awkward thresholds and sand covered ramps. I felt its cold metal, its weight and shifting balance and I bumped my shins and ankles on its corners. The child who used it had their own experience of its smell and textures.

Simmons states that: "communication and social interaction are embodied and interactive, not passive and observational, that the individual subject emerges through social interaction and as such is always dependent on others to some degree, that interactions can be understood in terms of power dynamics" (16, p.99). The social interaction between me and the child was often mediated or even experienced through the chair.

We emerged as individual subjects through our interaction with each other in gestures, sounds and touch, but also through our shared experience of the world because of our close proximity to the chair and our shared dependence on it. It supported the child's body and enabled me to give her access to different spaces and places. Crouching to adjust it or check that straps were properly done up I would feel the same wind blow our hair, or noticing with her, the smell of smoke from a fire in the garden, or the sound of birds.

Simmons and Watson's exploration of the interdependency of individual identities connects with posthumanist Barad's explanation of 'entanglement' and existence: "To be entangled is not simply to be intertwined with another, as in the joining of separate entities, but to lack an independent, self-contained existence. Existence is not an individual affair. Individuals do not preexist their interactions; rather, individuals emerge through and as part of their entangled intra-relating." (7, p.ix).

Attending to material experiences and questioning the representational certainty offered by words are ideas not just born of theory – they emerge from practice.

While I cannot present to others, in words, a child's 'voice', I can attend to the ways in which communication and social awareness take place materially and through relationships. While I cannot solve the climate crisis with my research, I can pay attention to the material world and the ways it is entangled in mine and children's existence, rather than consider it a backdrop.

I have found, so far, that this approach enables me to sit more easily with my unease, or as Haraway puts it, stay with the trouble (11).

ACTIVIST RESEARCH – DEFAMILIARIZING THE EVERYDAY

I am a professional doctorate student working in a mainstream early years setting seizing opportunities in local and national networks to share my learning to develop practice or provoke thought. I consider myself an activist researcher. As Simmons notes (16) power dynamics are at play in the process of interdependent becoming. It is therefore vital to attend to power dynamics. There are choices here. I could for example, draw on Watson's ethnographic research into how children with diagnoses are excluded within mainstream early years settings by not conforming to unspoken understandings of what constitutes what is 'predictable, acceptable and in line with rules' (17). Watson observes that "Without the 'correct' performance, the Other is positioned outside the boundary of the normal, and excluded." Watson's insights resonate with my practice experience, but I am hesitant about following her approach to explore nature-based settings. Rather than mapping similar power dynamics I have found critical disability theory a more productive and creative approach because, as Goodley and Runswick-Cole assert: "Disability has the radical potential to trouble the normative, rational, independent, autonomous subject that is so often imagined when the human is evoked, social policies are made, social and human sciences are developed and forms of activism are enacted." (5)

By bringing postcolonial and critical disability scholarship together, Goodley et al (6) urge us to seek 'new humanisms' and to "endlessly acknowledge and address the ways in which educational systems impose a collective ontological sense of 'wrongness of being'". This approach feels appropriate to activism – rather than document problems within a familiar framework, it encourages research that challenges us to explore new ways of being and perceiving the world and ourselves within it. Encouraging the defamiliarization of the everyday opens up the opportunity to think and do things differently.

Kafer (18) shows how we can defamiliarize how we see access to 'nature' and 'wilderness', pointing out the ways in which "non-disabled access [to nature] is made invisible while disabled access is made hypervisible". She draws attention to the way ramps or wheelchairs or accessible trails can be seen to intrude on 'natural' landscapes (a 'wrongness of being'). Being aware of this hypervisibility helps us notice how everyday materials and technologies such as waterproofs, wellies, cars and roads are accepted and unnoticed means of accessing landscapes and even become part of what is considered natural.

Defamiliarisation helps us to see differently the material systems involved in supporting a child with a 'peg' feeding system while out in local woods (Fig. 1). While the blue plastic gloves, syringe and tubes might be hypervisible they are materially little different to the plastic lunch boxes and plastic-coated tarpaulin used to ensure everyone else can eat while out and about.



Figure 1

DEFAMILIARISING PLAY – EXPERIMENTS WITH OBSERVATIONS

In her playfully entitled “Rules for re-enchanting our relationship with play” Russell (19) encourages us to defamiliarize play, reminding us that as we “shackle it to worthy outcomes” we might be missing the point of how to help it flourish. Instead, drawing on posthumanism, she encourages resistance to interpretation: “hold off imposing meaning” and “work with processes and relations”

Taking a posthuman approach to research can be challenging and liberating for a new researcher, because it questions traditional methods that I am only beginning to understand. I lean on Hackett’s approach of “acting like an ethnographer, thinking with posthumanism” (20).

Having used ethnographic methods to make observations at my workplace for a pilot of my main doctorate study I drew on my note taking, photography and film to create written narrative accounts. I am influenced by the early years practice of writing learning stories addressed to children (21), an approach which creates a sense of holding yourself accountable to a child. I wrote a narrative account on the same day of the observation. Then I rewrote it and I rewrote it. Each time I questioned myself: how do I know that? what can I be certain of? The process made me less sure of my choice of words, and more focused on the children’s movements and sounds. I incorporated my uncertainty into the text, for example:

“You stand smiling. You have socks on and you’re wearing a full waterproof, but you don’t have a yellow jacket on like everyone else. I wonder why? You’re holding a stick in your hand, it’s your left hand – and you’ve had that with you since just after you arrived I think - I wonder why you picked it up?

You are watching two running boys with your whole body turned towards them, and as they come near you, you turn your head to follow their movement with your eyes, and as they run past you, you shout ‘ga!’ loudly after them – they seemed nearly to collide with you. Your excitement seems to grow as theirs does and you move from foot to foot, perhaps keeping your balance, but also I think expressing your enjoyment in this encounter with your feet. And maybe you are moving back a little so as not to be bumped into.”

In another example, Fig. 2, I converted a narrative to a series of points with a line that connects them. These are the points where a child connects with matter.

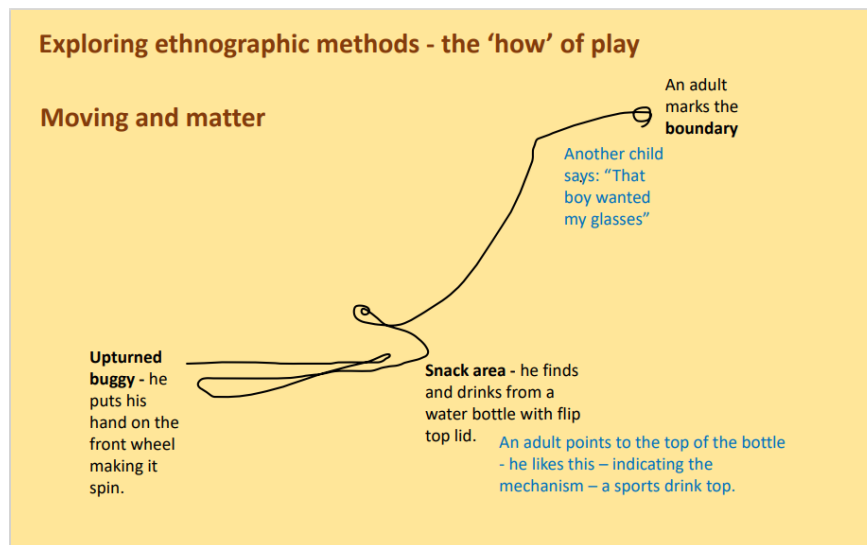


Figure 2: Moving and matter

Defamiliarising the process of representation helped me to resist the impulse to interpret. For example, I resisted the urge to focus on what might seem like a lack of connection between the running boys and the excited onlooking boy. An adult might wonder about their role in brokering play and consider one child excluded from the other children's game, seeing deficits in communication and interactions. Focusing on movement and sounds showed a joyful connection between one child, the grass, a stick, the space around them, and the movement of two running children.

The initial decision to represent one child's play as a line with a series of points of intra-action resulted from my experience of perceiving him to be always on the move. I found that this way of presenting my observation showed me that he was arrested by moments of intense interaction (or 'intra-action', Barad (7)) with matter. This challenged the idea of him as a child who doesn't stay still (and hence require surveillance).

CONCLUDING POINTS

In both narrative accounts I am turning away from interpretations of children's play that suggest 'wrongness of being' and focusing on the child's experience in a particular material place and space. This results from a posthuman approach that turns attention to matter and the way in which our being and identity depends on each other. I draw on critical disability theory that encourages defamiliarization of everyday assumptions in order to create new ways of being human in the world. I hope to explore experiences of disabled children and/or those with additional needs further in my main study to find ways of thinking and talking about play in natural spaces that attends to how we can connect to the natural world in socially just ways.

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CARVING MORE HOPEFUL TRAJECTORIES VIA A “NO PLAN PLAN” IN A CO-PRODUCED SECONDARY SCHOOL FILM CLUB PROJECT

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Abstract

This paper will begin to examine some unexpected methodological directions that continue to unfold into the early stages of an ongoing co-produced PhD project. It is a project that is taking place at a mainstream secondary school film club in the North West of England with a small group of young people who, in some way, identify, are labelled or diagnosed as having Attention Deficit Hyperactivity Disorder (ADHD).

I begin by situating the study. I consider the current secondary school milieu and give some details about the research topic (ADHD) and outline some of the circumstances that led to my interest in this topic and the project’s emergence. I have termed the looser approach adopted in the project somewhat paradoxically: “*The No Plan Plan*” (TNPP hereafter). I situate this way of doing things within the wider realm of the “posts” especially, “post qualitative inquiry”. In the paper I describe my orientation towards a mode of Research-Creation and explain how this interacts generously with TNPP.

In the concluding parts of the paper, I turn my attention to one exciting and hopeful emergence which has come about via TNPP. This is a walking with camera(s) technique. This unanticipated (and still yet unfolding) method arose in quite unforeseen and organic ways. In what follows, I trace how the walking with cameras technique came from some unexpected circumstances that occurred in the first term of the film club. I complete the paper by proposing some future directions this technique could take when put to work in co-production with young people and their school staff.

Keywords: Education, Neurodiversity, Video Method.

INTRODUCTIONS

As a few points of introduction to what follows, it is important to point out a few things. Firstly, it is key to consider the existing place of walking methods and their place within the field of education research. Walking methodologies are an established method in social research and some of these approaches deploy cameras and video technologies within research designs (1). Walking approaches have been operationalized in school settings in differing ways with varying effects (2, 3, 4). However, the emerging walking *with* cameras technique discussed herein was not directly informed by these existing methods in a systematic or pre-planned way. Rather, it was an aspect of the research that has (and continues to) unfurl quite organically.

Project Overview

The PhD project itself orients around themes of inclusion, belonging, neurodiversity as well as ‘non-traditional’ and ‘extra-curricular’ learning. It has a particular focus on developing a co-produced

secondary school film club alongside students and school staff. The research utilizes the living knowledges and expertise available in the film club and draws on the latent potentiality of the film form itself as a way to explore lived experiences of schooling and ADHD.

ORIGIN STORY AND REFLECTIONS

In the last few decades, those who work in secondary schools have been embroiled in waves of neoliberal reforms. Ball (5) describes these circumstances as multifaceted, performative, mechanisms (5). Even though the school is not directly analogous to a typical consumer marketplace, the mechanisms that play out at the school and those which Ball describes tend to circle the notions of: The Market, Management and Performance. As an examiner for the English examinations (GCSEs) and as a former classroom teacher (secondary English, Film and Media Studies) these mechanisms became very familiar to me. Britzman (6) considers the time constraints and pressures at play in education as a time of anxiety.

Recollections and Reflections from a time of reform

Some of the most pressurised circumstances I experienced whilst working in a school in England from 2013-2019 came about during the fallout of government reform. For secondary schools in England reforms created significant shifts in GCSE exams. Adapting to these changes increased time pressures and uncertainty, and for me these pressures were really bought to bear on my teaching during the years 2016-2018.

At this time many English schools were in a period of transition between the “new” and older way of doing things - I use the quotation marks around the “new” there to indicate an irony in that the “new” was not really a revised nor fresh approach at all. This “newness” remained embroiled in the performative market mechanics Ball (5) and others have described. In terms of the specific changes to the GCSEs exams, the reforms can be narrowed down into the following 4 main areas of change: content; structure; assessment; tiering and grading (7). The content of the exams was altered to become “new and more challenging”. This meant that all exams to be sat at the end of a 2 year course with non-exam assessment (project work and course work) would receive less credit than before, and in some cases this assessment was eradicated altogether. Alterations were to be made to the grading system. Given the extent of these changes, it is not surprising that as an educator working across 3 subjects across multiple age groups, I noticed a marked decrease in flexibility during lesson time.

The Film Club: A more Accommodating Space

At this harried time of acceleration and change, there was one space in the school which did appear to retain some freedom, and from my perspective the benefits of this space were felt by the teacher (me) and the students. This space was held in the afterschool film club. My experience of running the film club, whilst teaching across the subjects, was that film participation and the club functioned as a more inclusive and flexible space where experimentation with creative filmmaking could take place, and some more relaxed film watching could happen. In relation to the research topic at hand (ADHD) I noted that the film club space appeared to be more accommodating for some of the neurodivergent bodyminds, and I count myself included in this categorization. It was during the time spent running the club when I began to recognise how the multi-sensory, multi-modal nature of film facilitated reflective time and freedom of expression. So, it was the affordances of film, and to film club space that I wished return to in the PHD.

PROJECT DESIGN: HOLDING SPACE FOR SPONTANEITY

At the time of writing, I am in the second year of a 4-year PhD programme. In some more conventional and linear PhD projects which may seek “methodological purity” (8), the second year of a PhD can

often be the time spent in the field and the time in which “data collection” takes place. In a traditional ethnography, a researcher may immerse themselves in a certain culture and observe and capture detailed fieldnotes. By some way of contrast, the film club project falls outside of these parameters. It cannot be considered a traditional ethnography, nor a linear approach. The whole project takes up a more speculative way of doing things. By speculative here I mean this to be a sense of imagining, of envisioning, alternatives by looking back, forwards, sideways and to spaces in between.

The underpinning theoretical orientation underscoring the project falls somewhere into the broad categories associated with the “ontological turn”. More specifically, the PhD study is situated within the “post qualitative” tradition. I will not go into depth about this orientation too much here, but for some concise and elegant writing regarding this please see (9, 10). While there is no agreed upon consensus or a definitive definition for post-qualitative inquiry, it can be seen as approach that is always in the making. Nordstrom and Ulmer see post-qualitative inquiry specifically as an: “assemblage that continues to become” (11, p. 7). Overall, this orientation points to modes of inquiry that can be closely attuned to speculative, post-human, more-than-human, and new materialist philosophies. In the film club project I enmesh a conception of Post Qualificative Inquiry with a model of “Research-Creation”.

Research-Creation: Some Origins

Research-Creation has grown in popularity in recent times and is expanding to encompass a variety of exciting conceptualisations. Many artists and scholars who activate Research-Creation draw from feminist materialisms. These can link to speculative pragmatism, the environmental humanities, queer and trans studies, vitalism and affect theory (12,13, p.2,13). Again, in a similar way to the modes of research associated with the “posts”, Research-Creation is by no means tightly bound, set or prescriptive. Whilst Research-Creation scholars and artists across varying settings and creative practices activate it in varying ways, more recently some Research-Creation scholars have emphasised and asked us to reattune ourselves to the significance of the feminist praxis part within Research-Creation scholarship (13). Truman writes that this praxis is ongoing and should be a constant at every stage of the research process. Truman describes this as a: “praxis and rigor informing the ethical, theoretical, and artistic engagements throughout the research project, from planning to dissemination(13, p.95). Loveless (14) another Research-Creation scholar similarly suggests the practice of research creation asks us to work in alliance with anti-racist, anti- colonialist, and feminist interventions within the academy.

Research-Creation History

The hyphenated term “Research-Creation” is thought to have emerged in Canada. It was developed to recognise how artists working as teachers within research institutions such as the university were also engaged in the research. As a practice, a “way” or a set of “Techniques” (15), Research-Creation does not need to adopt any particular theoretical orientation, although many of the scholars who use the term are drawn to process philosophies, theories of affect, and feminist materialisms. Truman and Springgay describe research-creation. They suggest when you do research-creation, you are making art as a way of researching and theorising ‘Art instantiates theory,’ ... “[some works of art] are not metaphors, nor representations of theoretical concepts; rather, some works of art event concepts” (15) Although some social and general research might be described as engaging with “creative methods” or “artistic methods” - using drawing methods with child participants in conjunction with semi-structured interviews for example could fall into these categorisations. For example, a child’s drawing can make for a communication tool to illicit information, and the creative outcome (the drawing) can work in tandem with the interview. The drawing could then be used as data to be interpreted, coded, written up and disseminated. Many would agree that this research design is indeed creative and artistic, but what separates this example from my own positioning towards Research-Creation is that within my orientation there is more focus on processes.

For me, the films made in school and outside the school as part of the film club project are not the main concern. Films and creative artifacts are not being created to be analysed, nor are they being purposefully made to be used to disseminate the research “findings”. The real making of the knowledge here is what comes about through the filmmaking process: via the film’s pre-production, development, (planning) production (filming) and post-production (editing). Outside of the club my own filmic practices continue to unfold knowledges also. The films I create and watch when I am physically not present at the school site act as a conduit to my own understanding, application, and creation of theory.

Drawing from these ideas I am thinking and paying close attention to the following

- The Research Design as a process and how this has come to be, and what this in turn gives rise to
- How the artistic processes that surround film and filmmaking, inside and outside the club create or in Springgay and Truman’s terms “event” concepts and my own theorising.

Here Research-Creation has some overlaps with the speculation and experimental process seen in Post-Qualitative Inquiry. Erin Manning (16) describes this as “a practice *that thinks*” (p. 27, italics in original) and others have noted that Research-Creation is a space of what is yet to come (19).

Research-Creation Activations in UK Educational Settings

Scholars have activated Research-Creation within differing educational settings. Those who have done this have operationalized varying artistic forms and practices in these settings. Examples include: music and sound composition practices alongside early years pupils and education practitioners (17) ; literary compositions alongside secondary school-aged students(12,13), as well as some filmmaking practices in order to explore experiences of ‘oddness’ amongst school children(19).

There are some merits to activating Research-Creation in the school context. It can reorient views towards co-production. In the context of the UK school Pahl and Pool (19) have found that the focus on process rather than product is a useful way to avoid any urges to “fix” “present”, “codify” and “de-construct” and then further dissect young people’s creative work and it allowed them to reorient themselves to authorship. While Truman (12,13) found that research-creation and walking-*with* practices enabled students to create spaces to problematize and ask questions about their ongoing situatedness in their own creative world-making through art and movement.

ORBITS OF “TNPP”

The title of this paper mentions “TNPP”. This was (and still remains) not really an abandonment of all planning of film club sessions per se. Rather it is a flexible and adaptive approach. One that can respond to arising interests and unpredictable situations whilst simultaneously upholding ethical standards and adhering to the sensitivities of the individuals and the school setting. Given my experience of running film clubs and teaching and marking exams, I have a repertoire of film making and watching activities at hand- “in my back pocket,” as the saying goes. This assembled repertoire exists in and around me – in some cases I carry memories corporeally. Recollections of past lessons may arise unprovoked, or these could be stimulated by some occurrence or perhaps via another line of thought. In some cases, the plans take a more physical and less abstract shape; I have an archive of written lesson plans and teaching materials within my possession from which I can draw from when planning sessions - some of these are held on hard drives or usb sticks and others typed on ageing paper shelved in lever-arch files. Either way, when loosely devising the film club sessions, I can choose to draw from these to inform more structured sessions and this was the case in the early weeks of the club.

Hoping with real and imagined plans. The what ifs of “TNPP”

When starting to plan the film club project within some early draft proposals I continued to speculate with what I did not realise at the time was some speculative design thinking. I had to consider what was probable, possible, impossible, and plausible, but I did have some constraints. When first planning the early proposals, I did not have a confirmed school site secured. Thus, my planning was steeped in guesswork. I questioned whether the club would need to be linked to a certain curriculum outcome or “targeted” at a certain year group for example. Would the school gatekeepers want to see plans and documentation? What equipment would we have access to? What time of day would it happen? In this early planning, I was however confident that there were some ways to leave space for openness and new directions.

In my thinking and planning at this early stage, I prepared some abstracts which detailed an idealized and utopian “vision” for what could happen in the club sessions. This detailed what activities might or could take place. In these hopeful and idealized visions, I was looking backwards. I drew on past experiences from running the previous film clubs and hoped that some realisations of these may be actualised and reconfigured in this current film club setting.

Organic Emergence of the Walking-with Camera(s) method

I have found that during the first term of the film club it has been a case of taking it week by week and reflecting and following the lines of potential and the responses of the students and educators. This level of adaption is a luxury that may not be available for many classroom teachers. I am in a privileged position in that I have a week in between each weekly session. During this time I can reflect, “take stock”, attune myself to the previous week’s activities, and then start to approach the following week’s session.

A GENERATIVE DISRUPTION TO “TNPP”

In the early stages of the club, we were able to chase the activities and aspects of filmmaking and film watching that presented themselves as generative. This could be a felt and intuitive decision to follow something up or perhaps abandon something else. On more than one occasion the direction of the activities had come from unique circumstances or a students’ interest. These types of things of course fall outside of the realm of my predictive capacities. Below I discuss the origins and developments of one example. Here I delineate the walking-with-camera(s) method, which emerged organically from within the club. At the time of writing, I am pondering how this can open up new directions for the project.

The film club has a range of year groups. Within the first term there were some Year 7 and some Year 9 students who attended the weekly 1-hour sessions. After a few weeks and some introductory sessions, loosely built around the co-researchers’ interests, the Year 9s (14-15 year olds) expressed that they wanted more independence and wanted to use the cameras and equipment away from the usual teaching space where sessions were held. The year 9s expressed this desire during a session which built upon some of the themes of safeguarding. In this particular session we were practising setting up tripods and using camera angles via an accessible worksheet.

Towards the middle of the activity the years 9s expressed their desire to be out of the classroom and use the cameras more independently. This desire to be more independent was communicated in a number of ways. One way was direct and spoken verbally. The students explicitly stated that they would rather be outside the classroom space and doing their own thing. They asked : “Why can’t we just go around the school and use the cameras?”. Another way these students expressed this was by disengaging in the admittedly overly prescriptive planned activities in the session. What was clear was that these were refusals. Or to adopt the parlance of education these could be considered “low level

disruptions". In psycho-medicalised terms the students could be described as "dysregulated". Either way, this disruption provided a turning point.

The Week In Between

I took these expressions and the students' appeals to be outside the classroom into my reflections in the following week before the next session. In this week between sessions, I was able to reflect a little more and plan for the year 9 students to be away from the classroom. At the same time the year 9s were walking, the other students would remain in the classroom with a choice of filmmaking activities. I produced a brief session plan. This facilitated 3 of the year 9s to be accompanied by one member of staff. They were to go out with 2 cameras (1x Polaroid® camera and 1x camcorder) and walk around the school and respond to some loose prompts to guide their route and creation of images.

Circumstances Happen

In the session plan, the 3 year 9 students were to be provided with a copy of prompt sheet, the cameras, and the idea was that they could go and walk and film with a member of the support staff. Meanwhile I would remain in the usual room and undertake some of the activities along with the remaining students. However, as it goes there were absences and occurrences that meant that only 1 of the 3 Year 9 students attended that week. Despite the absences, the walking activity still went ahead, but as 1:1 student/staff activity. The Learning Support Assistant (LSA) accompanied the Year 9 student and they went for a walk with the 2 cameras for the full hour.

On their return the response from the student and the LSA appeared to be both positive. The student particularly liked the Polaroid® images and decided to take this home. After all the students had left the member of staff quietly reflected that they enjoyed the activity and mentioned that it was really nice to have that 1:1 time to get to know the student and find out about their daily life and activities in the school.

MOVEMENTS WITH WALKING-WITH CAMERAS

After what I perceive to be a positive response and some interest expressed from the other students along the lines of more questions and them asking "When am I going to get to go on a walk?", I was able to tweak the loose sessions plans for the rest of that first term and incorporate more 1:1 walks. In the remaining weeks each individual student would have the option to take a turn and do their own walk. All students elected to do a walk. This outcome as an example is just one of the unexpected directions that the project has taken. Overall, I attribute it's emergence to "TNPP" way of doing things and believe when taken forward and aligned with research-creation and co-production this method may query and reshape some of the technologies at large at the mainstream secondary school.

What next for Walking With Cameras?

Learning walks have been widely used in classroom settings and are aimed at supporting professional learning for educators. According to Baker and King a participatory learning walk has the potential to facilitate powerful reflection and inform educational practices (20). In schools in England senior leaders and Ofsted, the English schools inspectorate, use learning walks as well as other models of observation to inform their assessments of individual lessons as well as whole schools. Within the film club and through negotiation and co-production I hope that the walking-*with* cameras method can be reconfigured and flipped in ways so that co-researchers are the ones devising the rubrics of success.

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AN ANALYSIS OF REGULAR PHYSICAL ACTIVITY AS AN INTERVENTION FOR BEHAVIOUR CHANGE IN STUDENTS ATTENDING ALTERNATIVE EDUCATIONAL PROVISION IN ENGLAND

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Abstract

This research investigates the growing number of students that are being excluded or marginalised from secondary education (1, 2). It considers the 'gaps' in their learning and how specialist educators can address these and support them accessing full time education again, through programmes of physical activity. The following categories were identified: how the sessions were structured, and what benefits were obtained by the pupils during these sessions. Sessions were seen to have a positive impact on pupil behavioural patterns/decision making. This included evidence that sessions supported pupils to develop increased self-esteem and self-regulation. This outcome showed the potential to enable pupils to engage more deeply in their application of meta-cognition (3). This was achieved through: experiential learning in physically active settings; through a therapeutic approach; and making sequential improvements in pupil learning behaviours. Recommendations include teachers taking a growth mindset when supporting pupils, a greater focus on positive outcomes, and students leading in their own learning. Teachers were able to include different activities that supported the needs of the individual pupil, reflecting on therapeutic models of physical activity (4), and the impact of learning to learn for vulnerable young people.

Keywords: Ethnographic Therapeutic Intervention Self-Regulation

Introduction

Societal and class divides have always been prevalent but have been magnified through liberal capitalism and neoliberalism in today's educational backdrop. This has led to what Winlow & Hall (5) term 'social redundancy' for some of the public or community. School exclusion figures for England remain high, Alabbad (6) considers these as rising exponentially and discusses how permanent exclusion from school can have significant effects for pupils that find themselves removed or separated from their first-choice setting. Increasingly more subtle forms of exclusion from mainstream lessons and removal from class can impact vulnerable young people in the system, causing long term negativity for pupil self-identity and the relationships they hold with teachers and educational settings (1). This can be termed the 'inclusion illusion' (7), and suggests that longer term disconnects from subject specialists and mainstream lessons can widen gaps in learning from those in most need. This study aims to analyse intervention methods found in education, showing how marginalised groups can be reconnected with education, learning and the establishment as a whole (8). In particular this study analyses the provision of inclusive and restorative systems by specialist providers and the use of programmes of physical activity to support learning and act as an intervention strategy for individual behaviours.

In most cases pupils gain skills of resilience, become inquisitive and develop self-regulation in learning behaviours. Here pupils develop positive interaction with the education setting and protagonists within it (9). Positive interactions lead pupils to develop meta-cognitive strategies, taking increasing ownership of their learning and making a positive contribution to the educational setting. This study aimed to find out if the skills or attributes of introspection and empathy can be taught or imbedded in individuals finding it difficult to access mainstream education who were at risk from exclusion and marginalisation from educational settings. The study analyses the impact of physical activity on these young people and their relationship with education and educational settings, considering topics like 'learning to learn' and overall mental health (10). The objectives were 1) how educators provide for such groups or individuals, 2) the benefits regular physical activity has for secondary aged school pupils, and 3) provide recommendations for future practice.

Review of Literature

A little over 10 years ago Michael Gove and the Conservative government made a number of reforms to the teaching profession and education as a whole (11). In a drive to raise standards schools in England were to be held progressively accountable for academic performance, even if it meant reducing time spent on the more creative subjects like drama, music and physical education. This contradicts many research findings and the well held view that taking part in active learning supports cognition overall (12). For example, cognitive behaviour therapy often seeks to use physical representation of emotions and physical activity in itself as treatment for young people suffering from depression or anxiety (13). This is further supported by the recent publication of a UK government 'green paper' by the Department for Education (14) that highlights the importance of suitable settings for pupils diagnosed with special educational needs; including those with social / emotional and mental health conditions.

There is unanimous agreement from media, teaching unions, government policy makers and researchers that pupil behaviour and behaviour management is a key factor in considering pupil progress and school performance (15, 16). As Machin (17) identifies, exclusion rates remain at high levels and it appears that a minority of pupils within schools are marginalised as a result. This consequentially results in either significant short-term risk for those vulnerable young people or, if poor decision making is not addressed, long term societal problems with reoffending. Pattison (18) explains the need for a more inclusive approach to demonstrate what later research describes as a proactive model of behaviour support (2). Other curriculum areas have used more 'active' methods to help learning and they have worked, driving motivation and enthusiasm among secondary aged school pupils, emotions that suppress any need to behave in a negative manner. This may be perceived as a more inclusive representation of teaching methodology and supports access to learning for many pupils who find more formal systems difficult to work productively in.

Alternative methods of teaching and learning have been used over the years in different guises (19, 20, 21, 22). The barriers to entry for many students include trauma, mental health conditions and undiagnosed Special Educational Needs. There are a number of examples of educational organisations using programmes of physical activity to engage, motivate and support socially excluded learners in accessing education. They are reliant on a number of factors such as: staffing, their physical environment, financial backing or constraints, the nature of the students attending and transport implications. Building on previous work this study suggests that regular physical activity can help young people feel better, take part in positive experiences and start the meta-cognitive journey needed for learning.

Methodology

This current study aimed to investigate how educators implemented courses of regular physical activity to support learning in schools for pupils that are finding mainstream secondary education challenging. It sought to discover if physical activity could be used as an intervention for behaviour change. The key objectives were:

- Analysing the structure of programmes of physical activity.
- Studying the benefits of the programmes.
- Identifying best practice and providing recommendations for planning these programmes.

The research took an ethnographic approach as it was essential to study the protagonists in their environment and consider the reasons of why and how they ran their programmes in the way they did (23). The methods were selected to collect knowledge and experiences through semi structured interviews from a range of people, in this case a secondary school senior leader, a programme leader for an inclusion unit within a mainstream secondary school, and a programme leader from a specialist external setting for pupils who have been or are at risk of permanent exclusion from secondary school. The research sites were alternative provision and consisted of: a small group setting that provided an alternative solution to full classes but that was contained within a mainstream school; a pupil referral settings completely separate to mainstream schools that provided education for pupils who were all either permanently excluded from secondary school or at risk of permanent exclusion (24). The ultimate aim for these settings is to prepare these pupils to go back into a mainstream setting or, at the very least, prepare them for learning in education or training settings post-secondary school age. Data were analysed using thematic analyses to interpret the voices of teachers who worked with these vulnerable young people in programmes of physical activity. The intention of this ethnographic research was to apply findings from current professional practice to generate recommendations for further programmes of physical activity that support pupils removed from mainstream secondary school settings.

Findings

The secondary school in question was state funded, mixed gender intake, with a specialism as a sports college and the number on roll was more than 1200, the 'referral' unit existed as part of a multi academy trust and group of schools in the South of England. It provided education for students ranging in age from 5 to 16 years old. The teachers in the investigation are Teacher A (a physical activity programme leader and behavioural support coach within a mainstream setting), Teacher B (a programme leader providing physical activity sessions for excluded pupils within a specialist pupil referral unit) and Teacher C (a member of leadership team for the mainstream school).

Using Physical Activity as Therapy

The schools in this research repeatedly used the word therapy when discussing the qualities of their physical activity programmes. Research supports this concept as Sweeney (25) suggests the physical process of exercising improves mood and releases endorphins that help relieve stress and help the individual feel better. The structure of these type of sessions follow an informal discussion about challenges facing the referred pupil as he or she takes part in physical activity, Teacher B stated that physical activity:

‘Offers the chance to learn, where pupils have had a poor experience of school it can help restore their trust in the system’.

Teachers added that the sessions should be held on a regular basis, three or more times a week in order to get the most benefits from them.

Physical Activity helps pupils build relationships

Relationships were built and supported by strong foundations allowing marginalised pupils the opportunity to feel more included in the process of education. All three members of staff highlighted the need to tailor the sessions to meet the 'needs of the individual' (26), one went further and discussed the need for sessions to engage and support specifically those pupils with attachment disorders. Teachers allowed the important 'soft skills' of communication to be used during a 1:1 physical activity session, modelling behaviour and reciprocating through each session. Teacher B remarked, 'I am offering the chance to learn to learn for them'. Also, teachers structured activities so there was a necessity for mutual trust set against a perceived risk or danger for both, a reliance or guardianship under pressure. This was done in a variety of ways, for example belaying for each other on an indoor climbing wall or supporting during weight training were physical manifestation of the trust working under scrutiny. Teachers reiterated the need for this physicality in learning and it suggests there is an amount of embodied cognition for the learners as they continue on their journey.

Physical Activity helps with pupil mental health

For many pupils attending specialist provision and for those at risk of temporary or permanent exclusion from school their mental health may not be as regulated and well balanced as that of other pupils (27). Many are considered as requiring special educational needs for Social, Emotional and Mental Health reasons (28). Teachers in this study fully understood this and adapted their sessions accordingly, perhaps the best example coming from teacher B in the pupil referral unit.

'It's all about teaching the individual, progress does not follow a linear pattern, you have to fill in the gaps from their prior learning and knowledge overall'.

The teacher went on to describe how he used Maslow's Hierarchy of Needs to help young people feel better able to access learning. Supporting them with the simplest of requests first if needed, feeding them if necessary, listening to them and providing constant positive feedback. Finally taking note of their physiological, safety and social needs before accelerating onto learning. This also suggests that the pupils considered most at risk may require very different teaching techniques to their mainstream counterparts. The traditional routes and measures of progress might be more aspirational or targeted over time rather than routinely used to plan activities. This research suggests a much more nuanced outlook to learning from the staff that is reflective of the sometimes-unpredictable nature of the pupils. Presenting session content to reflect the learner need or requirement rather than asking the learner to adjust to the content was of key importance, therefore adaptability seemed crucial.

Physical Activity builds self-esteem

Physical activity relies on correct planning of the sessions, considering ability levels, experience and other personal and environmental factors (29). These planned sessions came from many different activity areas such as resistance training, cardiovascular exercise, countryside walks, Outdoor and Adventurous Activities, racquet sports, boxing and cricket. Teacher A described at length how he uses a positive psychology model to set targets for the pupils and then achieve the targets using a combination of physical activity and 'life coaching' (30).

'as a father type of figure, I see the pupils feel hopeless, Physical Activity gives them success...there is a pupil-parent-school dissonance...they need to find their character strengths and build self-awareness'

'The PERMA model gets pupils to reflect and feel positive about themselves'

This style of positive psychology promoted through physical activity sessions gave the pupils an opportunity to show what they can do, because they felt that often in lessons they did not get the chance to do this and association was given to what they knowledge or skills they lacked or were

unable to perform. Teacher C discussed the same topic and added salient advice by suggesting pupils found most positive experiences by taking part in individual / non-competitive formats, often using specialist coaches where necessary. In this instance the coach delivered the specialist content and the pupils had the teacher encouraging / working alongside, providing a missing inner positive dialogue delivered from an external source or intervention. Through time this could be reduced but the teachers said the dialogue supported these learners with a new task in particular, also offering the opportunity to reflect on how they learned best during the lesson.

Physical Activity allows access to learning

Allowing pupils to access sessions at their own pace and working individually as well as in groups was important, this experiential learning was referred to by Teacher B and they go further by suggesting physical activity sessions at specialist provision could be learner led, removing the authority figure from the classroom. This type of approach still fulfilled safety and professional requirements but did not take the pupil through a preordained journey where the teacher gave various instructions. The Education Endowment Foundation (31) suggests this kind of approach will leverage learning through a process of metacognition. Pupils can access different levels of knowledge and taxation at their own pace and representative of their knowledge and ability, a constructivist method of learning. Teacher C identified this approach as staff understanding the academic and therapeutic needs of the pupil and pitching learning commensurately. It also highlights that the dialogue between staff and pupils becomes less centred on behaviour and more about their learning, which shifts the dynamic entirely, both vested interests now discuss progress rather than focusing on anything negative.

Conclusions

The research indicates that teachers should use a growth mindset and focus on positive pupil outcomes rather than specific areas of under-performance. Where possible they should use positive psychology methods to support learning, for example the PERMA model described by Teacher A. They can consider a wide range of sports, beginning with non-competitive individual activities and work upwards to more challenging situations. Where possible using qualified coaches to deliver and teaching staff to 'walk' the pupil through their learning. The following benefits of these programmes were actively observed:

- i. Participation in exercise and physically active learning helped engage vulnerable pupils back into learning in general. Providing access to other subjects and activities in education as a whole encouraged learners to go through a process of metacognition.
- ii. Over a course of time physically active sessions improved pupil behaviour and decision making as they become increasingly comfortable with rules, structure and self-regulation.
- iii. Regular participation in physically active learning sessions may have encouraged pupils to access higher and executive functioning skills, for example application of working memory and impulse control (32), in turn reducing more unitary thought processes that support poor behaviour.

This method of learning was identified as supporting vulnerable young people through a combination of experiential and constructive learning. It provided a sense of imbrication for the learner and a journey of embodied cognition that yields positive results. The staff were unanimous in view of the benefits regular physically active learning had for disadvantaged or marginalised secondary school pupils.

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THE UN-TOOLKIT: GETTING TANGLED IN KNOTS AND EMBRACING THE UNEXPECTED WHEN RESEARCHING WITH NEURODIVERGENT YOUNG PEOPLE

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Provocation

This un-toolkit came to be woven from a variety of wandering threads: the theoretical insights of Ingold's (1) lines and knots entangled with ethical and practical threads from my time as a teacher, which were always inevitably knotted with my own school experience. Pulling the methodological thread of this emerging inquiry, I realised that some of those entwined threads were heaving and hauling through space and time, and I came to see how they were interconnected as part of the same knot. The un-toolkit is my attempt to look at, unravel, and re-tangle some of those existing threads, and invite new ones into the emerging research tapestry that encompasses my doctoral project.

Keywords: creative research methods, neurodivergence, secondary school

Context

Mainstream education in England is broadly governed by a neo-liberal ideology which is intricately knotted with school-based identity formation (2, 3, 4). Current policy aims to control students through categorisation and compliance: standardised individualising systems discern which students follow 'normal' or 'abnormal' trajectories by pitting them against each other and ranking them in multiple ways. At school level, this political turn has created an increase in the carceral rituals utilised in mainstream settings struggling to manage 'difficult' behaviour with reduced access to classroom support or suitable alternative placements. Such rituals are facilitated by punitive rules, micro-management, and isolation that reinforce in-school power hierarchies. This ideology has been perpetuated nationally through the recent roll-out of 'Behaviour Hubs' (5) where "Outstanding" schools mentor struggling institutions in "zero-tolerance" school policies. Recent research suggests that such approaches remain generally ineffective for managing behaviour, and contrast recognised knowledge about adolescent development (6, p. 8, 7, p. 989). Furthermore, reduced feelings of school 'belonging' perpetuated by such ideologies have been thought to contribute to increased rates of school exclusion (8).

Thinking in knots: theory and methodology

The project employs the concept of the knot (1) to de-centre traditional conceptualisations and research process that may negatively impact young people. Utilising the concept of the knot to explore

feelings of school belonging is beneficial as it is inherently antithetical to traditional ordered systems that exist within education policy and practice, and also in research.

Thinking in terms of knotted entanglements helps us to understand instead the interconnected lines between students and other actors (such as things, people, places, atmospheres, and systems) that impact their school experience as part of a tangled social world. It enables an exploration of factors from the macro-social influences of education policy to the micro-social impact of one physical school space, or the atmosphere felt in an after-school detention; more than this, it enables us to explore such factors through, and in relation to each other, giving a comprehensive insight into the lived experience of school life.

Embracing an understanding of the social world as a complex knot also helps to delegitimise and destabilise traditional relationships between researcher/researched and teacher/student. The knot is anti-hierarchical, with no consistent base or centre from which roots grow. It has a proclivity to form cuts and knots, but inevitably begin again as a new line, or form new paths from an existing line. Thinking with knots enabled me, through varied means (including the un-toolkit) to destabilise existing and accepted ways of knowing.

The knot is also reflected in ethical threads of the project which trail beyond the formulaic requirements of institutional ethics, developing a compassionate and iterative ethics process that responds to the needs of all participants. One way this is achieved is by promoting autonomy and inviting problematisation and refusal: the project aims to destabilise traditional researcher/researched dynamics through a responsive and dynamic commitment to doing research *with* young people. Destabilising traditional research processes utilising the concept of the knot also requires a reflexive awareness of researcher positionality; the un-toolkit helped me to reflect on my positionality at different stages of the project, including during my time in school. Acknowledging my own position as researcher as part of this entanglement allowed me to consider the impact of my own school experience, and my professional background as a teacher, through which I became further intertwined with certain ways of talking to, thinking about, and approaching young people.

With the help of the un-toolkit, I aimed to position myself as a “sympathetic other” which required my “imaginative, emphatic, reflexive engagement” (9, p.36) in ways outlined below.

Cutting and weaving threads: creating the un-toolkit

Creating and using the toolkit was not about attempting to think of and prepare for every eventuality, but rather to invite the unexpected in a way that centred the changing needs and wishes of everyone involved in the research process. I tried to be continuously aware of how they may be defined or viewed through diagnoses or needs assessments in other contexts. My aim was to create a space where they felt at least a little bit, but hopefully a lot; they could just ‘be’ without judgement or expectation, however far that was possible within the school environment.

My aim was not to use the tools in a predictable way that would ‘improve’ young people’s access to the research, and make their contributions longer, or fuller or, ‘better’ in some way. Instead, I wanted to engage with interwoven knots of the school environment through a creative process tangled in improvisation. Ehret (10, p.55) notes: “[s]tories emerge unpredictably in felt response to being here-now, there-now, and later-now, nowness whose affective lines emanate outward toward participants’ always right-now lives in unfinished worlds.” My intention, and the way in which I thought the toolkit worked quite well, was to be ready to engage with what leaked out beyond the probable or expected. I aimed to tacitly encourage this for the sake of shifting or nudging or in some way affecting, however temporarily, how those young people felt in school.

A secondary aim of the un-toolkit was to invite researcher vulnerability. To undertake necessary and important research with vulnerable groups, specifically young people, we ask them to be vulnerable,

often in institutional spaces that contribute to their vulnerability. It is only right then, that as researchers we are willing to be vulnerable, invite problematisation and refusal, and be prepared for unexpected outcomes. As part of a gentle research methodology, this requires methodological and ethical pondering about how this can be achieved, and for this project, the un-toolkit was one such way.

What was included in the un-toolkit and why?

Ingold (11, p. 10) writes that “[t]o improvise is to follow the ways of the world, as they unfold, rather than to connect up, in reverse, a series of points already traversed.” The aim of utilising tools documented here was to help us follow what unfolded in the school. Not only were the tools in the kit used by the students, but I found myself holding and manipulating the toys to process some of the excess energy (anxiety, and feelings of ‘getting it right’ for young people) that is an entangled and entwined part of me as a researcher, and as a person that is part of the vivid research tapestry we were actively co-creating. As the project unfolded, I was continuously aware of how the project was knotted and knotting with my own experiences, capabilities, and responsibilities.



Figure 1: The 'un-toolkit' as it was laid out for young people at the school

Laminated copy of young people's participant information sheet

The young person's participant information sheet (PIS) was an important part of the research process; thinking through its form and function in comprehensive detail was a foundation of the entire project and helped me develop my methodology further. Many examples of PISs that I found for children and young people did not focus much on accessibility or age-appropriateness. My teaching background provided a strong awareness for developing the PIS, and I used a variety of tools to make it more accessible.

The first important consideration was the demographic, and the second was the way that assent would be ascertained, in the first instance, at home with parents and carers. The project made space for parents/carers and school staff to give their opinions, and the iterative ethics process made a point of foregrounding problematisation and refusal: I hoped that both features, explicitly mentioned on the PIS, would help avoid any pressure from parents/carers or school staff for young people to participate. A non-negotiable part of the ethics procedure was making time when working with each young person to refresh their memory about the PIS, and again make space for problematisation and refusal. I

explain below how I used other tools to make this part of the research process more accessible, and this was another way I tried to limit outside pressure for them to participate.

An important feature of the project was ensuring young people's consent was as informed as possible which is why I included a young person's assent form, and iterative ethics process, in addition to the parental consent required by my institution. To create the PIS, I took all the information from my university's standard consent form and adapted it to make the language appropriate for young people, including providing plain English definitions for complex terms. Moreover, I incorporated additional features to help aid comprehension such as using functional images, repeating important points, and using sans-serif fonts, paper colours and formatting features that may be beneficial for young people with additional communication needs or differences, such as dyslexia (12). I was aware that some young people, parents/carers, and others may have language and communication differences or use adaptive software to help them read. For this reason, I made all communications available digitally via a QR code that was visible on flyers and a text message link sent via the school's messaging system. Last, I made participants and others aware that all information could be made available in other formats, such as large print, on request.

The PIS contains a lot of information which is important but potentially overwhelming, and so it was important for me to set the right tone and ensure that the document was appropriately formatted to respond to the needs of young people. Throughout the PIS, I employed an informal and friendly tone, starting with a big 'Hello!'. I began with a short introduction where I explained in a couple of sentences who I was, what I was doing, and how young people could be involved.

Important things to know



You can say 'no' or stop taking part in the project at any time.



When I talk and writes about the project, I will keep everybody anonymous. This means that I will change everybody's name (and the name of their school) so nobody knows that the project is about them.



I won't tell anybody what you have told me. This is called confidentiality. The only time that I would tell somebody what you have said is if you or somebody else is in danger.

Figure 2: 'Important things to know' section from PIS

The next section was instructions on what to do with the PIS. These instructions were short and accompanied by images to aid understanding, and hopefully making the consent process more engaging and less intimidating. It was important that images used in this way were predominantly functional, as this is a similar comprehension and communication tool to those used in other educational and therapeutic settings with which young people may be familiar. The following sections covered: what the project was about and who would be involved; potential benefits and drawbacks; what would happen when the project was finished, and 'important things to know'. This part reinforced key ethical considerations around participation, problematisation, and refusal. To further enhance its readability, I used a question-and-answer format.

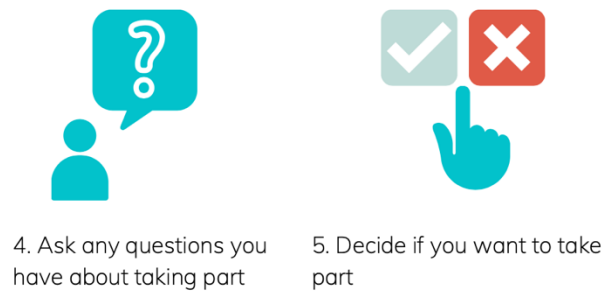


Figure 3: Extract from 'What do I need to do?' instruction section of young person's PIS

Sensation seeking toys

I chose to incorporate sensation seeking toys in the un-toolkit because the sensory, social, and environmental pressures of participation could become quickly overwhelming; neurodivergent young people have shared that sensory self-stimulation is one way that they process such situations (13).

I was aware that some of the students carried labels or diagnoses for differences that may impact their ability to contain their attention, frustration, excitement, or boredom in ways necessitated by the school environment, but I did not know their individual needs. For this reason, I included a couple of different toys that responded to different sensory seeking preferences.

Mobile phone and extendable handle/mini tripod

I chose to use a mobile phone instead of a personal camera-type device as I felt that the phone may be familiar to young people, which may allow them to take ownership of the equipment we were using more readily, affording them perhaps a sense of autonomy and self-confidence through its familiarity. To mitigate some ethical tensions of using a personal phone, I used an old phone, deleted all personal data, and removed all applications apart from the camera. Using a phone also helped reduce the time we dedicated to exploring how to use the equipment, and with it the need to relay too much complex information at one time.

Lanyard with 'student researcher' badge

Some of the tools served multiple purposes: the aim of the 'student researcher' badge was to invite a sense of autonomy and control over how events unfolded for young people in the research project, and whilst some did engage with it in this way, it also served as a marker of young people's reluctance or refusal to be visible in certain ways when they did not want to wear it. This refusal largely echoed their thoughts and actions whilst filming, and their feelings towards school, which came up later in the project. Giving young people the choice to engage or refuse through small acts and objects helped me to gauge their feelings and needs (in a way that was not reliant on verbal or written communication).

Clip-on microphone

The clip-on microphone was used to enhance the phone's capacity for quality audio recording which may have otherwise been limited due to the open, echoey school environment. I was conscious that young people, for different reasons, may be very aware of being visible in the school space, so tried to reassure them. For example, when I talked about the equipment with them, I emphasised that the microphone would not amplify their voice and invited them to refuse wearing it.

Watch

I only had a limited amount of time to work with each young person 1:1, and I was very cognisant of carrying out the research in an environment with reduced sensory and social stressors. From an institutional ethics standpoint, it was essential to avoid recording anyone who was not involved in the research. The project was undertaken in the school corridors during a normal school day; this meant the quietest moments were during lesson or form time. I used multiple opportunities before and during recording to make young people aware of the time, and how long we had left before the corridors would become busy. Being removed from lessons can be somewhat confusing and disorientating, so I reminded the young people of where they would be going next, and offered to walk there with them, or call a member of school staff to escort them.

The school environment is bound by a rigid structure that can feel stressful and overwhelming for neurodivergent people (14). I was aware of how students were heavily regulated by school time, so I tried to resist or destabilise this by offering options about time spent on the project. I let them know that they could carry on after breaks or lesson changeovers if they wanted to. However, interweaving with school time had some benefits: providing the time can be reassuring, especially for young people who feel more comfortable with routine, and predictability. This awareness and continuous communication aimed to demonstrate respect for young people's needs and wishes; it is an example of how small but considered acts contribute to dismantling traditional research hierarchies and conceptualisations of childhood.

'We are recording' swing tag for tripod

I was conscious of how non-participants may come to be included in research artefacts (in this case, videos) created at the school. I also created a swing tag to attach to the front of the handheld tripod to inform those we encountered inside the school that they were being recorded. I asked the school to inform school staff in advance when we would be recording on site; this meant that recording could take place on the school site, during school hours.

Notebook

I included a notebook to enable me to write notes about my experiences, and made another section available to young people who may want to write down reminders, doodle, or log their ideas and opinions without verbalising them to a stranger.

Young people's interactions with the un-toolkit

The first student that I interviewed was very intrigued by the toolkit as it was laid out on the table and began asking questions about it as soon as they entered the room. They were particularly interested in wearing the 'student researcher' badge and put it on immediately before exploring the other equipment, taking a clear interest in putting it together, and how it worked. It is interesting to note that this student expressed a high level of awareness about in-school hierarchies, power, and surveillance; they readily modified their behaviour considering these, such as feeling the need to creep past the Headteacher's office, even when they knew it was empty. They used the equipment to stand out in a different way, with a level of legitimacy or power it seemed they did not ordinarily possess.

The first student's response was what I had envisioned may happen when I created the un-toolkit, so the other varied responses were welcomed but unexpected. The second student was much more reserved and did not approach the equipment initially. The un-toolkit was still useful in this scenario: introducing each piece of equipment to the student, and by inviting problematisation and refusal, allowed me to gauge what they were comfortable with, if anything. This student chose not to wear the 'student researcher' badge but did want to hold the camera as we walked around school. Recording a walk around their school gave us something on which to focus, taking the pressure off the need to chat; compared with talking 1:1 in the classroom, they became more engaged and talkative when we were on the move and focusing on something else.

Their interactions with the equipment highlighted interesting methodological, ethical, and technological gaps between us: I was aware of ways this method could engender a sense of control, but I was not prepared for how acutely aware young people would be, not about recording, but about being recorded, and the recording as an artefact. The un-toolkit, as part of an iterative ethics process, allowed the young person to engage with or refuse the feeling of being (more) visible by stopping at any time or choosing the ways in which they were visible, as outlined above. This was the moment for me that the necessity of my epistemological position became acutely clear.

Role of the researcher

At the point of entering the school to meet the young people, un-toolkit in hand, I believed that I had a good grasp of the entangled methodological and ethical threads I may encounter, and the tools required to weave in new, emerging ones. I was focused on being aware of what unfolded and felt that the project aptly reflected my personal and professional experience, and ethical position.

Yet, in varied ways, I felt myself undulating, not just between 'traditional' and 'gentle' researcher, but teacher, adult, and even student. I planned ways to appear relaxed and somewhat antithetical to school staff, but on entering the school, I slipped into being 'on' in that unique teacher way. I filled gaps where I should have maybe stayed silent. I was anxious at times about *gathering* enough 'stuff' for the project, and I was not always 'in the moment' with young people. Here the institutional requirements of being a teacher and a researcher, real and imagined, past and present, collided.

Actively resisting the temptation to fill more gaps, ask more questions, or 'be' a certain way made me think about how the positionalities I have so far traversed were as much a form of protection as they were professionalism, especially in environments where things are heavily controlled but often feel out of control. To shirk the teacher mask, and simultaneously the sureness and practicality of traditional, organised, ordered research was to invite unpredictability, and with it, vulnerability. I was a teacher, researcher, adult, person in an unfamiliar, high-stakes situation and it was difficult to practise then (and divulge now) that evading my position of power was challenging and stressful.

It was with the help of the un-toolkit, as outlined above, that I was continually reminded of the project's ethical foundations which continually reconfigured my thinking. It was not perfect – but that formed part of my entanglement. The un-toolkit reflected and refracted the holes in the project 'meshwork' (1) we had created. Any moment where I had to consider my own positionality and actions, made me a more reflexive, compassionate, and sympathetic researcher (9). By resisting the pull to be in control, threads were encouraged to emerge, tangle, knot and break forming new knots that may have otherwise not been created. It was many of these new knots that brought about some of the most interesting and unexpected moments of the study.

Through the research process I discovered that I was complexly enmeshed with many existing, but hidden threads; they pushed and pulled me, like a marionette listing through time and space, towards traditional ways of knowing, and past professional positionalities.

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MINIBEASTS, MARK-MAKING AND ME: DEVELOPING A TRANSFERABLE ‘NON-CONTAINMENT’ MODEL OF PRACTICE INVESTIGATING HUMAN-INVERTEBRATE ENCOUNTERS USING AN EMBODIED DRAWING APPROACH

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Abstract

Against the backdrop of a biodiversity crisis and the ongoing debate around invertebrate sentience, this ongoing practice-based PhD investigates and contextualises the untapped potential of subjective drawing and mark-making within human-invertebrate encounters. The project focuses on encounters between the human and nonhuman ‘minibeasts’ living within the house and garden, including snails, spiders, butterflies, bees, woodlice and worms. This domestic focus developed during the Covid-19 lockdown after initial encounters with preserved insect specimens within natural history museums and butterflies housed within tropical butterfly houses. The research is asking how humans interact with these nonhuman animals living alongside us every day within our houses and gardens and how these encounters can be explored using drawing. Specific ‘non-containment’ drawing and mark-making techniques are presented, which seek through their application to explicitly investigate the agency of both human and nonhumans within a domestic setting. Developing an in-situ, embodied approach to working alongside the minibeasts encountered, the categories ‘Meeting Places’; ‘Feelings’; ‘Sounds’; ‘Bodies’ and ‘Movement’ evolve through practice into a framework alongside three drawing processes. This research aims to widen the practice of natural history drawing from the dominance of objective illustration focussed on anatomical accuracy to include more subjective and abstract responses to minibeast encounters. Within the practice three main drawing and mark-making practices are presented as: DWL (Drawing without looking at the paper), DES (Drawing with eyes shut) and DMB (Drawing moving the body) in order to embody movement and proprioception within the drawing act and explore minibeast encounters as dynamically as possible using all the senses. Reflective autoethnography, written records and the creation of videos of practice have helped to co-ordinate and curate the practice research into a visual blog and an exhibition of practice. Through the development of a transferable model of drawing practice, it is hoped that in the future the potential of embodied drawing as a multispecies ethnographic research method to investigate minibeast encounters can be applied within schools and environmental education settings. It is the long-term aim that non-containment drawing models of multispecies enquiry could gently critique the status quo of ‘minibeast hunts’ within education and ultimately open a pathway to enable human-invertebrate relationships to improve and flourish.

Keywords: multispecies, encounter, mark-making.

INTRODUCTION

This ongoing PhD project has developed against a backdrop of current research suggesting catastrophic insect decline is occurring right now (1,2). At the same time, research shows an evolving comprehension of invertebrate sentience (3,4) which is challenging the boundaries previously laid down between vertebrate and invertebrate beings. As we become more aware of both the similarities between minibeasts and humans and the impact of biodiversity decline, the race is on to develop methods of living alongside one another, and answer Donna Haraway's call to 'stay with the trouble' (5) before permanent catastrophic damage occurs.

Much of current multispecies ethnographic research is not offering transferable models of practice for working with invertebrates, instead investigating facial expressions and movement of larger mammals such as dogs, horses, and farm animals through practices such as following and co-breathing (6). Embodied drawing practice including performance drawing, although well-established (7) still operates overwhelmingly within a humanist framework, nearly always assuming other bodies present to be human bodies (8). The opportunity to explore the potential of embodied drawing practice explicitly focussed on human-invertebrate multispecies encounters therefore emerges to a) shift drawing research from a humanist to a more-than-human research arena and b) contribute an innovative practice-based research method to multispecies ethnography. This article presents the methods used within the practice research and the drawing 'data' accumulated over four years with reference to the following research questions:

How can embodied drawing practice explore and acknowledge the agency of both humans and nonhuman participants within situated minibeast encounters?

How can an embodied drawing approach towards human-minibeast encounters be successfully analysed, curated, and presented as a multispecies ethnographic research method?

METHODS

Methodology and setting of research project

The project adopted an inter-disciplinary open ended, posthumanist, practice-based methodology. During the first data-collection phase (2018-2020), examination of previous drawing practice was combined with drawing and mark-making, factual research gathering, and reflective writing carried out in three types of locations: Natural history museums, tropical butterfly houses and the domestic house and garden of the artist (at that time in North London). During and following the Covid-19 pandemic the second phase of practice research (2020-2022) focused solely on the domestic setting of the house and garden (which changed to Ventnor on the Isle of Wight May 2021).

Bodies present within human-minibeast encounters

Minibeast bodies present within encounters included dead preserved insect specimens in natural history museums and housed live butterflies. Minibeast bodies within domestic encounters situated in the house and garden are listed in Table 1 below.

Table 1: Minibeasts encountered during the research project

spider	fly	snail	slug	butterfly
grasshopper	shieldbug	ladybird	cranefly	cricket
bee	worm	woodlouse	ant	beetle

The term minibeast was first introduced in the UK in the 1970s as a term to aid primary school teaching and animals that can be assigned to this group differ according to habitat and size. It is also recognized here that a human body contains a multitude of invertebrates and other living bodies, the artist is therefore approaching each encounter as an assemblage of living beings. Haraway discusses

nonhuman organisms or companion species as including the bacteria, fungi and protists in her body and states “I am vastly outnumbered by my tiny companions; better put, I become an adult human being in company with these tiny messmates. To be one is always to *become with many*” (10).

Feeding, developing and disrupting the drawing practice research

A wide variety of activities were used as part of the practice research to feed, develop and disrupt the drawing practice, to encourage use of the whole body as an embodied drawing tool, to generate or access minibeast encounters, and to collect both written and drawing data. These included the three main drawing techniques DWL (Drawing without looking at the paper), DES (Drawing with eyes shut) and DMB (Drawing moving the body).

Development of non-containment approach.

Drawing adaptations that evolved around not capturing minibeasts allowed the mark-making to become freer and less constrained whilst affording more agency to the minibeast. By adapting the drawing ground, encounters could be inclusive of the drawing process without the need to move, contain or disturb the minibeast, for example by working with holes cut in the middle of the paper as shown in Fig. 1 and Fig. 2, and using a shirt as drawing ground in Fig 3. Drawing onto a shirt allowed me to follow the butterfly in flight, a video of which was presented at the research exhibition. Adopting a non-containment framework encouraged me to draw as much as possible in the moment and in-situ. It also forced me to examine my fears and feelings about working alongside spiders in the house when they were free to move at any point.



Fig. 1: Mark-making alongside snail in the rain



Fig. 2: Mark-making alongside spider on the wall



Fig. 3: Mark-making on a shirt alongside butterfly in flight

Generating and accessing a variety of minibeast encounters.

'Meandering' was employed as a principal research method: Slowly walking around the house and garden, I would take time to stop, crouch, sit or lie down and wait in different areas to see whether a minibeast encounter might occur. Minibeast encounters were sought out within the house, garden and even on the outside of the car within the wing mirror and on the windscreen. Minibeast encounters occurred at different times of day and in different types of weather and I adapted my drawing practice time and location to suit various minibeasts, for example snails were out during and after the rain and slugs were often more active at night as shown in Fig. 4. No Mow May – a recent movement by Plant Life to encourage people not to mow the grass in domestic gardens for the month of May (13) encouraged minibeasts such as ladybirds and bees to visit the lawn, due to the increased dandelion coverage.



Fig. 4: Mark-making alongside slug at night

Documentation and exhibition as research methods.

My previous drawing practice was examined to identify and develop sustainable and effective patterns for practice research over a prolonged period of time. These included working in series, maintaining a visual blog, reflective journal, and mark-making diaries, creating videos of practice, and keeping minibeast written records. Online Field Studies Courses increased knowledge about the animals within encounters and also provided ethical material to investigate within drawing. Visual data was curated and refined over time for exhibition.

SITES OF PRACTICE: ENCOUNTERS, EXPERIMENTS AND EXHIBITIONS

Human-minibeast encounters within Natural History Museums and Butterfly Houses

Between Oct 2018 and March 2020, Visual and written data was gathered from Natural History Museums in London, Tring, Ipswich, Oxford, Vienna and Southsea. Photos, written reflective records, videos and discussions with family and friends were collected and helped to develop and contextualise the drawings produced in these places.

Drawings produced during visits to natural history museums focused on moving through the physical space and observing the conventions attached to preserving specimens such as labels and display cases. The sights, sounds, smells and feelings were recorded as shown below in Fig. 5. On the left the drawing shows an imposing, overwhelming, crowded collection of drawers and display cabinets surrounding me within the archive. Brown colour is used to signify the wooden appearance of cabinets within the archive. On the right small experimental drawings portray what the sounds and smells of the archive might look like in a visual form and help me recall the sensual experience of being within the archive.

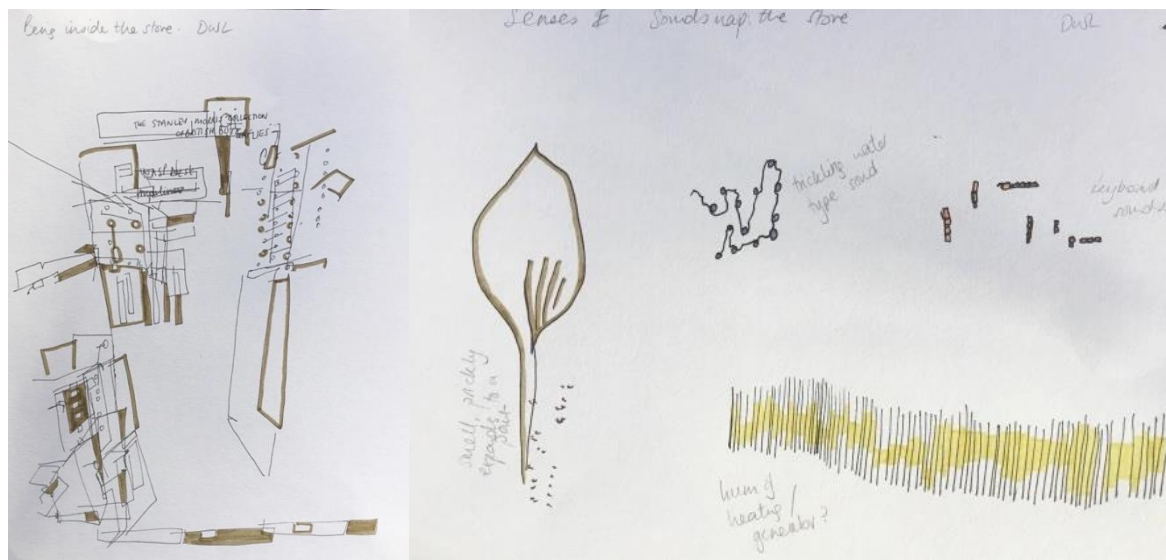


Fig. 5: The Natural History Archives in Portsmouth Feb 2022

A series of field trips to encounter butterflies housed in tropical butterfly houses in London, Swindon, the Isle of Wight, Whipsnade and Southsea took place during the same period. Again, photos, observational notes, videos and discussions helped to develop the drawings produced during these encounters.

Drawings within tropical butterfly houses concentrated on the sights and sounds of both butterflies and visitors, and included identifying and connecting with feelings associated with the containment of the butterflies as shown in Fig. 6. Again, the sensory experience is overwhelming but this time it is a much more dynamic environment, with constant movement and noise within the space which is represented through overlapping drawings. I become aware of how the butterflies are trapped inside the structure of the butterfly house and how they flit around the ceiling, unable to reach the open sky and - the drawings contain boundaries and borders to illustrate this containment.

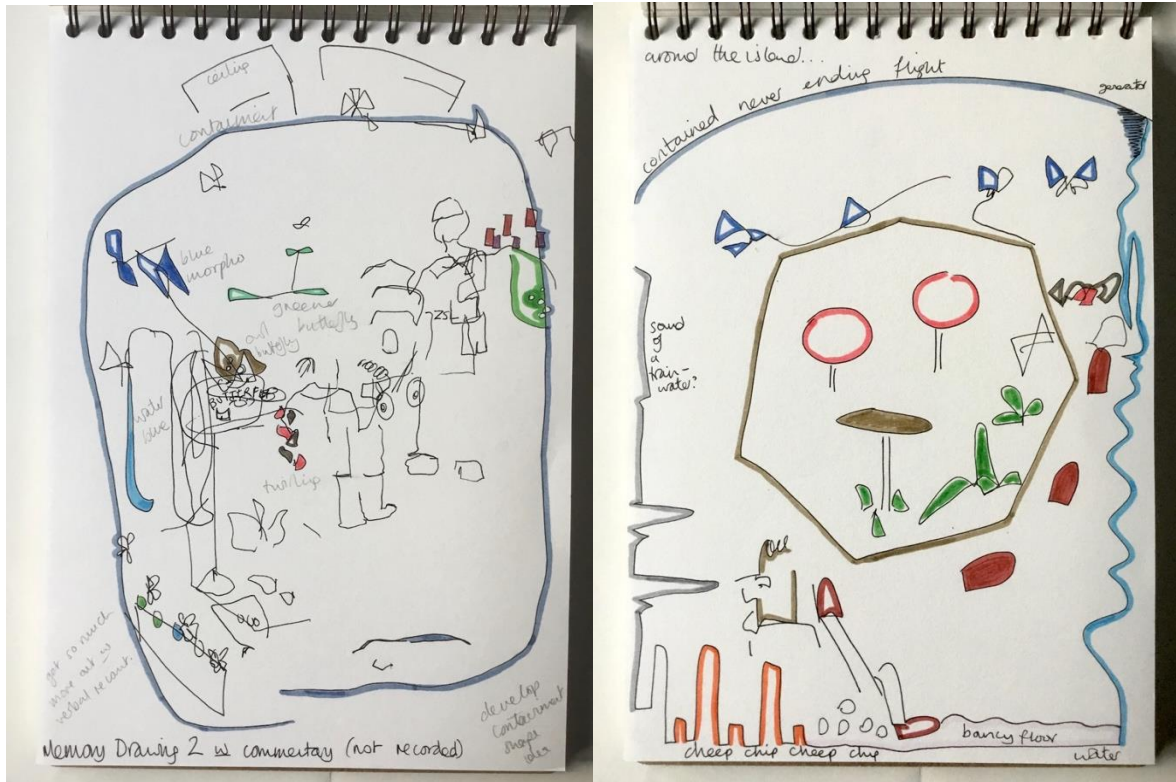


Fig. 6: Whipsnade Butterfly House Feb 2020

Human-minibeast encounters within the house and garden:

From March 2020 a huge shift in both sites of practice and everyday domestic life occurred. Amongst the confusion and fear of a global pandemic, drawing and mark-making within the house and garden took on a new, primary importance. Confined to 'staying at home', the opportunity to rediscover my immediate domestic environment as a primary site of research practice was embraced and documented chronologically on a research practice visual blog.

Ant Encounters April 2020

Fig. 7 shows a series of line drawings of encounters with ants on the fence during a prolonged observation over many days as the ants travelled along the same route. The drawings focussed on the ants bodies, movements and meetings whilst remaining aware of my own body and feelings as I sat on a stool close to the fence. At times I would put my hand on the fence and watch as they negotiated around my fingers. I became aware of feelings of companionship as I spent time drawing alongside the ants every day, finding comfort in their constant travels along the fence. I became more aware of the difference in scale between our bodies and was careful not to abuse my size advantage within our fence encounters. I was envious that they were still operating normally within their community, mixing

and meeting one another whilst the human world was becoming separated and isolated during the first lockdown.

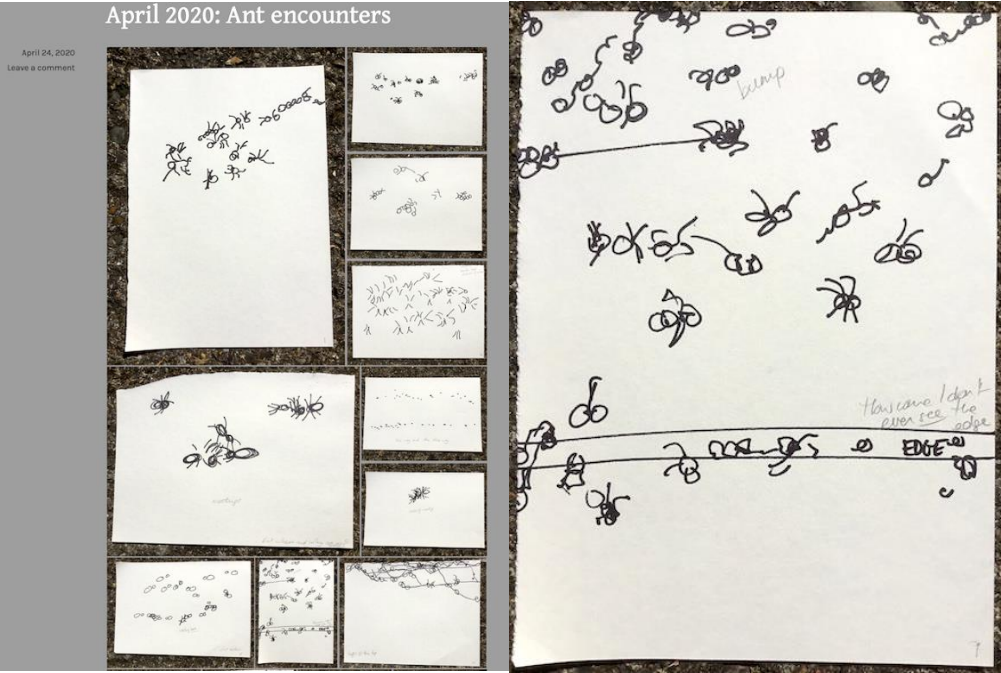


Fig. 7: Ant encounters on the fence

Woodlice encounters May 2020

Fig. 8 shows a series of drawings investigating encounters with woodlice on the patio in the garden.

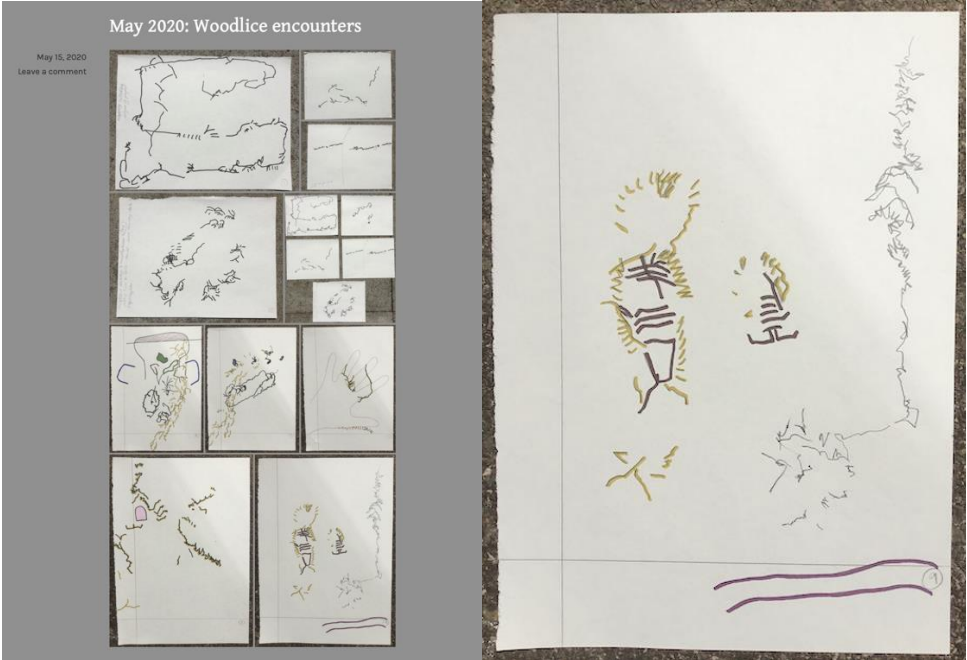


Fig 8: Woodlice encounters on the patio

This series of includes references to my body within the drawings for the first time through outlines of my hands and a pink fingernail. The series uses colour to track and present the movement and the bodies of the woodlice as they move around me.

Beetle encounter June 2020

Fig. 9 shows series of drawings completed after a beetle landed on my daughter’s finger. Referring to live i-Photos manipulated using the bounce and loop functions, drawings were made after the encounter using DWL and DES. Two of the drawings within this series were subsequently selected for the Trinity Buoy Wharf Drawing Prize Exhibition 2020 which toured the UK.

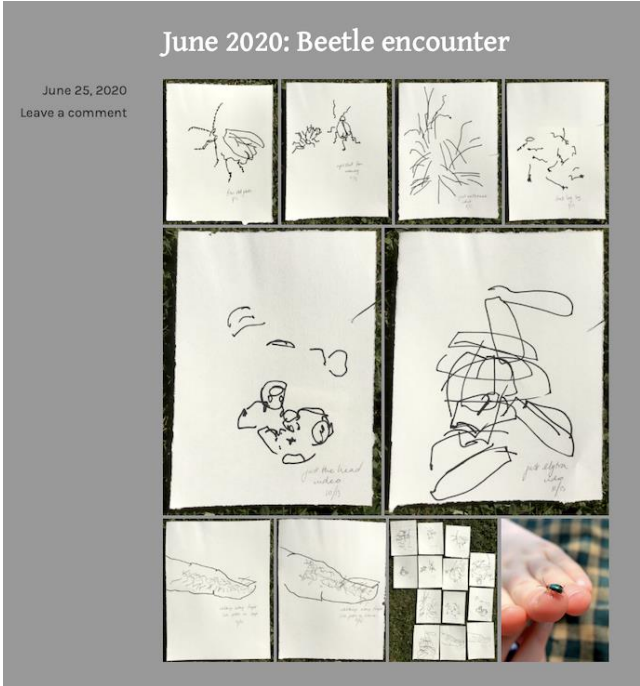


Fig. 9: Beetle encounter

Fly in the pepper encounter Sept 2020

Fig. 10 shows drawings within a series detailing the experience of cutting open a red pepper in the kitchen and inadvertently freeing a grey, malformed house fly which had developed inside. DWL, DES and the colour red help capture the shock, horror, disgust, and disproportionate fear I felt as the fly flapped hopelessly on the clean chopping board before dying and being disposed of into the bin.

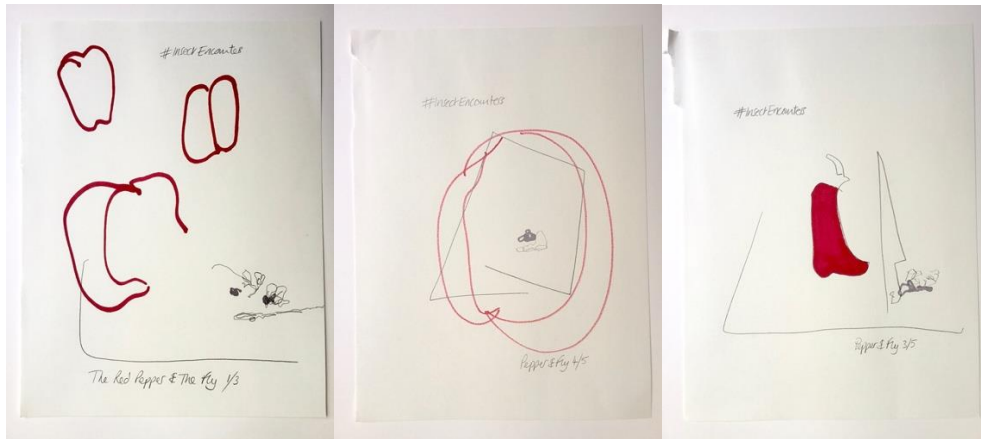


Fig. 10: Fly in the pepper encounter

Spider in the glass encounter Oct 2020

Fig. 11 shows a series of monoprints developed from the experience and live photos of capturing a large house spider in a glass to move it outside. This series was an important turning decision point in developing a non-containment in-situ drawing practice model.

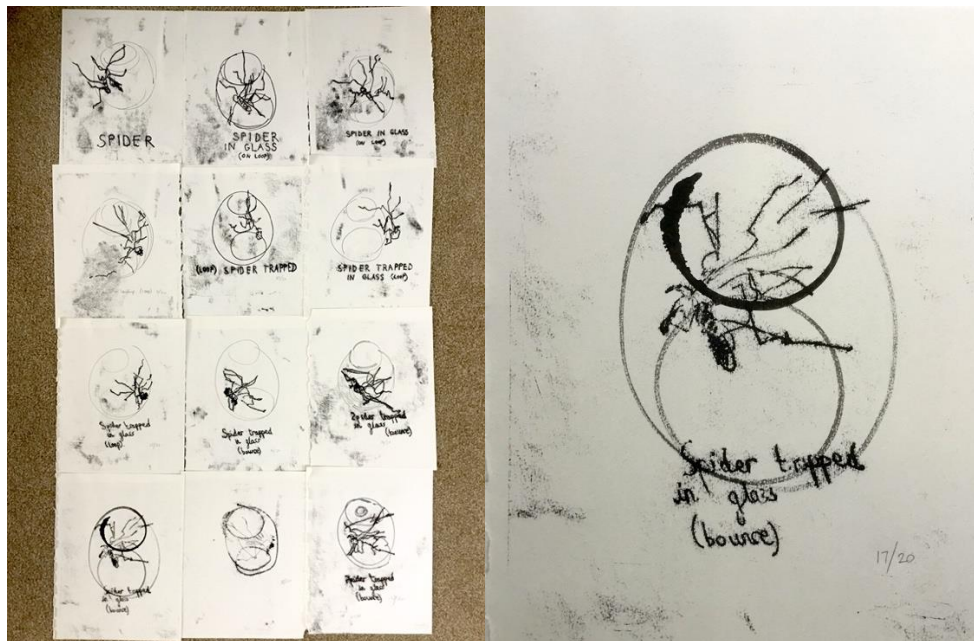


Fig. 11: Spider in the glass encounter

Winter Life Drawing Nov 2020-Jan 2021 and Nov 2021- Feb 2022

Life Drawing classes, both online and in person, provided a way of concentrating some of the drawing research onto the human 'Me' element within Minibeasts, Mark-making and Me' as shown in Fig 12. I used these sessions to build knowledge about where to fit myself in to the encounter drawings as a human participant. Life drawing classes also provided human encounters and a chance to experiment with different drawing materials during winter when minibeast activity was reduced.

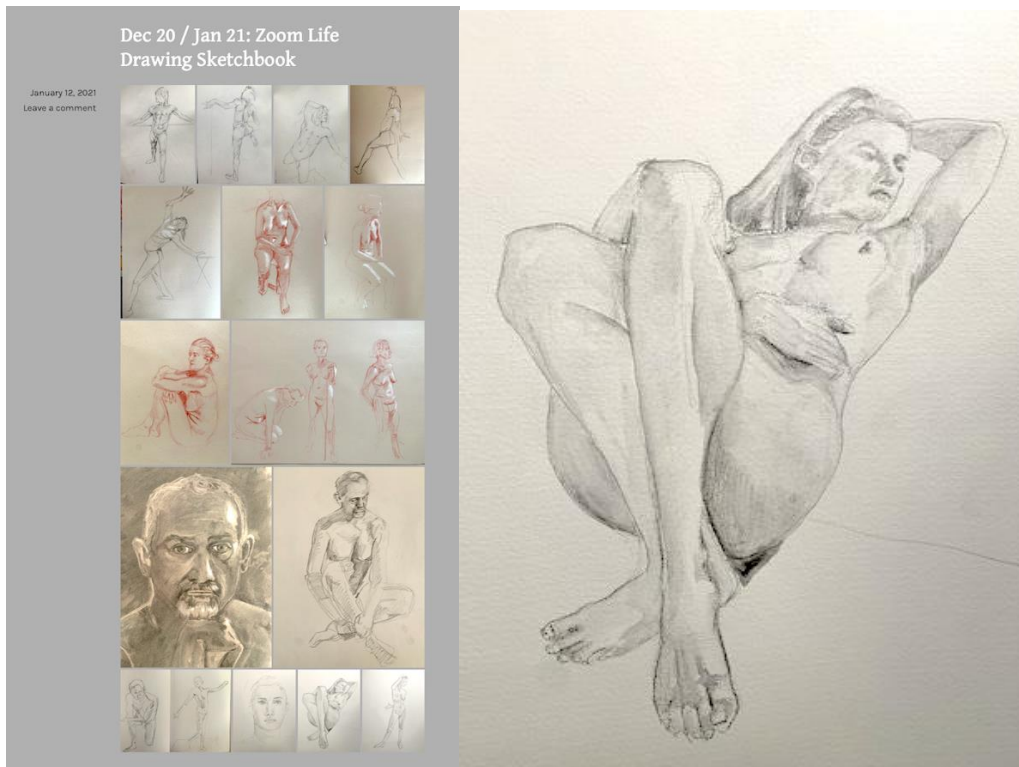


Fig. 12: Human encounters at life drawing classes

Being a beetle and performance drawing

Fig. 13 shows stills from a video recording mark-making DMB whilst embodying the movement of a Bloody Nosed Beetle that had been wandering across the patio earlier that day. Marks were created on a large roll of paper using graphite putty rubbed into the hands and feet and held as a drawing material. By developing elements of performance in my practice I was able to create videos that demonstrated the embodied drawing processes and products within the exhibition and within workshops.



Fig. 13: 'Being a Beetle' drawing practice

Exhibition Oct 2022

The exhibition shown in Fig. 14 provided the opportunity to curate a selection of the drawings produced into an immersive exhibition with elements of installation which included a bath, and a pathway with real turf, paving, and lavender plants. Drawings were included from both phases of data

collection and were displayed hanging and on the floor. Cushions were provided to encourage people to kneel and examine and touch the drawings, none of which were framed behind glass. A large piece of reflective writing was hung from the ceiling behind the bath. QR codes connected visitors to videos of practice around the themes Bodies, Meeting Places, Movement, Sounds and Feelings, which were also played on a television within the exhibition space.



Fig. 14: Images from the research exhibition at The Clayden Gallery, Quay Arts,

During the final phase of the practice research (Jan-Oct 2022) a daily practice of separate mark-making diaries helped to simultaneously sustain, break down and refine the elements of the drawing research into: Minibeasts, Mark-making, Me, Activities, Questions, Words and Written reflections. The mark-making diaries were displayed alongside relevant reading, writing and props within two research table boxes at the exhibition as shown in Fig. 15. These research boxes provided a focus for discussion with visitors to the exhibition and helped to frame some of the ethical conundrums within human-minibeast encounters.

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CARING WITH: UNSETTLING POSITIONALITY THROUGH DOG-HUMAN RELATIONS

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Abstract

What does it mean to be in relationship with our dogs? Feminist theorists have been chewing through this question within the work of autoethnographical “bitch” writing. This writing style reclaims what it means to be a bitch and explores the ways in which we are implicated with our dogs. Following the lead of bitch writers before me, I reflect on my positionality with four key dogs in my life as I grapple with my own research around multispecies care work. The paper explores my journey into posthumanist feminist thinking, and the ways in which this thinking-with chafes, soothes, and unsettles my burgeoning positionality. I begin by thinking with an old family dog, Max, and I grapple with the ways in which our relationship reinforced notions of speciesism and white privilege in slippery and often unsettling ways. I then explore the ways in which my thinking has changed throughout my academic, professional, and personal journeys. This journey, which sits in tension between my idealized innocent caring and the very real non-innocent care that I partake in, hovers on the edges of oppressive histories and positive futurities. I end by thinking with my three dogs: Tabitha, Scarlett, and Bree. Thinking with feminist, multispecies, and posthumanist writers, I ask how I can learn to *live less wrongly* with my multispecies kin network. By thinking with and living with our situated histories, I consider the response-abilities that my dogs and I have with each other. In keeping with the tensions of our sometimes emancipatory, sometimes oppressive, and always complicated relationships, I open up space to imagine new futurities, not as a means to provide answers to complicated problems, but rather to leave space for productive lines of inquiry.

Keywords: multispecies ethnography, posthumanism, dog-human relationships, feminism

INTRODUCTION

One of the hallmarks of posthuman feminist writing is personal writing interspersed with academic critique. No longer the objective observer, feminists insert and acknowledge their presence - as well as their ability to change- research through their involvement within the research praxis (1-4). Personal narratives - especially in writing about *bitches* (both human and dog) - can create what McHugh calls a “productive confusion” (4) in our understanding of multispecies relationality. Through reflecting on relationships with our companion dogs, feminist writers can reclaim what it means to be a ‘bitch’ and consider the ways in which we are implicated with our dogs (4).

In acknowledging that my own approach is firmly rooted within the critical feminist posthumanities, I tie personal reflections of my own journeys and kinship with dogs into conversation with researchers interested in care between species to explore the nuances of this positionality. I also explore the ways in which my presence as a multispecies researcher informs and is informed by my own relationships. Taking inspiration from auto-ethnographic accounts such as Satama and Huopainen’s exploration of grief and caregiving for a chronically ill dog, and Seung-Won Han’s exploration of proximal loneliness

with her dog as she moves to new spaces during the pandemic (5-6), I reflect on my journey in positioning myself within the field of multispecies care. Through this exploration, I hope to shed light on what it means to be a critical feminist posthuman researcher; and what this might mean as I navigate my PhD journey.

MAX AND I: KINSHIP AND FUR BABIES

The first story that is shared around dinner tables, when word gets out that I am studying dogs, is about my relationship with our old family golden retriever, Max (Fig. 1). Max and I were partners in crime when I was still in diapers, and he was still young enough to clear six-foot fences without hesitation. My parents joke that I would disappear for hours, only to be found within the various dog beds scattered throughout the house; small chubby hands positioned possessively in Max's golden fur. Knowing that my father – who often worked out of state – would be gone for days at a time, Max and I would romp through the backyard, finding the *best* places to hide my father's keys. The best place was, more often than not, Max's food bin. This was strategic, as romps called for mid-morning snacks.



Figure 1. Max and I spending time in the house together.

This image of childhood multispecies friendship is one echoed through many narratives around pet-human relationships in White families within higher socioeconomic brackets. Max was able to provide vital emotional and physical care to me as a child (e.g., 7-8). Growing up, I remember thinking of Max like a brother to me (see (9) for ascription of sibling status within kin networks). His standing in our family was likely best described as a 'fur baby', a term that is often criticized by feminist writers (e.g., 3). This fact sits uncomfortably now as I consider the ways in which this ascription of personhood imbued our relationship with a hierarchal anthropomorphism (e.g., 9).

Looking back on my relationship with Max, I grapple with the tensions within our relationship. While my childhood was, as Irvine and Cilia articulate, "in symbiosis with [Max]" it was also "separate from [him]" (10 p.3). Like many pet dogs living in the suburban San Francisco Bay Area of the 1990s, Max spent most of his time in the backyard, allowed indoors only when my sister or I snuck him in. His presence within the family existed in the liminal space between the human and animal (see 8, 11), and he was granted access to the family only in times which suited our needs. While time spent with him strikes a positive chord when I reflect back on my childhood, our relationship was steeped in hierarchical power structures and complex webs of oppression, which moved across species bounds.

The care work (see Cudworth (12) for theorization on multidirectional carework) that Max did for us was rarely, if ever, acknowledged. When he didn't fit our idea of a *good pet* (e.g. chewing up furniture

or tracking mud in the house; see 7), he would be locked in an outdoor pen until we were ready to interact with him again.

NAVIGATING CHOPPY WATERS: ETHICS, POSITIONALITY, AND RESEARCH DECISIONS

While Max was not our only dog growing up, he was the first dog that I lived with. He ignited my interest in dogs and plays a center role in how and why dogs have become integral to my research. However, even this focus on companion dogs within sociological research is fraught with tension, as dogs “occupy positions high on the sociozoological scale” (10 p.3) and are often rendered visible in multispecies kinship research before other animals. Relationalities with other animals, especially of the non-furry variety, receive far less attention within circles of more-than-human research (11), and I am non-innocent in my centering of the dog in lieu of other, lesser-studied multispecies entanglements.

As I moved an hour away from my family to attend university, I found myself missing canine companionship. Like Seung-Won Han (6) writes in her reflections of childhood, I found myself making friends with the dogs of others. As I navigated my own positioning within webs of family carework, I had learned to rely on Max and our other pets as what Irvine calls ‘*lifesavers*’ (12) without a full acknowledgement of the ways in which my dependence on their emotional labour disregarded their agency and exploited the care work that they performed, in ways which centered what Aalders and Monson call “romantic notions of companionship” (13 p.212). I would only come to learn later why power mattered in these relationships.

A Shift in Positionality

My own family history – weaving together Whiteness and a complicated Northern New Mexican heritage in a strange dance - had left me on shifting and uncertain ground as I entered my master’s degree. Implicated, like all families are, within a system where “anthroparchal relations intersect with other systemic relations” (14 p.427), I found myself struggling to gain footing on what I could study, balancing the line between research which replicated narratives of white saviourism and research which centered the heteronormative family within academia. I found myself asking, in many iterations, “why should we care about the stories of rich bitches, whether canine or human” (4 p.618)?

In grappling with how my positionality informed my research, I turned towards care, before settling on the study of more-than-human families for my doctoral research. My childhood and burgeoning adulthood had been characterized by my relationships with companion animals such as Max, and my assumed absolution of guilt through the study of a safe topic (dogs) was approached to celebrate the ways in which my dogs – both past and present- had helped me in navigating the harder transitional stages of my life.

Uncertain Ground

During the first semester of my doctoral program, my standing as a White Settler returned me to my commitment to *live less wrongly*, a concept attributed to Isabelle Stengers (15 p.117). Still uncertain of the particulars of my research interests, I knew that I wanted to better understand care and companion animals. Having been drawn to the slow thinking required of learners within critical conversations of race and social justice during my master’s program, I turned towards concepts that might help me find my footing in the landscape of multispecies research, care, and intersectionality. Within months, I found that my footing was perhaps more uncertain, and that instead of ending my first semester of doctoral work with a clear plan, I was left with more productive questions than I had begun with.

As I was sitting with readings by Donna Haraway and Rosi Braidotti (2-3, 16), read in concert with works by Leanne Simpson and Jennifer Nash (17-18), I found myself struggling to fit ideas of power and oppression within my concept of innocent care, a ghost of my White upper-class upbringing. Still struggling to relinquish the notion that dog-human care relations, deflated of their power, were spaces of positive affect, I had not begun to consider the ways in which dog-human interactions involved what Sayers et al. call “profoundly unequal power relations that are different in nature than normal kinship relations” (8 p.2). As I began to prepare for my qualifying exams, I chafed against readings which suggested that while we could look at multispecies families from a posthuman lens, multispecies families both reinforced and challenged power relations embedded within family systems (e.g., 9-11).

To accept my non-innocence- thinking with Puig de la Bellacasa’s idea of speculative care ethics (19) - rubbed against my desire to belong in a world which privileged the White, able-bodied human as the pinnacle of human exceptionalism (see 16). The spaces in which I occupied non-normative roles across culture, gender and neurodiversity- which were stumbling blocks towards assuming a normative sense of belonging- were easily hidden (from others, although I suppose I never felt like I fully belonged). As I struggled to put the pieces together, and to grapple with the mental disconnect between my actual non-innocence and my presumed innocence, I began to embark on the task of taking dogs seriously.

Living With Dogs

Haraway reminds us that dogs are not just useful tools to think with, but also tangible beings to live with (3). Having acknowledged a gap in my understanding of the dog’s side of human-dog care networks, I began to embark on what Bell et al. term engaged witnessing (20). This, I think, was my first step towards *response-ability* (21), and towards being able to respond in ways which required slow thinking and a recognition of “whom and what...I touch when I touch my dog” (3 p.3). By paying close attention to my three dogs and their histories during my first year within my doctoral studies, I was beginning to sit with my non-innocent belonging in our lives together.

This close attention required daily journal reflections on my dogs (Fig. 2), paired with video of our time during walks and what I termed *adventure runs* - jaunts through off-leash dog parks which necessitated zig zagging through forested paths after trees and many, many stops to cool off in the water- as well as outside courses on dog communication. These tools were imperfect at attending to anthropocentrism in research but gave me ideas around how to creatively live with my dogs in ways which unsettled my own positioning.

The moment L took off running, the pair starting barking, Tabitha’s high pitched and Scarlett’s a whining yip (not her defensive bark). They calmed down about 200m into the walk, but the moment L rounded the bend about 30m later, the yipping came back. Tabitha instigated play with Scarlett (a feat for everybody on leash), and when I saw that Luis had stopped his run, I let Scarlett off leash. She stopped, looked at me, before racing towards L, her belly to the ground as she barreled into him, her teeth bared in what I can only assume was her trademark appeasing grin and her front paws leaving the ground as she hopped towards him in excitement.

Figure 2. An excerpt from my ethnographic diary, describing an on-leash walk with the dogs. My partner (L) was running the trail ahead of us.

Situated Histories

Haraway asserts the importance of understanding who (and what) we bring to the table with our dogs. In her own reflection, she writes:

one of us, product of a vast genetic mixture, is called ‘purebred’. One of us, equally a product of a vast mixture, is called ‘white’. Each of these names designates a different racial discourse, and we both inherit their consequences in our flesh (3 p. 15).

Her reflection called me to think about the histories that my dogs and I brought into our becoming together - I center each of my dog's brief stories here.

Bree, our ten-year-old lab-sheepdog mix came to us via an animal rescue organization in Colorado. Having been found on the streets of a city in the midwestern United States, Bree had already given birth to at least one litter of puppies when found; had what was identified as cigarette burns on her nose; and experienced high anxiety when put in the same space with men and doors. Tabitha came next, lovingly termed our 'Honeymoon' for the fact that she joined our small kin network a day after my partner and I were married. Tabitha was a cattle dog mix of unknown origins, brought to a rescue in Northern New Mexico during the fall of 2017. We quickly learned that Tabitha – who many assumed to be a particularly friendly free-ranging dog – had quite a few tricks in her arsenal, and despite a rather frightening tendency at demand barking and upending all the knives in the kitchen, was a loyal and expressive companion.

Scarlett joined the kin network in the fall of 2020 (Fig. 3). As a way to distract me from the bubbling anxiety of finishing my master's work, our former free ranging mixed-breed joined our household at three-months old. She was taken from reservation land in a neighbouring state, with two dogs from the same litter. Each dog's history could fill pages, and following the threads of their stories would require an entire book.

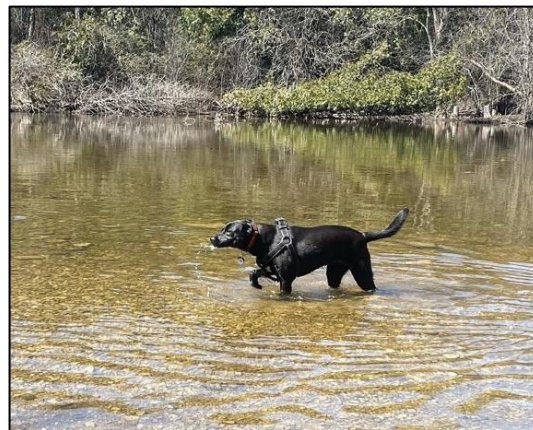


Figure 3. Scarlett, watching another dog in the river at a local dog park.

Pause: Troubled Waters

The stories of all three dogs, including the marketing of the rescue organizations, wove into narratives of white saviourism against the neglectful and dangerous conditions of living alongside the racialized other (see 20). Scarlett was a confirmed free-ranging reservation dog and we were told that Tabitha was suspected to be one; and stories around Bree's past life wove narratives of the 'irresponsible owner' (see 22 pp.62-91). Legally considered property in North America, dogs are expected to conform to certain norms (22-24). When living outside of the control of the white saviour and allowed to roam freely or with racialized others, dogs exist outside of these norms and become subject to police power (23). We were often told how generous we were to have 'saved' our dogs, and this story bled into our relationships in unsettling and often oppressive ways.

In my quest to sit with our conjoined situated histories, I began to think about my own implications within this history of white saviourism. In our predisposition to treat our dogs as 'children', as well as the stories that we told of saving our dogs from terrible conditions, I was implicated in the infantilization of my dogs as passive care receivers who had little agency within the household (see 7). This realization gave me pause, and I stumbled in my own ethical divisions as I continued my journey.

The thorny whispers of racism, classism and speciesism are questions that I don't yet have the words to think with in an anti-colonial manner; and yet I sat with these tensions as I moved through my readings on interspecies carework and posthuman families. My original plan had been to write about and research relationships of innocent becomings and positive futurities; and I found myself revisiting the question: Who cares about the story of a White bitch, writing about her dogs?

In writing about pet-keeping, and the dog-human family, was I centering whiteness? Was I centering gender and species-isms as the primary (and perhaps only) axes of oppression, which Deckha warned against (25)? How could I “centralize the dynamics of race and culture within [my] gender work” (25 p.530) when the majority of research projects on posthuman families relied on a high proportion of women whose racial ties were hidden (e.g., 7, 9)? Or that when race was mentioned, samples were predominantly White women (e.g., 11)? The finding is unsurprising, given the interwoven histories of pet-keeping, gender, and whiteness (see 3, 22-23). What could I study if this too was dangerous waters? Perhaps it was time to turn in my researcher hat in my fear that I was going to be doing more harm than good with any credentials placed next to my name.

I sat once again with critical feminist posthumanism so as not to turn away from the trouble brewing under my feet. Braidotti helped me with her call to work collectively through the “negativity and pain” and to “combin[e] sharp critique with intense compassion and care for a damaged and suffering world” (16 p.103). Puig De La Bellacasa reminded me that I wasn't alone - and perhaps, my thoughts were pointing me in a productive direction- in her reflection that caring across species bounds is a non-innocent process (19). So I sat with my feelings of unease – the dark pit in my stomach whispering that I was replicating everything that I was trying to deconstruct – and continued to *live-with* my dogs (Fig. 4).



Figure 4. Living with my dogs (from left to right: Scarlett, Tabitha, Bree). Enjoying a sunny afternoon by exploring one of the great lakes.

EMBRACING UNCERTAINTY: THINKING-WITH AND CARING-WITH

Personal and academic hats blurred in productive confusion as I continued my readings, my mind whirring with the stories that were being told in research and dog park alike. I began to pay attention to how *care* was defined; to the stories that humans told when I explained my research – stories that often offered conflicted and situated meanings of what it meant to be in a caring relationship. So too, was the concept of care slippery within research.

A common occurrence in both human and animal caregiving practices was that the term *care* is not explicitly defined (e.g., 26-30). Close readings of these articles suggested that care was assumed through a medical lens, which focused on the informal and often unpaid tasks that caregivers take on to support care recipients. Caregiving research for animals usually focused on the instrumental tasks (e.g. medication administration) as well as attention to the change of routine that occurred due to a

companion animal's diagnoses (27-28). In companion animal literature, care was argued to be a *separate phenomenon* from anticipatory grief as well as the grieving process when losing an animal (28). Feminist posthuman researchers have challenged this assertion, pointing out that grief and care are "inseparable parts of work relationally done and undone" (5 p 363). However, the assumption that one can separate the two emotions speaks to a care devoid of nuance within traditional literature.

The tensions that were all being held together by my burgeoning stance on the multispecies encounter, which focused on dogs - I can't deny that my centering of the dog is *as* problematic as it is an opportunity to explore multispecies relations - were complicated by my reading of Cudworth (12). Expanding the definition of *care*, Cudworth brought together conversations between posthumanists, care theorists, and multispecies researchers to define care as a type of gendered body work which is both reciprocal and multispecies (12). This care work requires both emotional and instrumental labour and is not limited to the work that we do around chronic or terminal illnesses, but rather involves work which occurs daily (12). Degeling et al. also found multispecies care to be relational, contextual and not tied to a chronic or terminal illness; with care requiring attentiveness to the other in a way which promoted flourishing for both humans and dogs (31).

Care, we are reminded in posthuman work, does not exist solely in the vacuum of medicalized diagnoses. Instead, care exists after a dog's death (5), as well as in the everyday caring relations, notwithstanding the health of canine companions (12). Like human care work, companion animal care is gendered and implicated within multiple webs of oppression (12). My care for and with my dogs *is* multi-directional and implicated within power structures; messy as it is vital. There was and is no way for me to truly request informed consent from my dogs when I needed a furry back to cry with or nose kisses (my dogs are quite good at 'missing' my nose in lieu of my mouth, these days) to pull me back into the present against a racing heartbeat. But despite this, there is space for *joy* in our relations together.

CONCLUSION: IMAGINING NEW FUTURES

We cannot look to the future without also situating our stories within the past and present (3, 15-16). To move into a realm of *critical* posthumanism is to sit with the tension between critical theories and the normative posthuman theories of a 'new human' (16). Here is where my positionality around multispecies research has found a rocky, tumultuous, and porous home. I grew up in a society which had bought into the idea of toxic individualism, and thinking with the collective futurities of critical posthumanist feminism is as uncomfortable as it is required. I sit here writing on unceded Indigenous land, with Scarlett catching the late-afternoon rays of light at my feet, Tabitha's leg positioned on my left knee as she takes over more than her fair share of the couch, and Bree curled up on the carpet, and I remember that my thinking and my feeling with multispecies research is complicated.

As I near the end of my written examination period of my doctoral work, I am struck by how many more productive questions I have ended with. Qualifying examinations are meant to show that we have deep understandings of our research specializations. My positionality demands that I acknowledge that I am *not* nearing an assumed expertise, and instead dwell in the productive friction of critical feminist posthumanism. My racing White Settler mind spins connections between readings in rapid strokes, trying to find answers to the ethical problems which crop up. I force myself to *pay attention* during time with my dogs, and return to my work, more slowly this time.

I am both a product of neoliberalism as much as I am an advocate for new becomings; and the innocence I once so desperately craved does not exist. I am a care giver and a care receiver, a lover of dogs as much as I am an unintentional exploiter of our relationships. As I stretch and get ready to play a long and immensely joyful game of chase with Scarlett and Tabitha, I think about the futures where I might *live less wrongly*. I don't know how my positioning will continue to change throughout my

wading through academia, but I anticipate that it will involve combinations of my personal and my academic journeys, paired with a commitment not to smooth out paradoxical tensions.

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BIO ART AS A MULTISPECIES INQUIRY TO STUDY REALITY: CO-CREATING KNOWLEDGE WITH OTHER-THAN-HUMANS

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Abstract

If we were to re-imagine humankind's hierarchical and dominant position towards other-than-human organisms, what new and multispecies research practices would arise? In this paper, we explore how to move beyond anthropocentric ways of knowing, aiming to discover new, more ecocentric alternatives to knowledge creation. In response to the growing need for multispecies epistemic approaches, we consider bio art as a potential guide in our quest for new knowledge cultures and methodological innovation. In this paper, we first question how bio art can guide us towards multispecies understandings of reality. Secondly, we explore what we can learn from bio art to recast our methodological research approaches, that enable us to generate more inclusive, multispecies knowledge. Drawing on posthuman theory, we examine two bio art projects that have won the Bio Art and Design Award in 2020: *Fur_Tilize* by Dasha Tsapenko and *Becoming a Sentinel Species* by Sissel Marie Tonn. In this paper, we lay out our first reflections on our quest for new methodological pathways that acknowledge the entanglement between human and other-than-human organisms.

Keywords: bio art, posthumanism, multispecies entanglement, epistemology.

INTRODUCTION

In her most recent book *Staying with the Trouble: Making Kin in the Chthulucene*, Donna Haraway (1, p. 30) asks “what happens when human exceptionalism and bounded individualism, those old saws of Western philosophy and political economics, become unthinkable in the best sciences, whether natural or social?” Haraway calls into question contemporary knowledge cultures in which humankind is considered master of knowledge production and innovation. She critically invites us to move beyond anthropocentric ways of thinking and to find ecocentric alternatives that acknowledge the entanglement between humankind and other-than-human organisms (1). As planet Earth's self-sustaining boundaries are being crossed due to human impact, we need to alter our dominant – and destructive – position on this planet into an econcentric one. We are urged to acknowledge the agency of other-than-human organisms and discover approaches to co-create new knowledge *with* nature. However, the pursuit for multispecies knowledge creation requires a different way of approaching research methods. How can we take into account multispecies entanglements – that is, the influential connection between all critters on Earth – when studying complex societal challenges such as climate change, natural disasters, mass migration, lack of energy supply, political conflicts, and so on?

In response to the growing need for multispecies epistemic approaches, we consider bio art as a potential guide that challenges the way we currently approach social reality from a theoretical, methodological perspective. We believe that bio art possesses epistemic potential that can enable us to go beyond “human exceptionalism and bounded individualism” in contemporary research practices (2, 3). Bio art has taken on challenges to rethink our relationship with other-than-human living

organisms (4). In the contemporary art form, artists engage with living matter to create works of art, ranging from the smallest entities such as bacteria to mammals and everything in between (5, 6). The living matter can both stem from other-than-human organisms (e.g. algae and plants) and from human bodies (e.g. bodily fluids extracted outside the human body such as tissue, blood and cells). Bio artists employ techniques stemming from scientific field of biotechnology, such as cloning and genetic engineering (7). The artworks created in these bio and technology-based settings provide interesting insights about how to establish a more equal and sustainable connection with nature.

Objectives and Research Questions

As part of an ongoing study we are carrying out on bio art and its ability to re-imagine humankind's position towards other-than-human organisms (8), questions arose about our own research design, urging us to challenge the (more-than-human) inclusiveness of our research approaches. While studying bio art's ecocentric intentions, we came to wonder how to align our own research practices to the multispecies objectives of bio art: how do we approach other-than-human organisms in our research design? How can we acknowledge the agency of other-than-human organisms in our study? And how can we co-create knowledge with other-than-human organisms? We have combined these questions in this paper and explore *how bio art can guide us towards multispecies understandings of reality*. We further question *what we can learn from bio art to recast our methodological research approaches, enabling us to generate more inclusive, multispecies knowledge*.

THEORETICAL FRAMING

Posthuman philosophy provides an interesting perspective to study bio art and its potential to steer towards multispecies knowledge cultures. In adopting this philosophical stance, we critique dualistic ways of thinking in which two radically opposing categories are utilized to grasp reality. This dualistic manner of approaching and understanding the world created hierarchical systems between two "opposites" in which one is valued higher, while the so-called 'Other' is perceived to be secondary, resulting in practices of discrimination and suppression (9, 10). Dualistic thinking is also to be found in humankind's position towards the natural world: culture versus nature, human versus other-than-human, living versus non-living organisms are few dualisms that guide our understanding of nature. These hierarchical binaries have been dominating since Modernity, and it has prevented us from consciously taking into account the agency of other-than-human living beings in our daily lives (1, 10).

Posthumanism provides a post-dualistic perspective and aims to go beyond anthropocentrism by emphasizing the agency of the other-than-human world: the capacity of other-than-human living organisms and phenomena to influence and shape reality (1, 10, 11, 12). As Anna L. Tsing (13, p. 22) points out, "making worlds is not limited to humans." Instead, making worlds is a multispecies affair: all species play a part in creating the world. We engage in processes of *thinking-with*, *making-with*, and *becoming-with* our other-than-human colleagues. In other words, we engage in *collective ways of doing*, meaning that both the human and the other-than-human work together to create reality (1, 12). Humankind is just one piece of the multispecies puzzle.

Humans shape multispecies worlds when our living arrangements make room for other species. [...] Pines, with their associated fungal partners, often flourish in landscapes burned by humans; pines and fungi work together to take advantage of bright open spaces and exposed mineral soils. Humans, pines, and fungi make living arrangements simultaneously for themselves and for others: multispecies worlds." (13, p. 22)

Multispecies entanglement stands for a messy, cluttered and knotted way of being (1, 13). It represents a network between all species influencing one another and equally contributing to the world we are living in. Posthuman theorists advocate for a relational approach in which the intimate entanglement between nature-culture is acknowledged. By breaking through conventional binary distinctions, posthumanism addresses the fluidity of being (14).

Although epistemological concepts regarding multispecies entanglement are utterly discussed in posthuman theory, these ideas are theoretical and remain difficult to translate into practice. With our study, we respond to the invitation of other authors stressing the need to transform posthuman ideas into workable research approaches in fields such as multispecies ethnography, anthropology beyond the human, multispecies futures studies, and so on (e.g. 13, 15, 16, 17).

METHODOLOGICAL APPROACH

In this paper, we examine and discuss two bio art project that were created in the context of the Bio Art and Design Award (BAD Award). The BAD Award is an international art and design competition that was founded in 2011 in which artists and designers experiment with living matter. The award aims to foster artistic and technological innovation by generating interdisciplinary collaborations between artists and scientists (18). Each year, three project proposals are selected through an international jury and the artists and scientists win 25.000 euro to create the projects in renowned science and research centers across the Netherlands (19).

In this paper, we discuss two projects that have won the BAD Award in 2020: Dasha Tsapenko's project entitled *Fur_Tilize* and the project *Becoming a Sentinel Species* by Sissel Marie Tonn. The selection of the two projects was based on their emphasis on other-than-human entities. Although their rationale is rather similar, Dasha Tsapenko and Sissel Marie Tonn adopt different artistic approaches and engage with other (bio)media: while Tsapenko engaged with mycelium to create living garments, Tonn used her own blood and created a sci-fi film. We conducted a visual and context analysis of both artworks, focusing on their visual and formal characteristics, the scientific and artistic techniques used, and the artworks' political and societal dimensions (20). The visual and context analysis was complemented with interviews with the artists. We used a thematic analysis to analyze the interviews. In what follows, we discuss *Fur_Tilize* and *Becoming a Sentinel Species*, and we provide insights into the relevance of bio art in multispecies knowledge creation.

MULTISPECIES ENTANGLEMENTS IN BIO ART

Growing Living Garments: *Fur_Tilize* by Dasha Tsapenko (2020)

In *Fur_Tilize*, the Ukrainian artist Dasha Tsapenko presented garments that were grown using mycelium (*schizophyllum commune*) on hemp. The garments visually reminds us of fur coats (e.g. Fig. 1-2 show the artwork entitled *Fur_Tilize* by Dasha Tsapenko). Tsapenko created five garments that each slightly differ from one another, as they all are in a different state of symbiosis. Symbiosis refers to interspecies relationships in which at least one of the species benefits from this relationship. On each garment, the mycelium and hemp became more intimate partners, engaged in a higher level of symbiosis, and the value of the coats was being increased (21). Besides emphasizing symbiosis between the mycelium and the hemp, Tsapenko highlighted the symbiotic relationship between the living garments and the human who would wear the garment as well. If one approaches their clothing as a living being – what the garments of Tsapenko in fact are – it implies a totally different perception of care: you need to water your coat, you need to control the temperature of it, and make sure it stays vital. This is a whole new approach to interact with your clothes. It changes the perception of what it is you need to take care of and how you should take care of it (21).



Fig. 1: *Fur_Tilize* by Dasha Tsapenko (22).



Fig. 2: Detail of *Fur_Tilize* by Dasha Tsapenko (22).

Tsapenko needed to alter her ideas on many occasions while producing the garments. Although she initially wanted to create the coats out of one big piece of hemp, she had to rearrange her thoughts to align with the material she was using. Growing the mycelium on the hemp needed a sterile environment. It was much easier to keep various small pieces of hemp sterile than one big piece. After the crops were grown, the tiny pieces were sewed together into a coat. Moreover, Tsapenko was not able to get all stages set that were planned in advance. Although she had clear goals and expectations for the project, the artist confessed during the interview that she had to adapt her initial plans. When she started working with the hemp and mycelium, she thought the human would have much more agency, but the contrary was true. She had to revise her questions and alter her attitude towards the non-human living beings and started to acknowledge them as collaborators (21).

Dasha Tsapenko has pointed out she was not the only one guiding the project, the organisms were doing so too. While the artist provided ideas and helped to create synergies, the eventual growth of the garment was beyond her force. As Tsapenko started to understand the living beings as collaborators throughout her research process, a new hierarchy emerged, bringing the artist and the living matter on the same level. In this way, the final outcome of the project – the five living garments – is not only produced by a human artist, but also by a range of other-than-human creators. By showing the complexity of living matter and acknowledging its ability to transform, shape, and influence the research process and the artistic creation, life is perceived to be an entanglement in which different agents/species (the hemp, the mycelium, the artist, the scientist, etc.) become collaborators.

The Human Body in an Active and Contaminated Environment: *Becoming a Sentinel Species* by Sissel Marie Tonn (2020)

Becoming a Sentinel Species is an experimental science fiction film created by the Danish artist Sissel Marie Tonn. In about twenty minutes, the speculative movie reflects on the idea that humans are sentinel species as well (e.g., Fig. 3-4 demonstrates a scene in the sci-fi film *Becoming a Sentinel Species* by Sissel Marie Tonn). Sentinel species is a concept that refers to organisms that are being used to warn humans of hazards by detecting the risks in advance. The concept is most commonly applied in relation to environmental threats. In ecotoxicology, for instance, they serve as indicators of pollution and demonstrate the effects of it on the environment. The audio-visual artwork that combines soundscapes and sensorial images conveys the narrative of two scientists who want to become sentinel species themselves (23). The two protagonists of the sci-fi film carry out an experiment in which they mix microplastics with human blood. Through this experiment, they discover that the contamination of human blood with microplastics has far-reaching effects on their nervous system function: the microplastics activate an ancient alarm in the immune system of the human body and trigger hallucinations. Following this experiment, the two scientists decide to introduce extractions of

microplastics into their own body, resulting in delusions and memories of human's watery origins. The scientists enter a dreamy condition of "our evolutionary origins in the primordial sea, many millions of years ago" (23).



Fig. 3: *Becoming a Sentinel Species* by Sissel Marie Tonn (24).

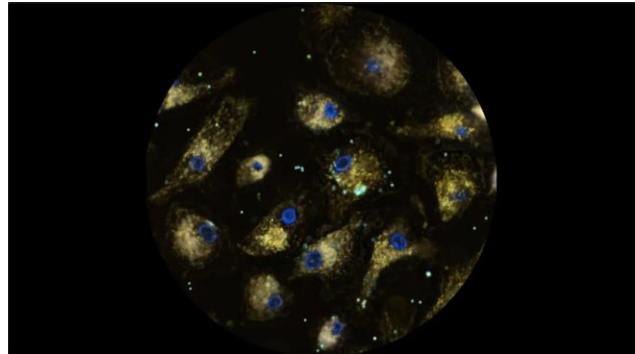


Fig. 4: Detail of *Becoming a Sentinel Species* by Sissel Marie Tonn (24).

This sci-fi narrative was based on recent scientific evidence that microplastics indeed are already to be found in our bodies, which might be harmful to our immune system (25). In this sense, humans can also be seen as a sentinel species and demonstrate possible threads of plastic pollution for other species and the environment at large. The artwork was accompanied by a real scientific experiment in which the blood of the artist herself was extracted and was contaminated with microplastic particles. As the particles were polluting the artist's blood (outside of her body), her immune cells engaged in a battle with the plastics, resulting in visually interesting microscopic footage that was integrated in the movie, shown in Fig. 4 (26).

The concept of "sentinel species" indicates that the lives of some organisms are being instrumentalized as research objects, without taking into account that they have lives and roles in a broader ecosystem. Tonn emphasized the hierarchy between human and other-than-human lives and aimed to re-imagine the concept of "sentinel species" by putting human beings into the position of sentinels. In doing so, the art project emphasizes that humankind is inseparable from its environment. The environment is having slow and invisible, yet harmful effects on our bodies, just like humankind is having on the environment (26). Tonn highlights that microplastics are now also flowing through our veins and illustrates the intimate interconnection between nature-culture.

Sissel Marie Tonn's experimental film quite literally presents multispecies entanglement. As she turns the human into a sentinel and acknowledges the influence of a contaminated environment on the human body, Tonn points out that humankind cannot be understood without considering its other-than-human colleagues. Tonn turns the usual hierarchy between the human and other-than-human around and generates a new understanding of relationality, that is, the intimate and entangled way of being between all species that are sharing planet Earth as their home.

BIO ART AS A GUIDE TO CONCEPTUALIZE ENTANGLED RESEARCH PRACTICES

Guided by Donna Haraway's invitation to move beyond "human exceptionalism and bounded individualism" in knowledge creation, we questioned how bio art can guide us towards multispecies understandings of reality (1, p. 30). Both Dasha Tsapenko and Sissel Marie Tonn's projects emphasize the influential and active force of other-than-human entities. They denounce anthropocentrism and highlighted the networked existence of the human and the other-than-human. While *Fur_Tilize* emphasized synergies between the artist and the organism, *Becoming a Sentinel Species* stressed our relationality with other species and nature at large. In both projects, humankind does not obtain

absolute mastery over nature. Instead, nature and culture, the human and the other-than-human, collide and even join forces to co-create the artworks.

Becoming a Sentinel Species and *Fur_Tilize* both closely relate to concepts stemming from posthuman philosophy. However, the bio-based projects go beyond merely communicating theoretical ideas. Whilst other-than-human agency and multispecies entanglement only remain a value, reasoning, or mindset within philosophical writings, the art projects go one step further by bringing these concepts to practice. The artworks represent testimonies of the *making-with* and *becoming-with* the natural world and yield a notion of *collective doing*, a practice in which all species collaborate in the creation of reality. While bio artists successfully employ multispecies approaches, the question arises how we can invite other-than-humans to participate in our research processes as well. What can we learn from bio art to recast our methodological research approaches? And how can we create more inclusive, multispecies knowledge?

During the process of studying these bio art projects, we were urged to adjust our research perspective: instead of centering the artist as the protagonist of the art production, we started considering the other-than-human organisms as co-creators. To explore generate new and multispecies knowledge cultures, we built upon Anderson et al.'s (27) call for *polylogic approaches to research methodology*. This polylogic research approach takes into account the geographical context in which the research takes place. Anderson et al. (27, p. 598) aim to move beyond mere dialogue between the researcher and the researched subject by including "other actants that influence the praxis of methodology." In particular, they emphasize place as an influential agent that affects research encounters and the knowledge that is generated. Place includes "unique arrangements of people, landscape, weather, buildings, animals, economics, politics, cultures and more" as well (27, p. 599). In this sense, Anderson et al.'s conceptualization of a polylogic approach closely relates to bio artists entangled engagement with living matter.

When creating their bio art projects, Dasha Tsapenko and Sissel Marie Tonn also took a polylogic approach: they position themselves in a knot of other actors co-creating and collaborating with one another. Rather than perceiving the organisms as passive 'media' simply used and modulated by the artists, bio artists approach the other-than-humans as active agents. We have learned from Dasha Tsapenko and Sissel Marie Tonn how to acknowledge and approach other-than-human agency in practice. Following their entangled polylogic explorations, we suggest that methodological research approaches should represent a multispecies knot, consisting of humans actors (i.e. the artists, we as researchers), other-than-human actors (i.e. mycelium), and non-human actors (i.e. materials), that all influence the research process, the research encounters, and the eventual knowledge production. We have to entangle ourselves – aren't we automatically? – in the networked existence of research practices.

In our quest for entangled research practices that guide towards multispecies knowledge creation, bio art provides epistemic potential to move beyond anthropocentrism and acknowledge humans' situatedness in a multispecies world. While studying the two bio art projects, we became more acquainted with the notion of collaborative research *with* other-than-humans. Bio art – as multispecies epistemological explorations – breaks through the hierarchical binary between humans and other-than-humans and contributes to devising multispecies methodological tools to encounter an entangled reality.

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CATS, COWS, CENTIPEDES AND CHILDREN: EXPLORING ETHICAL ENTANGLEMENTS IN POSTHUMAN DOCTORAL INQUIRIES

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Abstract

This paper illuminates the ethical entanglements that emerged/ are emerging/ might emerge with nonhumans (including multi-species others and the material world) during and throughout doctoral research processes. As education doctoral students with shared concerns about educating in the Anthropocene, we are hope-ful that posthuman, feminist new materialist philosophies can offer new ways to the environmental crises. We share our struggles and joys in enacting lively, relational ontologies, inspired by the work of Barad and Haraway. This paper share stories from our doctoral research to explore ethical entanglements: ‘Centipede and Wonderboy’ tells of a research event that emerged in the urban forest school where Hannah, the children and nonhuman nature are exploring the possibilities of play. Charlotte explores how animal-human stories are constituted through ‘multispecies moments’ in an international school. We consider the agentic nature of doctoral ethical procedures and the anthropocentrism they give force to. We end by reimagining a posthuman ethics where nonhumans are acknowledged and included at every stage of the research process in a generative, dynamic intra-play of situated, entangled engagements.

BECOMING-WITH THE ANTHROPOCENE

As two doctoral students carrying out inquiries in the context of the Anthropocene, and with a shared interest in post-anthropocentric approaches in educational research and practices, we were inspired by the theme of the ECQI Congress 2023. ‘The Anthropocene’, a term proposed by Earth system scientists Paul Crutzen and Ernest Stoermer (1) describe a new geological epoch in which over-consumptive and fossil-fuel dependent human activities have permanently changed the planet (2). Species extinction and biodiversity loss that are a result of these anthropogenic changes compels us to rethink our human and nonhuman relations. Our doctoral inquiries enact relational ontologies and posthuman, feminist materialist philosophies to challenge anthropocentrism (human-centredness). The concept of ‘post-anthropocentrism’ sees flattened hierarchies and the human as enmeshed in the world, rather than at the apex. Responding to the devastating declines in global wildlife populations⁶, we share how our research is entangled with nonhumans. Decentering the human and instead focusing on relations with other species might provide hope for educational research practices to find ways for us to ‘think and act differently for global, social and environmental justice’ (3).

In this paper, we share the theories that we are becoming-with including Haraway’s ‘Making kin’ (4, 5) and Barad’s Agential Realism (6) because these have inspired us to rethink our human/nonhuman relations and give direction to the trouble of educating and researching in the Anthropocene. We share stories of our research journeyings. Charlotte is in her first year focusing on animal(s)-child(ren) relations in an international school and Hannah, in her fourth year, is exploring the possibilities for/of play during child-nature encounters in an urban forest school, UK. This paper was co-authored by ‘Other Kin’ as we attempt to acknowledge the nonhuman life that inspires, challenges and nurtures us in the co-production of research, at all stages of our PhD journey. The paper ends with a series of

⁶ The Living Planet Report 2022 states that there has been a 69% decrease in global wildlife populations since 1970

propositions to rethink current doctoral practices that give force to anthropocentrism and offer ways we might do doctoral ethics differently.

MAKING KIN FOR MULTI-SPECIES FLOURISHING

In our research, we become-with a variety of species, human and nonhuman, to explore how education might offer more hope-ful post-anthropocentric futures. The term *species* is a term that attends to the differences between life forms and through naming, classifying, isolating, and sorting, the separations between humans and nonhumans are exacerbated. For Donna Haraway, this reduces life forms 'to type, all Others to the rational man, and all essential to his bright constitution – is at the heart of racism and flourishes, lethally, in the entrails of humanism' (4 p.18). We are troubled by this human-centric onto-epistemology and to respond-with damaged human-nonhuman relations, we use the term, *multispecies*, to help recognise the entanglement of all life, since no species exists on its own. Even 'we' are multispecies, as our own human cells are outnumbered by the 10-100 trillion microbes that colonise our bodies (7). In our attempts to further reduce human-centeredness in our research and to stay with the trouble of anthropocentrism, we turn to Donna Haraway's notion of 'kin' (5) as an inclusive, generative practice that seeks to recognise the value and worth of all life forms, all matter. Kinships provoke us to break down damaging binaries such as nature/culture, man/woman, human/nonhuman, social/ecological that have thus far, galvanized separation and destruction in the Anthropocene. Responding to The Living Planet Report's (8) alarming statistic, that 69% of global wildlife populations have decreased, we seek an education that embraces notions of kinship, where we make kin with the Others in our world; those who are beyond our humankind. When we consider the kinships that emerge/are emerging within multispecies assemblages, we are faced with the urgent need to practice better care and become-response-able to multispecies flourishing in the Anthropocene.

BECOMING-WITH KAREN BARAD

As doctoral students we are interested in how Karen Barad's philosophy of 'agential realism' can help us to rethink and redo our research relations. Building on notions of kin and kinship, agential realism offers new ways to think with more-than-human relations, acknowledging that we are mutually entangled and always in the process of becoming-with. According to Karen Barad, 'individuals do not preexist their interactions' but 'emerge through their entangled intra-relating' (6 p.ix), interactions thus become 'intra-actions'. The edges and boundaries of what it means to be human become blurred, we are never the bounded individuals we might believe ourselves to be but are always in relation. This does not reduce our responsibility, but makes us 'response-able' to the other. Through this paradigm shift, 'ethics' becomes intertwined with knowing and being – an 'ethico-onto-epistemology' (6 p.185). What is needed, according to Barad, is a 'posthumanist ethics, an ethics of worlding' (6 p.392). This posthuman reconfiguration, has significant and transformative implications when we consider how we might enact this in our research practices and, as we explore in this paper, brings into question some of the anthropocentric processes and practices of the doctoral journey. What might this 'ethics of worlding' mean for our practices as doctoral students? How might we enact our institutional ethical requirements in ways that acknowledge our responsibilities to/for our more-than-human kin?

BECOMING-WITH DONNA HARAWAY

We use Donna Haraway's (4) concept of becoming-with to help us work alongside Karen Barad's theory of agential realism. This concept helps us acknowledge that we are always becoming through intra-

actions and are not singular but always more-than. When Haraway questions, “Whom and what do I touch when I touch my dog?” (4 p.4), she refers to the entanglement of life and place, the situated knowledges that are formed through our relationality and inter-dependence with everything around us, the living and non-living. Whilst stroking her dog, Haraway intra-acts with a multitude of relations, an assemblage of dog-agility-breeding-colonialism-love-struggle-humans and more. Humans and animals are always already entangled simply by being in the world together; they relate in indeterminate, inconclusive, non-linear processes, constantly influencing each other and ‘are everywhere full partners in worlding, in becoming with’ (4 p.301). This dynamic interplay (or, for Barad, intra-play) takes place in the contact zone ‘where the outcome, where who is in the world, is at stake’ (4 p.244). As such, humans are never just becoming alone; they are becoming with others in a practice of becoming worldly; a practice that invites us to ‘speculate, imagine, feel, build something better’ (4 p.92) to make us response-able for the co-shaping of our worlds. Human exceptionalism suppresses our potential to become-with others and therefore, to become worldly.

Through our research, we are becoming-with Haraway and Barad as we search for post-Anthropocene futures: we hope to illuminate the anthropocentrism that is present in our educational systems by exploring asymmetrical power relations between humans and nonhumans in schools. In doing so, we notice in our respective PhD journeys how academic research processes often do not honour the entanglements of life since there are no ways to formally acknowledge how we, as researchers, are becoming-with multispecies in our doctoral inquiries. To produce data that exclude multispecies means that we separate and privilege the human experience, a practice that is undoubtedly evidenced by the distressing statistics in Living Planet Report (8).

BECOMING-WITH RESEARCH ENCOUNTERS

BECOMING-WITH ANIMAL-CHILD ASSEMBLAGES

As a first year PhD student, my (Charlotte’s) doctoral journey places me in the literature review stage as I research possibilities for multispecies intra-action in various educational contexts. I am interested in exploring power dynamics in relational encounters between animals and children to consider how they become-with and become-response-able in our worlds at large. Here, I consider two stories: firstly, how one traditional university process does not acknowledge the ethical entanglements of a doctoral student; secondly, ‘multispecies moments’ that reveal how anthropocentric mattering is so deeply enmeshed in our educational approaches and school systems. ‘Multispecies moments’ (10) is a posthuman methodology I am coining to explore ways of producing data with animals and children and is inspired by Carol Taylor’s ‘material moments’ (9).

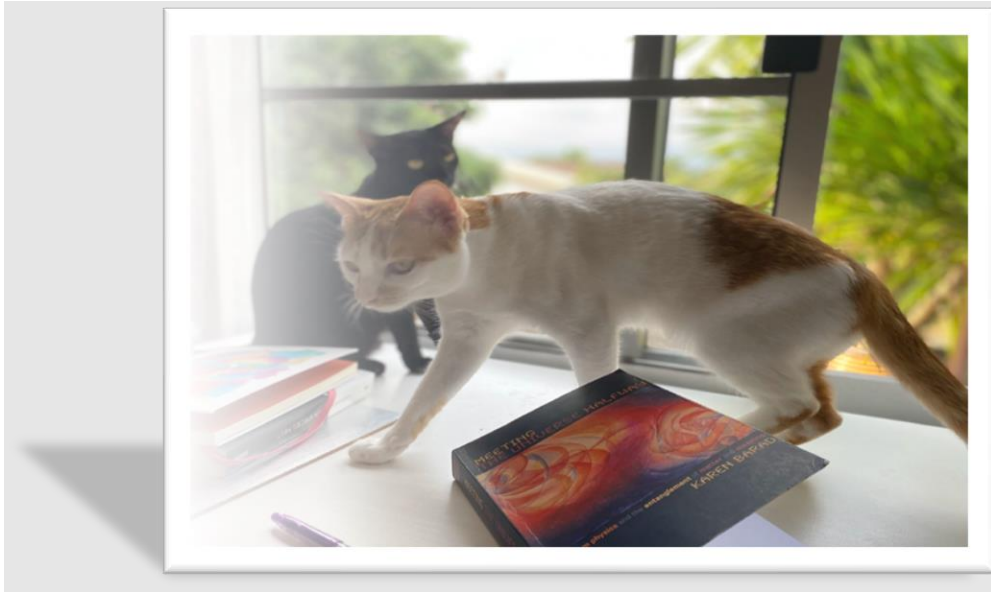


Figure 1: A cat-human-research assemblage

My favourite space to become-with my literature review is at a table in my kitchen looking out at Thailand's exotic trees, flowers, plants and mountains in the distance and beyond. A typical and mundane reading encounter could be described like this:

I hear the whirring of the fan trying to cool a warm room. Outside, birds are chirping and as I cast my eyes out of the window above the computer screen, I see a frangipani tree with bright pink flowering buds drooping elegantly over the grass below. Around me, my kittens cause havoc, darting across the room, chasing tails and tossing small toys around in their paws. The relations in this territory are temporary between table-chair-computer-birds-fan-heat-kittens-frangipani-cat toys-and me. They are enmeshed, dynamic, immanent, and emergent, circulating across and within one another. The literature review process emerges within human-nonhuman assemblages of affect; together, all 'entities' are entangled as co-producers of knowledge.

Whilst researching, my eyes are drawn to my cat's behaviours as they sense something in the room or outside. With intrigue, I notice their noses twitching, eyes squinting, ears rotating to sensory stimulus that I cannot detect. Their sensory responses consistently remind me that nonhumans process the world so differently to humans and I can only attempt to understand if I dedicate time, energy and effort to notice and follow their behavioural cues. I consider how much of what Karen Barad describes as the 'radical aliveness of life' is unnoticed, unappreciated and reduced by humans on a day-to-day basis because they do not sufficiently attend to nonhumans' needs, appreciations, interests. Exploring animal-child assemblages in schools means giving more time, energy and effort to attend to the multitude of relations in an educational encounter.

This 'literature review' process so often individualises the bounded researcher, situated outside or above the research as an almost all-knowing, worldly spectator who gathers pieces like a jigsaw, then identifies missing pieces as research 'gaps.' The researcher could be seen as capturing the voices of other similarly individualised and bounded humans and not necessarily as a process of becoming-with multispecies. Agential realism helps us to remember that since we are always intra-acting with the world around us, we are constantly in relation with multispecies, even when reading the words of other humans. This leads me to trouble-with how I attend to the contributions of multispecies when

they influence and shape my reading, thinking, and reviewing processes when consulting literature. Unknowingly, I might be amplifying and prioritising human-centric experiences and knowledge of our worlds, even at early stages of my PhD journey. Becoming-with Barad's 'ethico-onto-epistemology' helps me to consistently challenge how I am choosing what to include/exclude, why, and for whom. This process of becoming-worldly with multispecies reduces the force for anthropocentrism; I consider how this could be included in the research process for all doctoral inquires in attempts to more become-response-able in post-Anthropocene futures.

'Multispecies moments' (10) is a posthuman methodology that reminds us to recognise the human researcher in the research-production process and in doing so, attempts to decenter the human, opening new ways of observing and becoming-with others. As a methodology, this enables researchers to remain open to possibilities so that more unexpected moments might emerge from an encounter. In my research, I give attention to moments in and around school that involve animals and children as 'which are often mundane, every day and seemingly trivial' (11 p10). Traditionally, these moments might be considered trivial by some because they are not rooted in academic study, nor involving solely human subjects. Multispecies moments will attend to the tiny moments of encounters to explore potential for human exceptionalism. As exemplified in Figure 2, the following experiences might be explored: school displays that depict and celebrate animals; animal content in curricular textbooks; the depiction of animals in children's literature; the use of dead or live animals as educational resources. These encounters offer provocative questions about how power between animals and children might be generated through various intra-actions.

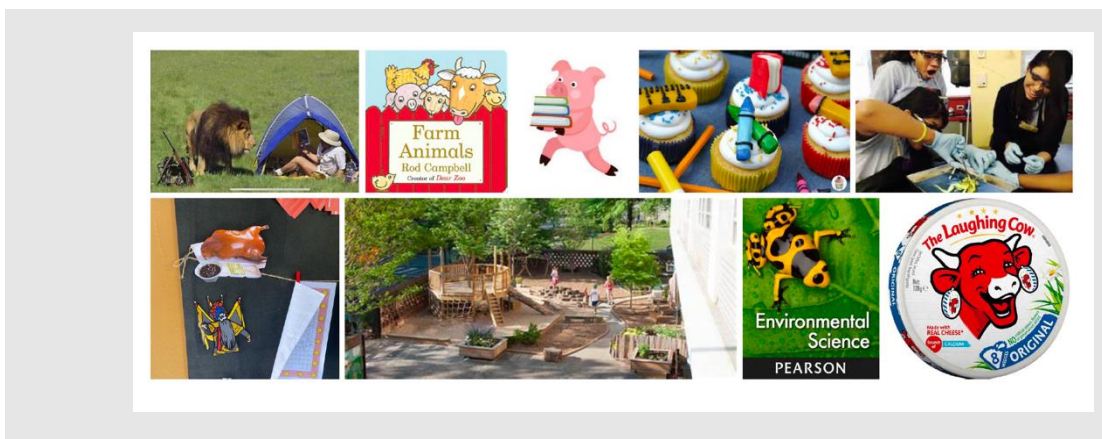


Figure 2: Multi-species moments in international schools

To momentarily hone in on the cow product, an item observed in a school cafeteria, we gain insight into the stories that children are told about human-nonhuman relations. The cow's unnatural, morphed appearance, with its red skin and toothy smile, results in a cartoon-styled image that purposes the cow as entertainment to attract young human consumers. The cow is feminised, humiliated and plasticised through its human facial features and jewellery, forcibly wearing its bodily extraction on its ears to seduce another species to consume the product. The cow's smiling countenance proposes a joyful and benevolent animal, willingly offering its body as commodity, an accomplice in full partnership with the dairy-production process. Most disturbingly, the cow still has its horns, obfuscating the violence that many dairy farmers carry out when they dehorn cows at a young age, for human safety and economic interests. This re-virginises the cow, a reversal of the forced insemination that is carried out to ensure the cow unnaturally produces milk and blinds us to the un-cowly ways in which milk is farmed from her body. This image of the cow creates a

multispecies fantasy; a mythical cow-creature and a delusional human story of dairy processing, both generated as a result of human dominance.

In schools, reducing children's intra-actions with such examples of human dominance and cultivating mindsets that actively question and challenge untrue stories and unfair power relations in our worlds, might create better conditions for multispecies flourishing, together, in the post-Anthropocene. As such, multispecies moments enact a hope-ful move away from anthropocentrism and towards biocentrism, reconfiguring the child in a world that is more than a human experience.

BECOMING-WITH POSTHUMAN PLAY IN AN URBAN FOREST SCHOOL

My (Hannah's) doctoral inquiry explores the possibilities for/of play in an urban forest school during human/nonhuman encounters. Over the course of a school year, Hannah co-researched with young children from an inner-city primary school and nonhuman nature (including weather, plants, animals, fungi) in a local urban park. The research focused on play as it emerged from these 'assemblages' during forest school sessions run by a local outdoor education charity. The Deleuzo-Guattarian concept 'assemblage' (12) refers to the relations between entangled entities and the ways in which these entities intra-act. The data was generated through playing together, building on the practice of 'shared play' (13) where children and adult researcher play together as a form of knowledge creation. Stories of play were co-created by the children, nonhuman nature, practitioners and the researcher (Hannah) and have been named 'Play Tales' (14) because these stories work in-between the boundaries of real-fantasy, space-time, human-non-human. These 'play tales' hone in on intensities within these playful encounters and tell different stories from different perspectives and in multi-modal ways. In this paper, we share extracts from the play tale entitled 'Centipede and Wonderboy', a story co-created by a Centipede, a plastic pot and Wonderboy one summer morning during a 'bug hunt'. The tale was shared by the children via a collage (see Figure 3) for an end of year research exhibition and re-told again for this conference paper. This play tale illuminates some of the ethical tensions that emerge during these intra-actions, and the dynamic and messy relations that are part of the research apparatuses.

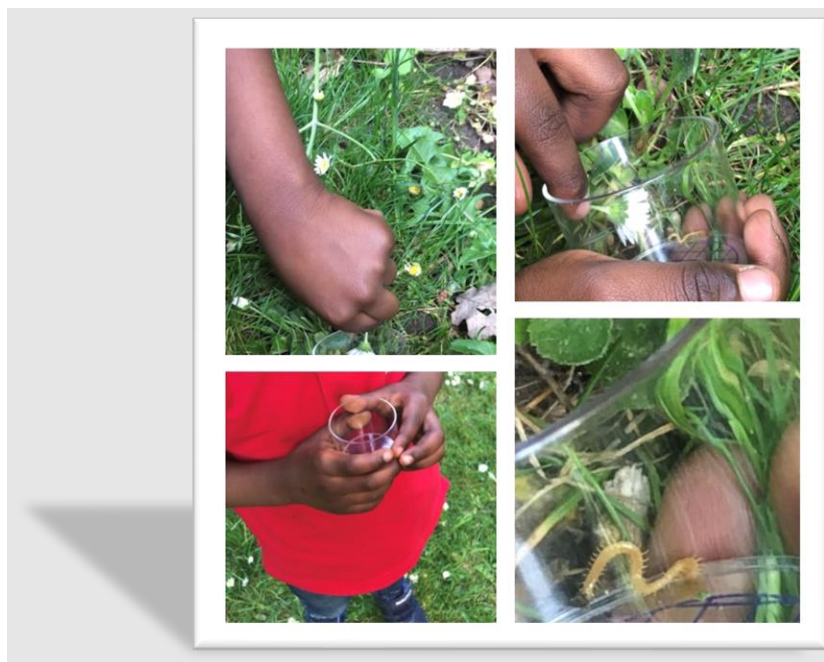


Figure 3: Centipede and Wonderboy Collage

Centipede is moving through the wavy grass. Sunlight flickers between each blade as Centipede's legs move one after another. Centipede's antennae feel the grass in front of them and their back legs do the same, checking that they are not being chased by a predator.

Centipede suddenly finds itself trapped in a pot with walls. They see the grass, the sun, the soil, but they cannot reach them. Their back legs become stuck in a corner of the pot. They try to move but the surface is too slippery. They find themselves suddenly spinning away from the ground, moving quickly towards the sky. Centipede feels dizzy. Centipede feels sick.

"'I'm stuck, I'm stuck' That's what he's saying!"

Wonderboy notices Centipedes stuck legs. He notices his writhing body. He gestures to Hannah that he needs to return him to his family in the grass. He opens the pot and places it on the floor, using a Daisy to gently free Centipede from the sticky edge. Centipede's legs carry him quickly into the blades of grass and he disappears into the hedge surrounding the park.

"He will come back tomorrow and say: 'Thanks for saving me! I'm back with my family now'" Wonderboy says.

Centipede wriggles into the grass weaving in through the blades. They explore what is in front of them with their antennae and then rushes forwards. His body behind him moves in waves so that he is a wiggle in the grass. He pauses, feels, rushes. Pauses, feels, rushes. Then they move so quickly, weaving between the grass, that they disappear beyond our humansight.

'Centipede and Wonderboy' has a happy ending. But there were other endings we explored. An ending where Centipede loses a leg as he is scraped from the pot. He tries to crawl through the grass, but he can tell that one is missing and it does not feel right. He wonders where his children are. He searches through the grass, but he can't find them. He walks through the grass alone.

We don't like this ending. We decide to go for the first one. But we know the second is plausible. More likely, perhaps. The possibilities that this 'play' - this intra-action between child, plastic pot, centipede, grass – gives force to are considerations of animal (specifically invertebrate) sentience, response-ability (6) and activism. As our 'play' turned towards a darker side, we were able to explore further possibilities. Thinking-with the Centipede, as Wonderboy does in this event, can illuminate the ways in which these violent, anthropocentric practices in education have desensitized us to the ethico-onto-epistemologies that are always in play. 'Everywhere, life is making itself known, heard, and understood in a wide variety of media and modalities; some of these registers are available to our human senses, while some are not' (15). Wonderboy and Centipede's kinship challenges the anthropocentric educational practice of bug hunting, bringing to the fore the notion of capturing invertebrates in plastic pots so that human children can look at them and learn about other species. Centipede's writhing in the pot communicated his discomfort. Recently scientists have argued against the rendering of invertebrates as insentient and therefore ineligible for moral consideration and yet this is not a common view. Wonderboy emerges with Centipede and assumes invertebrate sentience, and the need to be response-able, taking action for his nonhuman kin. The anthropocentric, anachronistic view that invertebrates are lower in the *scala naturae* 'continue to influence public policy and common morality' and yet there is now evidence that these views are unwarranted (16).

APPARATUSES OF ETHICAL PROCEDURES FOR DOCTORAL RESEARCH

Whilst in different stages of our research, we are moved by some of the formal processes in the PhD journey so far. At each stage, the PhD 'milestones' enact 'agential cuts' that come to matter. For one,

the ethical approval process considers obligations towards humans. The supplementary ethical approval form that considers nonhuman animals is only necessary if the research directly intervenes with animals. The ethics procedures become an apparatus in the research process, enacting 'what matters and what is excluded from mattering' (6 p.148). These 'apparatuses are boundary-making practices...where "phenomena" are the ontological inseparability of agentially interacting components' (6 p.148). The approval form becomes entangled in anthropocentrism, reinforcing the notion that nonhumans are an afterthought; a secondary consideration, beyond the wellbeing of human research participants. This raises questions about why other forms of life and natural material are not considered in research ethics, such as insects, vegetation, trees, geology and more. The speciesism is hard to ignore.

POSSIBILITIES FOR POSTHUMAN ETHICS FOR EDUCATIONAL RESEARCH IN THE ANTHROPOCENE

As we move through our respective PhD journeys and grapple with the institutionalised processes that reinforce anthropocentrism, our ethical entanglements shift to 'what next?'. We argue that what is needed is what Karen Barad describes as 'a posthumanist ethics: an ethics of worlding' (6 p.392). Here we offer possibilities for becoming-with ethics; our invitation to researchers to consider ways that reduce anthropocentrism in academic research for better futures and multispecies flourishing. We advocate for diffractive apparatuses (6) that would assist researchers in the exploration of a greater range of interdisciplinary concerns, reduce anthropocentrism and speciesism, and support, nurture and challenge a kinship between Others in doctoral inquiries. This would illuminate 'how different differences get made, what gets excluded, and how these exclusions matter' (6 p.30). The use of a diffractive methodology would create spaces for de-territorialisation (12) whereby the boundaries of the ethical approval process might become questioned more frequently, encouraging researchers to re-consider the relations they hold between objects and bodies to create new thinking, ideas, perspectives, processes. As we bring this paper to its close, we re-open our ethical entanglement quandaries by quietly sitting-with this provocative reprise from Bruno Latour (17):

'To limit the discussion to humans, their interests, their subjectivities, and their rights, will appear as strange a few years from now as having denied the right to vote to slaves, poor people or women.'

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THINKING WITH ASSEMBLAGES: OPENING NEW PATHWAYS FOR ENVIRONMENTAL EDUCATION PEDAGOGY AND RESEARCH IN THE *META-ANTHROPOCENE* ERA

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Abstract

The modern socio-environmental Anthropocene crisis invites us to search for ontologies and epistemologies that decentre the human, pointing out the need to enrich environmental education for sustainability, towards new, more holistic models of thought and practice. Our proposal draws inspiration from the DeleuzoGuattarian philosophical toolbox, integrating a post-humanist/relational materialist line of thinking. We employ the concept of assemblage (1) and through pedagogical encounters (2), learning and knowledge are taken place among all human and more-than-human world. Our methodology is based on an “experimentation in contact with the real”, as Deleuze and Guattari (1) would encourage us to do (p. 12). Therefore, it is strictly post-qualitative. Concepts as method (3) and thinking with theory (4) will be put into practice, in a constant conversation with empirical materials so as to generate new knowledge.

Keywords: assemblage, pedagogical encounters, thinking with theory.

PROLOGUE

The term Anthropocene defines the current geological period defined primarily by the role humanity has played in causing today’s environmental problems, with Colebrook (5) pointing out that the prevailing planetary imbalances endanger the very survival of the human species. Academics and researchers underline that the transition to the *meta-Anthropocene* era requires a change of course by that begins with the deconstruction of dominant ontological, epistemological and ethical assumptions through the adoption of a posthumanist line of thinking (6). Posthumanism is a profoundly philosophical view that takes a distinct ethico-onto-epistemology approach (7). It rejects human superiority and supremacy, resists making humans the focus of research interest, dissolves dualisms (e.g., nature|culture, mind|body, etc.) and promotes interconnectivity and interdependence of worlds (6). Deleuze & Guattari, two French intellectuals and philosophers of the 20th century, laid the foundations of current posthumanism/new materialism, inspiring researchers to use their lines of thinking as a starting point for their inquiry and begin to unfold them. However, much more needs to be done in order to arrive at a more fertile tradition of thought that will lead us to the *meta-Anthropocene* era.

ASSEMBLAGE PEDAGOGY: NEW PATHWAYS FOR ENVIRONMENTAL EDUCATION FOR SUSTAINABILITY (EEFS) IN THE *META-ANTHROPOCENE* ERA

The need for a post-humanist approach to educational reality in general is recognised, which will offer new possibilities for the introduction of new pedagogical methods (6). This is also the case with the field of Environmental Education for Sustainability (EEFS), which according to Taylor A. (8) also needs

a clear and decisive voice of posthumanism, as an appropriate theoretical and philosophical framework. Indeed, posthumanism perceives subjectivity as ecological, materially enmeshed in the flows of *cosmos* (9), thus allowing for a transition to a collective *we*, highlighting the interdependence of all species which, in any case, is the epitome of EEfS, rather than a collective *we* that refers exclusively to humans and how they can oversee efforts to protect the environment (10). In this way, thinking, learning and knowledge are co-generated by the human and more-than-human world, and as Lynch & Mannion (11) put it, through an attunement with the environment. Therefore, we are in favour of a relational dimension of EEfS that is in constant motion and thus achieves the interconnection and entanglements of all actants, always bearing in mind the words of Deleuze & Guattari (1) that *we become-others* through constant differentiations in ourselves. Particular emphasis is attributed to the power that places exert on us. By recognising the synergetic agency of the more-than-human entities and materialities in the mutual *becomings* of bodies of all types, we emphasise the relationality and complementarity of the multi-dimensional relationships between children and places (12, 13, 14).

The hidden truths of each place invite children/students/people to make their own discoveries and encourage them to create their own stories (15, 16). The best way to do this is through experimentation and play (13). The basic principle of these approaches that we also embrace in our pedagogy and research is the acknowledgement, on an ontological, epistemological and ethical level, of the equal status of human and non-human entities in the world (6), challenging human superiority and fostering more relational orientations and alternative ways of knowing and being (8). We employ the idea of *assemblage* as our central concept shaping our pedagogy. According to Deleuze and Guattari (1), this concept encompasses non-hierarchical relational territories and encounters of various human, more-than-human and material entities that influence, affect and are affected by each other. It also conceives people and places as made by dynamic heterogeneous relations of human and more-than-human actants. Learning takes place between all different parts within the assemblages and is perceived as a non-linear and rhizomatic process (14).

On the level of educational praxis, our assemblage pedagogy in EEfS draws inspiration from and is based on pedagogical encounters (10), which are considered as potentially rich learning experiences (2). These encounters are often unexpected, produced by flows, forces, qualities and agencies within assemblages, through in-depth engagement, free play and experimentation, in which children become products of these assemblages (16). Our emergent pedagogies seek to be open to the multiple ways in which students, teachers, researchers and more-than-human others co-create spaces and places of teaching and learning in the context of pedagogical encounters with entities and materialities of place. Our efforts involve nurturing an openness to our *cosmos* by slowing down our pace of thinking and moving in order to attune ourselves to the environment with activating all our senses. It is important to provide our students with space and time to immerse in place and allow multiple events to come to the surface and evolve, giving them the opportunity to experience unique, meaningful and significant moments for themselves (17).

Emphasising on the synergetic agency that emerges from the symbiosis within our *cosmos*, the more-than-human entities and materialities the children encounter in their everyday environments are valued as co-learners as well as co-educators (11, 12, 13). This implies a major shift in pedagogical thinking and research, opening new prospects in EEfS for learning environments that include and nurture educational synergies between the humans and non-humans. These environments allow educators and students to release new lines of thought, always, as Deleuze and Guattari (1) put it “in contact with the real” (p. 2), allowing *new lines of flight* to emerge towards a symbiotic ethic in EEfS.

A symbiotic ethic creates an innate, internal sense of responsibility for the relationships and realities we co-create and share with the rest of the world (18). Moreover, it encourages the establishment of new ways of living, as it orients children to new ways of thinking, empowering them in their efforts to establish ethical relationships with other species (8, 19, 20). This symbiotic ethic inspires students to

always remain open to new encounters with the entities and materialities of place (11, 13, 21), recognising their place in an interdependent relational network of bodies of all types (20).

On a practical basis, a pedagogy of assemblages encourages children/students to immerse themselves within the cultural and material realities of place by learning about its natural and cultural history in order to be able to imagine a more sustainable future in their local environments (13). Children are facilitated to cultivate an openness to the *cosmos*, appreciating and embracing the differences and innate value of each and every particular entity of the place (14).

More specifically, the role of teachers involves a mindful design of the educational activities during fieldtrips, always bearing in mind to leave space and time for the unexpected and the spontaneous. By promoting inter-relational processes between human and more-than-human entities and materialities, children share embodied experiences with place and acquire new skills to read and live their place through all their senses (21), while fostering embodied relationships with place, a sense of place and a sense of belonging (22).

Drawing inspiration from the work of Deleuze and Guattari, Gough (23) argues that places “become pedagogical through the cultural practices that allow and encourage us to participate in their multiple qualities” (p. 71). Thus, educators incorporate the element of each place's stories through interactive engagement with its natural and cultural history, engaging all entities and materialities that make places and shape pedagogies (14, 24, 25). By listening carefully and appreciating the unique truth that each story carries, children are inspired to co-create and become co-protagonists of their own stories along with the elements and qualities of their local environments (15, 19).

METHODOLOGY

Having adopted a monistic ontology (1) for our inquiry, our endeavour should be seen as post-qualitative, aiming to highlight the relational agency within assemblages of bodies of all types. The methodology used here should not be seen as a paradigm to be followed by other researchers but, as the trigger for differentiation. According to Lather (26), there are infinite tiny methodologies that could be conceived, thus offering pluralisation, innovation, and creativity in the way we conduct post-qualitative inquiry.

Any research effort needs to be supported by an appropriate philosophical background. Thus, in post-qualitative research an ontology of immanence and transcendental empiricism is essential, since, as Deleuze & Guattari (1) said, we should not focus on the actual but on what is yet to come. We endorse Deleuze & Guattari's (1) rejection of the verb *is* which is characterised by representativeness, stasis and lack of imagination and, instead, adopt their conjunction *and* which allows us to be transformed and multiplied continuously. In our pedagogy we use the concept of assemblage as a method (3), as it can respond appropriately to the complexities, interconnections and syntheses within the context of EEfS, producing new understandings of life and new types of knowledge for the transition to a *meta-Anthropocene* era.

We embrace *thinking with theory* (4), with theory being our companion in trying to make the concepts fit and put into practice. Plugging concepts in empirical materials will shield the effort to “experiment in contact with the real” (1, p. 12). We use a relational materialist lens to converse with the empirical materials collected during the pedagogical encounters that children experienced in the wetland and the forest, through practices of *deep hanging out* (27) and *walking-with-place* (28). The empirical materials included photographs that captured children's actions and intra-actions with the entities and materialities of the place, the walk-in chats with the children in the wetland and adjacent forest, and the researcher's journal and fieldnotes, during and after the fieldtrips carried out.

What we really need is an encounter between theory (concepts) and praxis (empirical materials) to achieve a polymorphous filtering of our materials that will allow us to approach and highlight the

complexity of *cosmos*. The intention is to raise new questions and through concepts to generate new and multiple orientations for thinking (3) while making understanding more feasible.

A CONVERSATION WITH OUR EMPIRICAL MATERIALS: EDUCATIONAL SYNERGIES WITHIN OUR COSMOS

In the context of our educational design, we have always welcomed the unexpected and the spontaneous that encouraged children to actively encounter place through practices of *deep hanging out* (27). Children had there the opportunity to immerse themselves in place with all their senses, blurring boundaries and bodies and *walking-with* (28) human and more-than-human worlds, alone or in pairs, with eyes open or blind-folded, by paying attention to the sensory. We experienced moments where bodies functioned and intermingled with each other, transmitting intensities (1) and paving the way for a relational pedagogical praxis (10).

During our fieldtrips, children experienced multiple encounters with aspects of the historicity of the place when they found remains of old ships along the shoreline. That gave us unique opportunities to experience moments of *becoming-different* and *becoming-other* (22, 29, 30) and to travel with a time-machine, unfolding the historical identity of place and becoming the protagonists of our own stories, sailing with our dream ship in unknown, yet magnificent, seas.

Walking along the coastline, they almost immediately found the remains/remnants of old ships and boats. Iron parts and bars, oversized nails, rings of chains and anchors. The opportunity was not wasted! The history of the place began to unfold before them: from ancient times, this place has experienced great prosperity, an important port (both commercial and military) with an acropolis-fortress, a place of fish breeding and then, a place of eternal rest on the muddy bottom for the last century's local wooden commercial ships and fishing boats, being left there to face a slow death. Until a few years ago you could see their carcasses slowly disappearing under the surface of the water. Now, all it takes is a dive with your mask to wander around this marine graveyard.

(Researcher's diary)

Our interest laid in the stories emerging from the pedagogical encounters of human and more-than-human actors within the pedagogical assemblages (13, 31, 32). Our aim is to experiment with acts of thought (33), exploring the realities that each story highlights, the way in which members of the assemblages affect and are affected by each other and by other assemblages in a state of a constant *becoming-different*, *becoming-other* (1), and to highlight what is produced within *the human-place assemblages* (31), in an attempt to create and follow our *lines of flight* (1) for the pedagogies and inquiries yet-to-come.

Through the draft vignettes of this ongoing doctoral research endeavour, we wish to share an idea of how we conceive an encounter between our theory (DeleuzoGuattarian philosophical toolbox) and our praxis (educational processes, lived experiences, intra-actions, empirical materials) and explore what new realities are possible to emerge from such encounters. It is important to note that our endeavour involves a partial knowing (34), situated within events (31) in the context of EEfS.

The vessel~children~water assemblage

The *vessels~children~water* assemblage involves the interweaving of children's imagination and the materiality of place, which leads to unique experiences and unexpected, perpetual *becomings-with* it (Fig. 1). The story that emerges through this assemblage involves an encounter between the material (sticks, wood, leaves, remains of old ships, overhanging eucalyptus, mud, shoreline, sea) and the

cultural elements of the place (nautical/maritime tradition, shipbuilding, stories of/in/with the sea) that constitute its unique identity.



Figure 1. The vessels~children~water assemblage

The materialities and flows called children to intra-act with them. Children listened to their voice and responded to the call. They built vessels and started travelling! So much excitement about what they accomplished with what they found around them! Excitement about the journeys that were opening up before them! (Researcher's diary)

And what seemed to emerge was another kind of knowledge through existing practices of knowing in being (7) with experimentation and free play that have the potential to create new spaces for journeys with *fair winds and following seas*.

The encounter with the abandoned nest

The last vignette involves the encounter with an abandoned nest in the forest (Fig. 2).



Figure 2. Finding the nest



Figure 3. The hand-made bracelets

The very moment they held the nest in their hands, they saw the faded threads which were entangled with the other materials the nest was made of. The children were convinced that these threads were the special hand-made bracelets we wear on the first day of March, made of red and white threads (Fig. 3). It is an old tradition in Greece to wear these bracelets to protect ourselves from the sun of spring. We take them off on the last day of March and hang them from the tree branches for the birds to pick them up make their nests. They were so thrilled with their discovery and, of course, I shared their enthusiasm. (Researcher's diary)

This encounter sparked a conversation emphasising the relationality, reciprocity and complementarity of diverse relationships (13, 14, 19, 32), where Greek tradition is interwoven with bird architecture. The children were led to a deep connection and awareness that they were and will always be inextricably linked and mutually constituted with the entities and materialities of their everyday environments. They are constantly changing, differentiating and arriving at multiple becomings-with(in)-their-place. They can no longer be perceived as separate entities, as the intra-action with the socio-material aspects of the place leads to a new assemblage of bodies and meaning.

EPILOGUE

A growing number of researchers suggest that solutions to contemporary socio-environmental problems need new approaches focusing on relational orientations and alternative ways of knowing and learning. Thus, we too seek to design and implement innovative pedagogical approaches and practices in the field of EeFs. These innovations are inspired by the concept of assemblage and focus on all the human and non-human actants in a place. The philosophy of Deleuze and Guattari contains such a dynamic and provides an appropriate philosophical and conceptual background for the EeFs to create pedagogical encounters between the children/students and their more-than-human-world. In the pedagogy we propose, life and the world are perceived as a complex network of assemblages that constantly creates interconnections, combinations and transformations, and the child is in a process of perpetual becoming. Learning takes place among all human and more-than-human actants, while all these encounters and relationships can lead to the generation of new knowledge for the children of the *meta-Anthropocene* era and the educational realities yet-to-come.

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WHAT A WONDERFUL WASTE

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Abstract

The paper questions the role of waste in the production and consumption of the Anthropocene and presents the results of two case studies as inspiration for new ways of living, producing, and consuming in the Anthropocene. The two cases have different focuses: the first is the organic farm project Rabarbergaarden in Northern Zealand, Denmark, which is dedicated to a circular economy, giving more back to nature and the local community than it takes, harvests, and withdraws. The second case is Restaurant Nolla in Helsinki, Finland, which consistently works towards lowering the by-products of food production and consumption, eliminating refuse to the extent possible, and considering itself a zero-waste restaurant. In both cases, debris and waste have been redefined through efforts towards reduction, reuse, upcycling, or recycling. In this sense, the cases are exemplary and demonstrate with different means that waste is not just a thing, it is also a thought; or rather it defies the traditional dichotomy between material and social. Waste becomes through a complex interplay between social practices, material objects, and discourses, and it is handled accordingly.

INTRODUCTION

Our way of life in the Anthropocene may, among other things, be characterized by excessive food production and consumption. Food production and consumption are increasingly mentioned in connection with sustainability, but rarely in a positive light. Sustainability may be defined, as proposed by the Brundtland Commission (1), as 'meeting the needs of the present without compromising the ability of future generations to meet their own needs'. Both food production and consumption are often cited as examples of human activities that greatly burden the planet (e.g. 2, 3). Food and sustainability are not uncomplicated acquaintances, nor easy combinations.

Fortunately, there are more and more enthusiasts aiming to link food production and consumption with sustainability. They are launching initiatives and developing solutions that may enable us to live, eat, and enjoy food and culinary experiences with a deep respect for the planet we inhabit, the animals with whom we coexist, and the plants that condition our existence.

These initiatives, while imperfect and flawed, embrace the uncertainty of our time by trying, failing, and struggling, yet constantly striving for a sustainable future, perhaps even more so than most scientific and scholarly work of the Anthropocene

METHODOLOGY: DUMPSTER DIVING

Based on a three-year case study that included participant observations, semi-structured interviews, informal conversations, food consumption, desk research, and mail correspondence, I sought to gain an in-depth understanding of the thoughts, interests, and

logic behind new initiatives in food production and consumption in the Nordic countries.

The qualitative inquiry combined classic semi-structured interviews and participant observations with a less preconceived recipe for qualitative inquiry, which included casual conversations, food tasting, experiencing the physical environment, and material engagement. When researching food, the body is obviously a point of departure for knowledge (4, 5). Speaking about food and meals is one thing, but producing, eating, smelling, and sensing food is another. Likewise, discussing a circular business model of food production has cognitive advantages, but experiencing the outcome of such a model may provide a different kind of non-verbal knowledge.

The data collection involved data creation, data doings and data artworks, but also something given as data when I least expected it. Some may choose to exclude the term data entirely, but I prefer, like Brinkmann (6), to insist on the possibility of stumbling upon data that break down preconceptions and predictions; data that astonish as such. They are given as data in the sense that they unintended become.

Furthermore, the research approach is inspired by Walter Benjamin (7), who paid particular attention to the debris of his time. Debris, by definition, is neglected and overlooked, and as such, is less tainted by intentions and less corrupted by ideology. For Benjamin, ruins and rubble were leftovers and remains of modernity (8). These fragments urged him to think of a history that no longer existed and a future that never materialized. Meticulously, he collected scraps, rubbish, and garbage and organized them in envelopes from which now-classical essays and analyses took shape. In the essay *Charles Baudelaire: A Lyric Poet of the Era of High Capitalism*, Benjamin (7) described the delight and yearning of 'love at last sight'. One may say that the collection of waste and debris, that is, the intellectual dumpster diving, may, in some sense, be the prolongation of love at last sight.

While practicing the envelope method of Benjamin (7) as a collector of debris, the research project also asked diffractive questions about interrelatedness and connections, as well as redefinitions and disappearances of waste. Bruno Latour's (9) procedure of 'Ecologising' implies following a network of actors, including humans and non-human objects, whose relations remain uncertain and require an inquiry tailored to their particularities. 'Is everything interrelated?' Latour asks. 'Not necessarily. We don't know what is interconnected and woven together. We are feeling our way, experimenting, and trying things out' (8). Thus, inspired by Latour's thoughts on ecology as a way of handling the collective life of all humans and non-human objects, I have followed some of the most unlikely actors of the Anthropocene: waste, leftovers, and scraps of food production and consumption, in search of new ways of living.

The following analysis should be perceived as an attempt to practice exactly that - not knowing, embracing uncertainty, yet searching for a way of understanding and researching circular business models and waste management within food production and consumption in the Anthropocene. As a side effect, the leftover, surplus, and dead ends of the research process may indeed offer the most unintended and surprising insights.

THEORETICAL FRAME: WHAT A WASTE

By definition, waste is useless and undesirable. It is considered something to be avoided, shunned, and minimized. Some argue that inadequate waste disposal is the main problem, while others contend that the primary issue lies in the very generation of waste (10).

However, the very conception of waste is rarely questioned. Perhaps, as Prográc et al. (11) note, because once something is identified and designated as waste, it tends to be treated accordingly. In this sense, the definition of waste becomes a self-fulfilling prophecy, leading to

disregard for its potential value. Waste is a process of devaluation of the designated. Just labelling something as waste can perpetuate a cycle of neglect that prevents us from seeing the potential benefits it may offer. Yet if waste is a valuable resource, why should we then prevent it? Waste, scrap, and throwaways have long been a source of ambivalence

In his seminal work, *The Protestant Ethic and the Spirit of Capitalism*, the German sociologist Max Weber (12) argued that the emergence and thriving of modern Western capitalism were influenced by a set of values characterizing Protestant asceticism: dedication to discipline, thrift, delayed gratification, and abstemiousness on the one hand, and distaste for luxury, instant gratification, hedonism, and aversion towards excessive consumption on the other hand. From this perspective, waste may be considered a Protestant sin. One may ask whether the perception of waste today is still embedded in this ethic. With few other options than acknowledging work as the duty of life, the faithful Calvinists were required to live their lives as if they were certain of their status as the elect; thrift and diligent work were signs of the promise of eternal salvation. According to Weber, this ethic fuelled modern capitalism:

For when asceticism was carried out of monastic cells into everyday life, and began to dominate worldly morality, it did its part in building the tremendous cosmos of the modern economic order. This order is now bound to the technical and economic conditions of machine production which today determine the lives of all the individuals who are born into this mechanism, not only those directly concerned with economic acquisition, with irresistible force. *Perhaps it will so determine them until the last ton of fossilized coal is burnt* (11, p.81) [italics added].

Weber's iron cage of rationality may manifest today as the ecological crisis of the Anthropocene. However, paradoxically, minimizing and preventing waste is also in sync with the Protestant ethic and the rationality of modern capitalism.

According to the American professor of competitive strategy, Michael Porter (13), waste is not a sin; rather, it is unworthy of attention. In his classic work, Porter presented the value chain as a systematic way of examining the activities of a firm and their interactions in order to improve its competitive advantages.

The value chain divides a firm's activities into two groups: primary activities and support activities. Primary activities are directly related to the production and delivery of a company's products or services, and include inbound logistics (such as receiving and storing raw materials), operations (such as manufacturing or service delivery), outbound logistics (such as distributing finished products), marketing and sales (such as advertising and selling), and service (such as providing after-sales support). Support activities, on the other hand, are not directly involved in the production and delivery of products or services, but rather provide the infrastructure and support necessary for the primary activities to function effectively. These include procurement (such as purchasing raw materials), technology development (such as research and development), human resource management (such as recruitment and training), and firm infrastructure (such as finance and accounting).

By optimizing the value adding activities, minimizing the costs associated with them, and improving the linkages between them, a firm can improve its production, increase its margin, and achieve a competitive advantage over its rivals. Margin refers to the difference between the total value created by a firm's products or services and the cost of performing the activities to create those products or services. Waste is not directly accounted for in Porter's Value Chain. His primary focus was on optimizing value-adding activities, with little attention paid to the issue of waste. However, inefficient production and inadequate linkages between value-adding activities may cause delays, spillage, and excess; some would argue that it is, in fact, waste.

In comparison, waste (*muda*) has been met with pronounced skepticism in Asia, particularly in Japan, where the LEAN philosophy has developed and thrived, spreading to the rest of the world. For prosperity, competitive advantages, and efficiency, the continuous reduction of so-called

'non-value-added waste' is deemed crucial in production management (14, 15, 16). The LEAN philosophy was originally formulated by Toyota Executive Taiichi Ohno (17), who considered waste an inevitable byproduct of all production and processes, whether tangible or intangible, and recognized seven types of waste: overproduction, waiting time, transportation, processing, inventory, excess motions, and defects.

Overproduction involves producing more than required or producing too soon, while waiting refers to delays caused by inadequate coordination, poor scheduling, or inefficient processes. Waste of transportation involves moving materials or products unnecessarily, and processing refers to performing activities that are not required or inefficient, leading to additional costs. Inventory involves excess or unused materials, tying up resources; motion refers to unnecessary movements or motions of workers or equipment, and defects refer to products or services that do not meet customer requirements or quality standards leading to rework or scrap. Clearly, this approach to production fits well within the logic of capitalism (18). The notion of waste prevention seems not only central to ecological thinking and new efforts of circular economy but also to capitalism itself.

ANALYSIS: A ZERO WASTE MINDSET

Much waste can be identified within food production and consumption: overproduction occurs when e.g., too many meals are prepared compared to demand or too many ingredients are added unnecessarily. Time is wasted on waiting when goods, task, people or meals are not moving, resulting, for instance, in fewer table turnovers or in food products passing their best-before dates. Waste of transportation occurs when movements of costly goods does not add value: e.g., long distance import of avocados that rotten before being eaten. Over-refinement or over-processing increases the cost of the product while adding limited value, for example colouring of sausages or plastic wrap of cucumbers that may prolong shelf-life but not necessarily life of the planet. Excessive inventory is yet another form of waste, as seen in supermarkets where tons of food are disposed of daily. Moreover, unnecessary movements of people and machinery complicate and prolong production time in farms, abattoirs, and kitchens. Defects require rework or repair and may even be shipped directly to landfills; it may be waste at its worst.

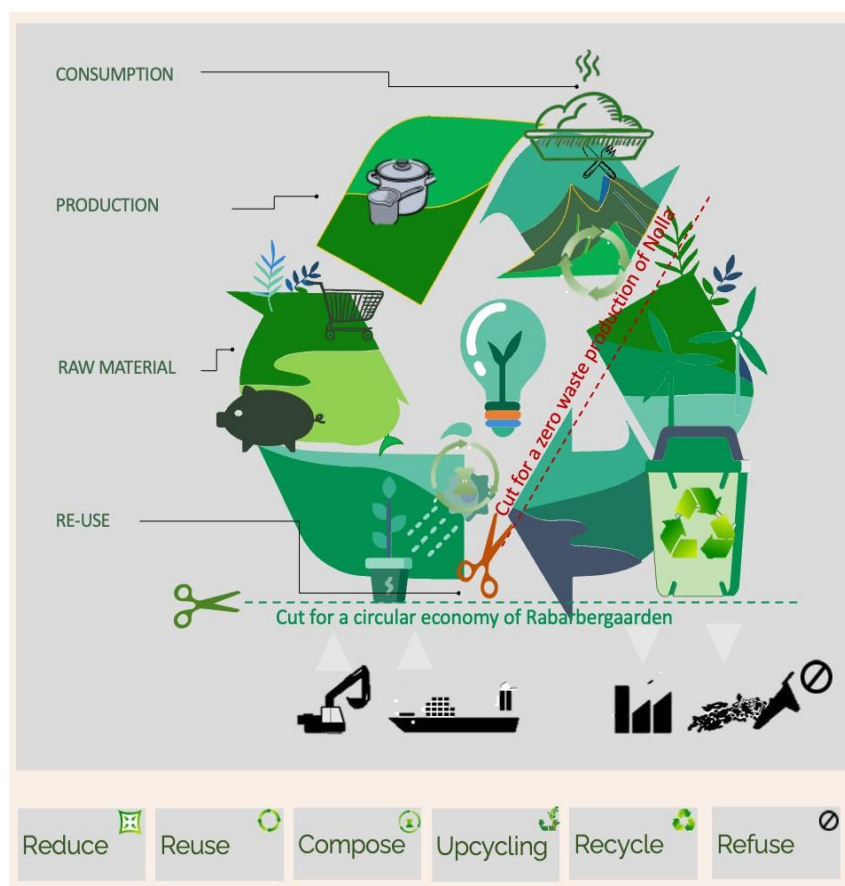
Both at Rabarbergaarden, an ecological farm in Denmark, and at Nolla, a zero-waste restaurant in Finland, they strive to eliminate waste by carefully selecting ingredients as well as suppliers and by optimizing and refining their production processes. Restaurant Nolla operates with a concept of no waste production reflecting a similar mindset: As they write on the back wall of the restaurant, 'How low can you go? We are aiming at zero'. In a similar vein, Rabarbergaarden views all components of the production as valuable assets in a zero-waste system; all resources should enhance the operations of the farm. This approach allows food producers to maximize resource utilization while minimizing the environmental impact of waste

As Rabarbergaarden and Restaurant Nolla strive to eliminate waste and optimize their production processes, and as they try to limit our excessive food consumption and educate us on ways to live sustainably, they display and practice a mindset that may be heralded as a rejection of the throwaway mentality of the Anthropocene.

It is possible to identify at least six ways in which waste is perceived, handled, and articulated by Rabarbergaarden and Restaurant Nolla:

1. One way of minimizing waste generation is to avoid it completely. The minimization of waste can be accomplished through waste prevention. For example, by utilizing the entire carrot, including the top, as an edible vegetable, waste generation is avoided entirely.

2. Another way of reducing waste is the use of long-lasting, quality items that can be re-used multiple times. This approach reduces the need for single-use products, which are significant contributors to waste generation. For example, regular use of durable plastic containers or glass jars can significantly decrease waste production.
3. A third way of reducing waste, if organic, is to divert from disposal through composting, such as potato peels, or repurposing as animal feed, such as apple cores. Apart from reducing the amount of organic waste that ends up in landfills, composting has many benefits, including improving soil quality, reducing need for synthetic fertilizers and reducing greenhouse emissions associated with waste disposal.
4. A fourth way of limiting waste is upcycling, that is, to transform leftovers or scrap into new, valuable products. For instance, apple skins can be utilized as source for the production of vegan leather, fats can be transformed into hand soap, and coffee grounds can be repurposed as a soil amendment to improve soil quality.
5. A fifth possibility of waste reduction is Waste recycling, referring to the process of collecting and processing waste materials to produce new products. Recycling may involve mechanical processes, such as sorting, cleaning, and shredding or involve chemical processes, such as melting, and refining to turn waste into new raw materials or products. Some would argue that energy recovery from incineration is also a form of recycling involving burning waste at high temperatures to produce energy in the form of electricity or heat.
6. A last resort of waste handling is to treat it as useless garbage and refuse and dump it in the bin and send it to a landfill.



At first glance, the hierarchy of waste management options appears straightforward: it is preferable to prevent waste from being generated in the first place, rather than retrieving value from waste or even as a last resort disposing waste in a landfill. By improving waste reduction efforts through sustainable practices such as composting, recycling, and reuse, Rabarbergaarden and Restaurant Nolla can significantly decrease the amount of waste sent to landfills and thus reduce environmental impacts.

However, in reality, they face a difficult and continuous choice between waste management options for individual items such as a simple apple core. It could be the seed for a new apple tree, food for animals, or a source for dried apple concentrate or the apple skin could be upcycled to vegan leather. The question of what to do with waste requires careful consideration and decision-making, and we must ask ourselves the unsettling question: who is to decide?

CONCLUSION: WASTE OR RESOURCE, THAT IS THE QUESTION

As we turn away from the throwaway mindset of the Anthropocene, we recognise the waste of waste as a first step. The popular saying 'one [wo]man's waste is another [wo]man's treasure' points to the fact that value of a material is not absolute, but rather depends on its intended use and the perspective of the beholder. This idea emphasizes that waste is not an inherent characteristic of a material, but rather a consequence of how it is perceived, designated, and managed.

By embracing this socio-material conception of waste, we can, first and foremost, broaden our thinking about waste and explore innovative ways to repurpose, recycle or upcycle it. This shift may help reducing the amount of waste that ends up in landfills, while also promoting a more sustainable and circular economy. Yet, a zero-waste mindset also urge us to minimise waste much in synch with the protestant ethic, LEAN philosophy and the competitive rationality of modern capitalism. A zero-waste society inclines us to produce and consume more consciously but still within the logic of a regime that endlessly ask for more, for more efficiency, for more profit, and for more at a higher pace. First, we label something as waste, and then, we strive to eliminate it by all means. It would be foolish to disregard the act of power within the war against waste.

If everyone agrees that waste is univocally bad, should be prevented and condemned, critical awareness is called for and academic suspicious may be required. The sociological literature is, in fact, densely populated by figures of condemnation and disdain. The sin of prostitutes is well-known, and so is the ambivalent desire associated with promiscuous existences described by Judith Walkowitz (19). She termed it 'dreadful delight'. Thinking of the trail of waste, that many larger music festivals typically generate and leave behind, may indicate that the protestants' sin of waste may contain traits of the very same ambivalence of dreadful delight.

In a similar vein, Zygmunt Bauman (20) has described the stigmatization of vagabonds. Like waste, vagabonds are often seen as valueless and undesirable, lacking any remarkable value-adding properties. Their idleness and uselessness do not fit into society's established structures and norms of production and are therefore often hidden away or incarcerated as outcasts, much like waste that is sent to landfills or places of poverty; that is, away from the streets and visibility of everyday life of the Western world. The non-conformity of vagabonds and waste may expose the limitations of established society. Their very existence of purposelessness questions the established order.

The preoccupation with waste prevention and minimization that characterizes both modern capitalism and circular economy efforts bears some interesting resemblance to former witch hunts that often arise in situations of social change. According to Mary Douglas (21), witchcraft accusations and witch hunts are ways in which people attempt to maintain social order and

control during times of uncertainty when social norms and boundaries are unclear. The ecological crisis, with crop failures, illness, and natural disasters, may be a testimony to the failure of modern capitalism and the Anthropocene, generating ambiguity and uneasiness. Arguably, a circular economy future, where waste is eliminated, material loops are fully closed, and products are recycled indefinitely, is hardly attainable in practice under the present conditions (22). Our current obsession with waste management, rather than addressing its root cause, may be symptomatic.

A more nuanced approach to waste could improve our understanding. When we categorize waste as either a useless by-product to eliminate or a valuable resource to exploit, we risk oversimplifying the complex and ongoing process of managing waste, which involves constant negotiation of its value. It is crucial to understand not only that what is considered waste in one context might be seen as valuable in another, but we should take into account the social, economic, and cultural factors that influence waste perception and waste management. We should also bear in mind, that when we consider waste as a resource, it is still something to be exploited and worth competing for.

When we differentiate waste as either worthless or valuable, we tend to rely on a conventional subject/object perspective that views humans as active agents in control of objects that lack agency. What if we were to reject the traditional subject/object division and instead recognize the value and agency of non-human entities? By assigning value and agency to non-human objects, we can view them as valuable cohabitants (23, 24). In this way, we would coexist with animals, plants, food, waste, and other quasi-objects that are neither entirely natural nor entirely social.

Going forward, it may be necessary to avoid timeworn patterns of thinking and instead recognize that non-humans and quasi-objects are both means and ends in themselves, as Latour has argued (7, 25). No animals or plants, and no food and no things are merely means. They are always also ends.

By recognizing that humans co-depend on the world and that humans are entangled with non-human objects, we may unlock the potential for more sustainable practices that promote a mutually beneficial relationship between humans and non-human objects. Rather than framing waste as waste, or waste as a resource for further exploitation, we could perhaps appreciate the value, surplus, and material that we have kindly borrowed from non-human actors and hence view waste, food scrap and leftovers with courtesy, gratitude, and humility. This would require us to refine our vocabulary, modify our thinking, and adjust our practices.

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REIMAGINING OUR URBAN ENVIRONMENTS AND EXPLORING THE POTENTIAL FOR MORE SUSTAINABLE FUTURES THROUGH QUALITATIVE INQUIRY

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Abstract

The need to strive for resilience and mitigate or adapt to climate change is increasingly at the forefront when planning for and managing urban concentrations. Open space is one of the dimensions of urban form which is integral to improving the sustainability and resilience of built environments. If urban open spaces function as urban green infrastructure they have the potential to contribute towards sustainable development and increase the resilience of towns and cities.

The poor quality of urban open spaces in Malta suggests that a 'gap' exists in relation to their planning and design. Various trends such as: Malta's particular scale; development pressures; policy orientation; governance; climatic conditions; and unsustainable mobility patterns, support the need to develop research in relation to Malta's urban open spaces. Using qualitative inquiry, the research investigates this and develops proposals, for addressing this gap. Addressing Malta's urban challenges could ensure more sustainable futures with urban environments where people want to live, work and play.

An adapted version of the 'Mixed Method Exploratory Sequential Approach' using Malta's urban conurbation as a case study is adopted. The methodology is developed in two phases. The first utilizes mixed data collection techniques to gather a substantial amount of data and create an evidence base. The second phase develops proposals in response to the results of phase one and explores potential barriers to implementation using focus groups. The focus groups explore the use of online methods integrating visual interactive surveys and addressing three main themes: spatial implications; planning aspects; and governance requirements.

As a basis for the focus groups discussing spatial implications, a potential spatial plan for a network of green open spaces is developed. Conceptual designs are used to illustrate how Malta's urban open spaces could act as green infrastructure. These address typological spaces and identify the key design principles, as part of a green infrastructure approach. This paper presents how the second phase of this methodology was used to understand the potential to reimagine our urban environments and move towards more sustainable futures.

Keywords: Exploratory Qualitative Methods, Green Infrastructure, Sustainable Development, Networks of Green Open Space, Reimagining Urban Environments

INTRODUCTION

The need to strive for resilience and mitigate or adapt to climate change is essential when planning for and managing urban concentrations. Open space is one of the layers integral to improving the sustainability and resilience of built environments. This recognition is evident through the wide range of policies incorporating the role of urban open spaces (1) or mandating or subsidising the inclusion of green features in new urban developments (2). Their impact on ecological functioning, health/human

well-being, and other social and economic benefits has been documented (3,4) clearly establishing their importance in improving the sustainability and quality of the built environment (5,6,7,8) and their potential to address climate change challenges, particularly in urban areas (1,9). The presence of more high-quality green space in urban areas is therefore becoming crucial (10). Additionally, if urban open spaces function as urban green infrastructure they have the potential to contribute towards sustainable development and increase the resilience of our towns and cities.

The Maltese Context

An initial review of Maltese policy (spatial planning and others) and publications, identified the poor quality of open spaces in Malta (11,12,13,14) in relation to sustainability. This suggested that: a ‘gap’ exists in relation to the planning and design of urban open spaces in Malta. In fact, the Environment and Resources Authorities (ERA)’s document on green infrastructure (GI) in Malta concludes that there are potential research opportunities in relation to adopting a “multifaceted planning approach to GI and building expertise and experience in this regard.” (15)

Malta has one main urban conurbation the dynamics and size of which could easily be compared to that of a medium sized European city. As a result, policy is often developed at a national scale which can also be considered to be the city scale.



Figure 4: The Principal Urban Area (PUA) (right) compared to Den Haag in The Netherlands (a medium sized European City) (left) Source: Author (base map adapted from Google)

Malta has the highest population density of all EU member states. In 2021, the population stood at 519,562 which implies a density of 1,649 persons per km² (16). This coupled with one of the highest motorization rates in Europe (17) results in urban open space being prioritized for car usage (18,17). Additionally, trends relating to: development pressures; policy orientation; governance; and climatic conditions, further support the need to develop research in relation to Malta’s urban open spaces.



Figure 5: Open spaces in Malta illustrating climatically uncomfortable spaces and vehicular oriented planning and design. Source: Author



Figure 6: Open spaces in Malta illustrating challenges related to: (a) flash flooding and (b) a project proposal adopting vehicular oriented planning and design. Sources: (a) (19); (b) (20)

Research Overview

Extensive literature exists concerning the planning and design of urban open spaces and their potential contribution to sustainable development. However, there is still the need to understand if and how the spatial planning process can provide the necessary framework for facilitating an integrated approach to their planning and design as a means of improving the sustainability of the Maltese urban environment. Thus, the research aim, question and objectives were developed as outlined in Fig 4.

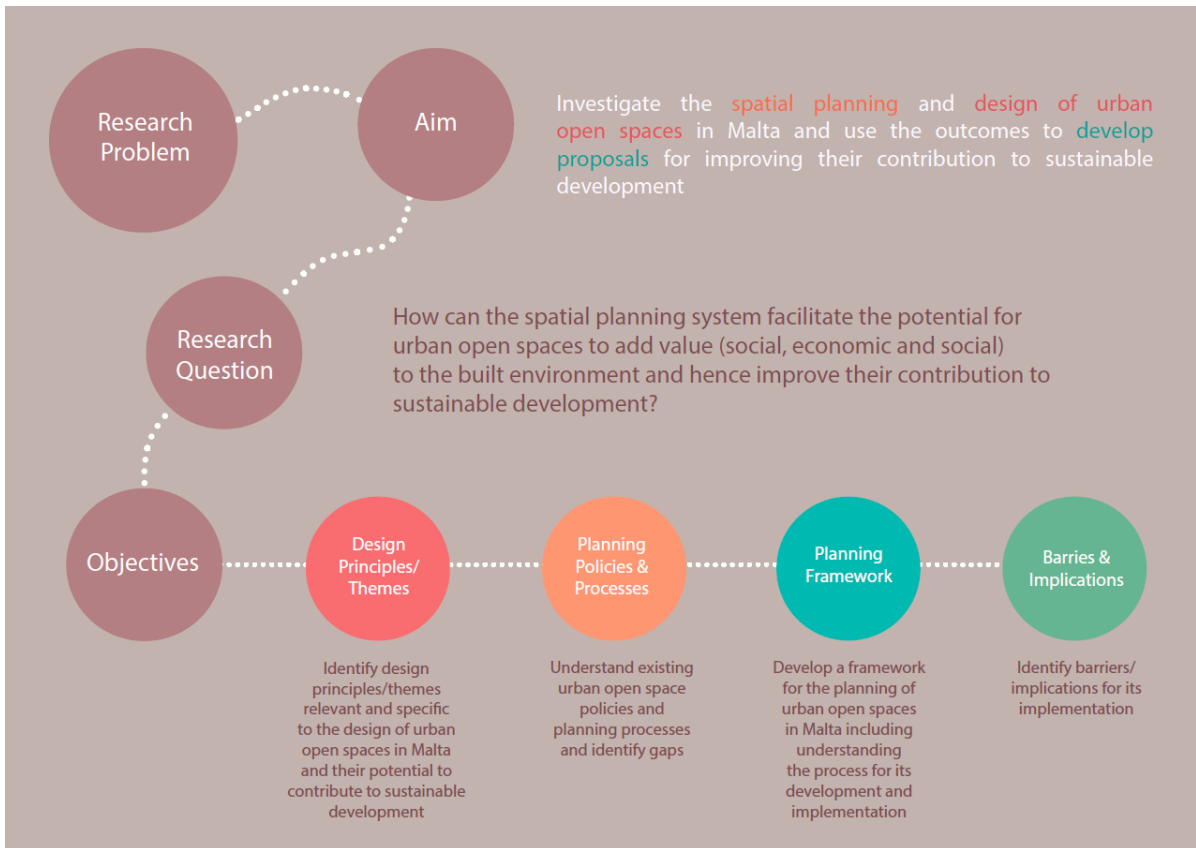


Figure 7: Research scope. Source: Author

METHODOLOGY OVERVIEW

The research adopts a case study approach since it seeks to understand a specific issue within a specific context. When researching a case study, the main aim is to understand what is particular to the case (21). In fact, case study research is suited to “questions that relate to a particular landscape setting; questions of an exploratory nature; questions that seek an in-depth understanding about particular types of situations”. (22) Case studies play a role in developing and contributing to knowledge, through the power of multiple case studies to act as “a means of advancing theories by comparing similarities and differences among cases”. (23) Gerring (24) defines case studies “as an intensive study of a single unit with an aim to generalise across a larger set of units”. (24)

Since the aim of the research was to specifically study the case of Malta, a single city case study approach was chosen using the main urban conurbation in Malta. Fig 5 outlines the mixed methods methodology. The different data collection techniques were developed in relation to the objectives as outlined for the research (Fig 4).

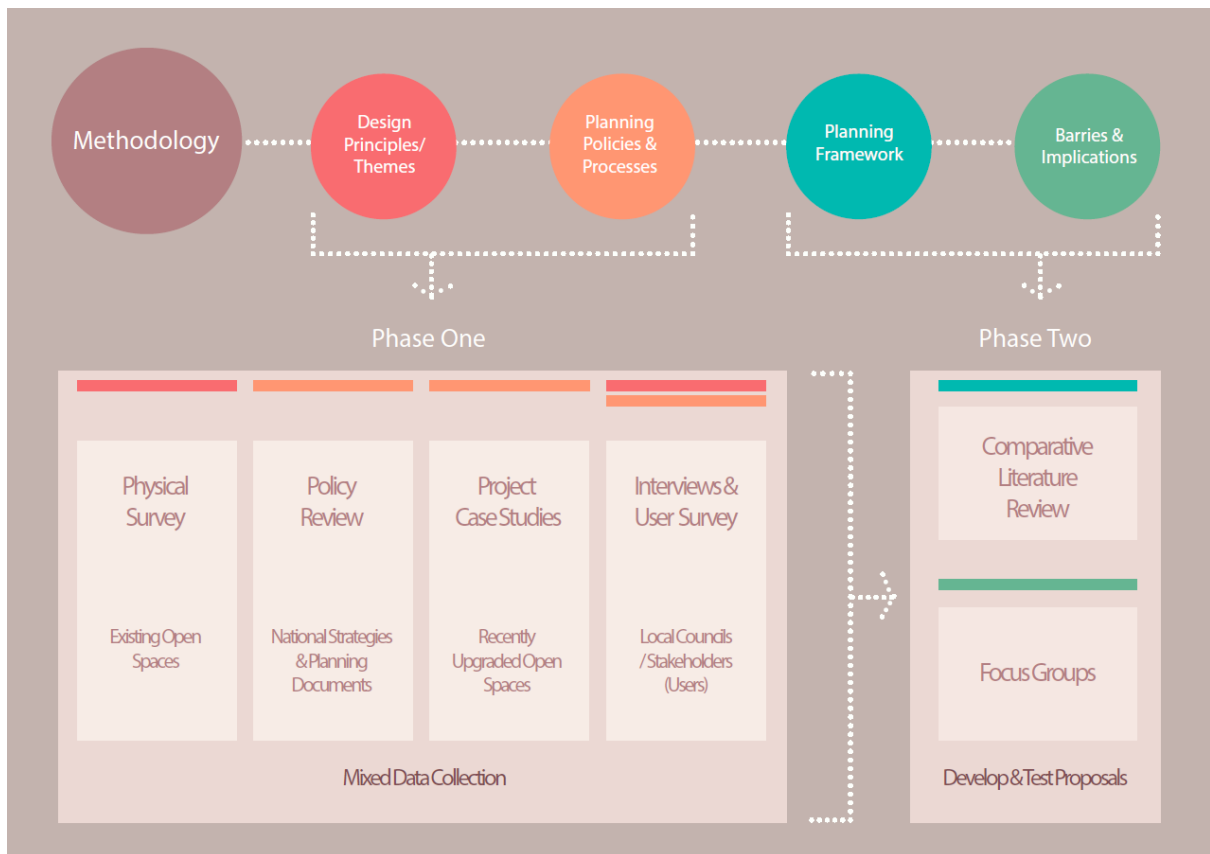


Figure 8: The mixed methods research methodology. Source: Author

Choice and Development of the Method

The research’s pragmatic nature suggested a mixed method strategy, since, with pragmatic orientations, the idea to choose the most suitable research strategy for the problem which is to be investigated (25). Using Creswell and Piano Clark’s (26) definitions an adapted version of the ‘Exploratory Sequential’ model was used, starting with an inductive qualitative phase followed by a qualitative second phase rather than quantitative. The reasons are that the aim of the second phase is not to have a representative sample which identifies the opinion of the majority. Rather, it is to gather a richness of ideas from different stakeholders, to explore what different people think about the proposals and what the issues might be to implementing them. Exploring new ideas is what planning and policy making is about and not necessarily identifying what the majority think.

Having said this, the research design can also be seen as a two phased approach which adopts a convergent design for the first phase and a purely qualitative design for the second (26). Adopting a convergent design is in fact suitable for pragmatism as an umbrella philosophy and is useful when the design purpose is to provide a more complete understanding of a topic. This is in fact what the first phase of the research set out to do. In conclusion, it can be said that the research design is a variation of the ‘typical’ mixed methods designs, adapted in relation to the research orientation, philosophy and purpose.

Theoretical Framework

The theoretical framework adopted is based on the Brundtland report’s (27) three dimensions of sustainable development that should be considered in an integrated way: society, environment and economy. The design principles through which urban open spaces can add social, environmental and

economic value and hence contribute towards sustainable development where identified. These were grouped into twelve main categories and sub-categories (28).

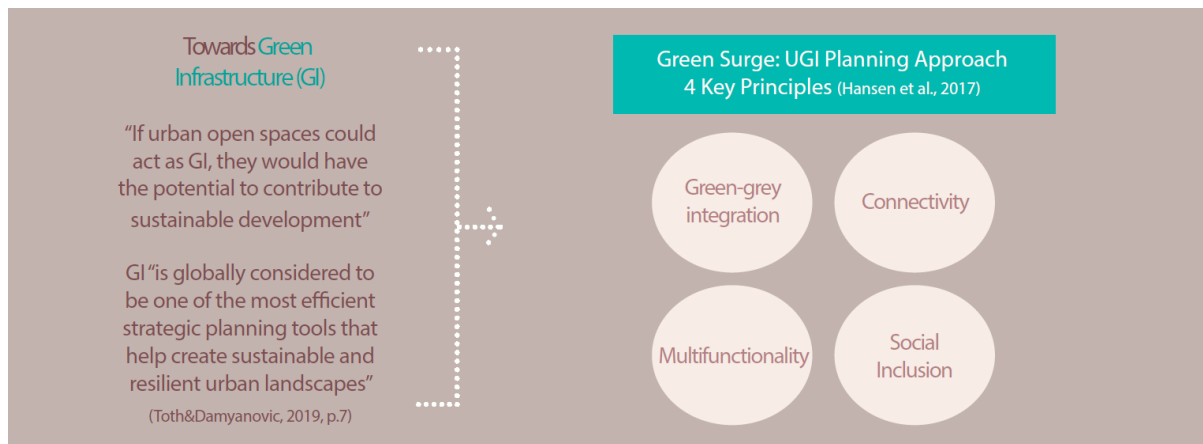


Figure 6: Theoretical underpinning.

Additionally, urban open spaces have the potential to tackle urban challenges and contribute to sustainable development if they function as urban green infrastructure (UGI) (29). To achieve this, the Green Surge project has proposed the UGI planning approach which focuses on four main principles (Fig 6).

PHASE 2 IN DETAIL

The second research phase addressed the third and fourth objective. The first step was to develop an urban open space planning framework for Malta. So, based on the phase one results, a comparative literature review was carried out focusing on the emergent themes, particularly planning and governance issues. Comparing the data with the literature, planning and governance proposals were developed. Focus groups were then selected to complete the third objective by elaborating on and refining the proposals and understanding the process for development. They also served to achieve the fourth objective, to identify barriers/implications for implementation.

Focus Groups as a Data Collection Technique

Originally, interviews with authorities/expert stakeholders were going to be included in phase one. However, as the research progressed they were shifted to phase two as the testing technique and eventually it was decided to use focus groups. The reasons are as follows.

- Potential solutions were emerging during the case study interviews and it was felt that this would also happen when interviewing authorities/expert stakeholders. This risked the interviews becoming repetitive if they were held in the first phase and then again to test the proposals in the second phase.
- Bringing experts together as a focus group and creating a platform for discussion would be potentially more effective and interesting in exploring solutions and developing ideas especially considering the integrated and multidisciplinary nature of the research topic.
- Various themes and questions were already emerging from the surveys and case study/local council interviews. Even though not concrete proposals, they were queries, leading to suggestions, which could be explored. Thus, speaking to the authorities seemed suited as a form of testing.

Developing the Proposals using a Comparative Literature Review (CLR)

The CLR guided the development of proposals. The phase one results identified design principles which should be targeted in the Maltese context in order to improve the potential environmental, social and economic benefits which urban open spaces can provide. It was concluded that urban open spaces in Malta are lacking in their potential contribution to sustainable development (28). Additionally, organising the results according to the four main principles of the UGI planning approach (29) illustrated that urban open spaces in Malta are not acting as green infrastructure (GI) elements. The need to explore and develop proposals for urban open spaces to act as GI was therefore identified.

The principles of GI, however, need to be understood in relation to the local scenario in terms of the planning system, social, economic and environmental conditions, as well as available actors. The success is dependent on the planning process together with the engagement of stakeholders and implementation (29). A more detailed literature review was therefore carried out of international best practice on the planning and governance of urban open spaces with a focus on urban green infrastructure and the specific themes needing attention in Malta. This literature provided a framework for consolidating the results and developing proposals.

The key findings were summarised systematically and proposals developed. Each proposal/action was categorized and grouped to provide a consolidated list of proposals relating to: Spatial Implications; Planning and Governance (30,31). They were further developed using best practice case studies as reference examples. The proposals were then subjected to focus group discussions, which also included a visual interactive survey.

Data Collection and Analysis

The primary aim for the second phase, was to understand the barriers and implications to the implementation of proposals and thus refine and elaborate them. Focus groups allow for a semi-structured interview with groups. They are usually suitable for collecting data on a particular subject. The term focus group discussion (FGD) is also used. This is also seen as an ideal method for getting stakeholders of similar characteristics (e.g. backgrounds or experiences) together to discuss something specific (32,33,34,35).

Developing the Method and Participant Selection

Participants were carefully selected to represent two main groups of stakeholders. The first, the authorities who play a role in relation to: planning, design, implementation, management and regulation. The second, a mix of stakeholders made up of NGO's and academics from different backgrounds. Three sessions were held with the authorities covering: spatial implications; planning proposals; and governance proposals. Two sessions were held with the 'mixed' stakeholder group since participants were not willing to participate in three sessions due to time constraints. Therefore, the spatial implications and planning proposals were combined, with the second session tackling governance.

A focus group is seen as a suitable method here as this can be used to: "explore a topic which is difficult to observe...does not lend itself to observational techniques (e.g. attitudes and decision-making) ...collect a concentrated set of observations in a short time span...ascertain perspectives and experiences from people on a topic...clarify research findings from another method." (34). All these aspects are of relevance here. Additionally, this was preferred over interviews, as focus group participants would likely react to and make comparisons between their own experiences potentially leading to more in-depth and interesting insights.

The aim was therefore to provide a discussion platform. The strength is that the method provides space for agreement or disagreement between participants. This provides a snapshot about how that particular set of stakeholders views the subject being discussed, the range of perspectives or opinions, and to what extent, based on their experiences these are consistent or vary. This can potentially provide much value in understanding whether there is consensus or diversity of experiences (34,32).

The Use of Visual Interactive Surveys

The first session with authorities, on spatial implications, was a physical meeting where the researcher moderated the discussion and a note taker was present. The session was purposely not recorded to provide more comfort for the participants to speak openly. To improve accuracy, the notes were reviewed and analysed within 24 hours while the discussion was fresh in the researcher's mind. A presentation of results and proposals was given followed by questions which were developed to guide the discussion. However, participants were left free to discuss openly. The researcher simply moderated the discussion and posed questions when the discussion fell flat. The questions also ensured that the required aspects were discussed.

Initially, all the sessions were to be held as traditional physical focus groups. However, the second and third sessions with the authorities and both of the sessions with the 'mixed' stakeholder group were carried out virtually adding the use of an online visual interactive survey to maximise participant input. In the case of the discussion on spatial implications held virtually with the 'mixed' stakeholder groups, a short survey was developed to compliment the virtual discussion. For the sessions relating to the planning and governance proposals, virtual meetings were held where the results and proposals were presented using international case studies. Following each set of proposals, questions were posed to the participants. The participants were asked to answer these anonymously using an online survey created using Google Forms.

In developing the survey, the idea of descriptive social surveys was also kept in mind. These are used when "information is required that can only be found by asking what other people have seen or experienced." (36) This would involve the development of a survey, with a standard set of questions, usually based on categories. Here, the selection of participants is crucial and it is important for the questions to "be clear, direct, and unambiguous". (36) Since the aim was to tap into the participants' experiences, it was important to have representatives from the different authorities which play a role in the planning and design of urban open spaces. It was also important to have representatives from civil society, which is why a wide range of NGOs and academics from various backgrounds were invited to participate.

Qualitative Thematic Analysis

The data was analysed qualitatively using a database compiled for each thematic session. This included: notes of the discussions of each session held where relevant; and the survey data for each participant group (authorities and 'mixed' stakeholders) in chart and text format. The textual data was coded using NVivo and the emerging themes compiled for each of the following: Spatial Implications; Planning Proposals; and Governance Proposals. The results were consolidated for the reactions to the 'Spatial Implications' first as this also informed the development of the initial planning and governance proposals. The reactions to the planning and governance proposals were then consolidated and the results report on four main aspects: the level of agreement/disagreement of each proposal; the potential barriers and threats to implementation; addressing multifunctionality and identifying remit; and finally, understanding implications for implementation (30).

DISCUSSION AND CONCLUSION

The methodology illustrates the importance of adapting to circumstances during the course of research. In this instance a global pandemic resulted in 'social distancing' regulations coming into force meaning that, some of the focus group sessions had to be organized as virtual meetings. Working from home also created a situation where participants had restricted working schedules and it was not possible to coordinate a session for all to be present at once. Multiple sessions with fewer people present at one time where therefore organized.

Another observation is that the traditional focus group session which was originally held allowed for a relatively unstructured discussion as intended so as to trigger interesting and explorative data. Following that, it was felt that the second and third sessions should target the collection of specific responses to get a better understanding of the potential barriers to implementation as well as the reactions of the participants in general. Additionally, it became evident that during the unstructured discussion, even though the researcher acted as a moderator, the more dominant participants tended to contribute more than others. When the need for online meetings arose, it was felt that the risk of this happening would be even more pronounced. The interactive survey was thus developed and indeed served to facilitate and allowed for all participants to respond and contribute.

The transitioning to virtual meetings triggered the use of the visual interactive surveys. This provided to be advantages as it did allow more specific responses to be gathered for each set of proposals. Additionally, participants could respond anonymously which potentially allowed for more genuine responses while still allowing the opportunity for discussion. The use of this technique also allowed a number of sessions to be held ensuring a high number of participants, as the data collection was not solely dependent on all participants being present at the same time and generating discussion.

In terms of the mixed methods methodology, the focus groups did strengthen the whole approach as the proposals which were developed based on the first set of findings were refined and elaborated upon as was originally set out in the methodology strategy. This strengthened and improved the validity of the research findings and recommendations.

Finally, while the planning and governance proposals were being presented to the focus groups, and even through the analysis of the results, it became clear that there tended to be a general agreement for most of the proposals. What could have been interesting (as in fact suggested by one of the participants) is an attempt to prioritise the proposals and try and understand which would be most effective in bringing about change. As this emerged, the possibility to follow up the focus groups with a quick online survey (exploring prioritisation) was considered. However, time limitations had to be acknowledged. Additionally, such an endeavor would probably merit a much more in-depth research methodology and analysis and therefore could provide scope for a research proposal in itself.

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INTERSECTIONAL ANALYSIS WITHIN A GENDERED MIGRATION CONTEXT

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Abstract

Transnational feminism theory has appeared as a paradigm that aims to decolonize feminist research from earlier hegemonic discourses. Transnational feminism has imposed itself not only as a critical framework to feminist waves, but also as analytical qualitative framework after a longitude of quantitative research. This paper is a contribution within the framework of the 6th European congress of Qualitative inquiry (ECQI) and it aims to analyze how interlocking of power affects those who are most marginalized in society, in this case migrant women. Migrant women face multilevel discrimination first as a woman, then as a migrant. The intersectionality of gender, race and class reconsiders a collective of factors that affects a social individual in combination. Some critics of the intersectional paradigm found that it is virtually impossible, in qualitative research, to ask questions about intersectionality. Analyzing factors separately is an essential analytical step.

Keywords: Intersectionality. Gender migration. Vulnerability. Coloniality of power.

Introduction

As a contribution in ECQI 2023 about Qualitative Inquiry in the Anthropocene: Affirmative and generative possibilities for (Post)Anthropocentric futures, the main goal of this paper is to underline the conceptual framework of the intersectionality within gendered migration research and to highlight some of the practical examples of intersectionality factor's while researching women's migration journey. Migrant women are exposed to many sorts of discrimination. The factor of gender is the pivot element while studying migrant women, but is not the only factor intervening on migrant women's situation, other factors play a remarkable role such as economic belonging and race. When analyzing intervening factors of migrant women's marginalization in the host society, intersectionality is used as a methodological tool aiming to understand migrant women's discrimination and marginalization. There are common individual factors when analyzing the social and cultural background of indigenous people. The macrostructural factors can also be common as they can depend on a country's position on its international economic and political system. These factors highlight how the international system is still functioning on the continuity of the colonial legacies. The world system is controlled by a market economy as a main component of capitalism. In the first part of this paper, I aim to discuss the intersectionality of factors as heuristic to interpret the result of qualitative research within migrant women contexts. Migrant women fleeing oppression, civil war, or war in their country of origin are not safe when arriving in the host country. They face continuum violence (CV) such as gender-based violence (GBV), discrimination and racism based on skin color or other physical features. This combination of social, cultural, and political structure creates various/new forms of discrimination and marginalization. The second part of this paper will discuss the macro structural conditions that make migrant women one of the most marginalized social groups. Transnational feminism is employed as a critical research analysis of the way that globalization and capitalism affect peoples' geographical movement and leads to a feminization of migration. Feminization of migration can be understood as

the increasing number of migrant women due to several factors. Emancipation is one of the main factors as well as economic and social factors.

Feminization of migration is not only a quantitative issue but mainly a qualitative phenomenon. Studies about gendered migration are rare. Women were considered as a passive actor in the migration process, they were mainly considered as a companion, as a mother or as a wife (1) to the principle actor; the migrant men. According to a study held by the United Nations, the year 2000 was a remarkable year on migrant women's departure. In 2017, the total percentage of women in migrant stock was about 47% from the international migrant trend as shown in the following graph from the United Nation (UN) population division.

The feminization of migration is not only about percentages but mainly about the change of women's role in many societies. Women's emancipation in some patriarchal societies had an impact on the women's migration flows as well. Structuralist theories while studying migration focus on the class factor (1).

Capitalist market work division leads to more ignorance of women's role in society, and limits migrant women into unskilled jobs. The "Feminization of poverty" is a major factor of female migration, in other words the economic situation, class belonging forms a part of the cultural capital (2) that leads to more struggle for women when accessing the labor market. Those difficulties lead to more vulnerabilities and less opportunities for migrant women.

The importance of this study lies in the interlocking between the micro-individual factors and the macro-structural factors as an intersectional analysis that affects migrant women's path and leads to more discrimination and more vulnerability.

Intersectionality as a methodological concept

Intersectionality was first presented by Kimberlé Crenshaw (3) as a key methodological framework when researching women's marginalization from an antiracist and anti-discriminatory approach. Crenshaw's focus was on the conceptualization of Black women's experiences in order to highlight the multiplicities of experiences while studying identity and power as the analytical lens for intersectionality.

Multiplicity of concepts when studying Black women demonstrated the limitation of a single axis framework that had dominated the emergent anti racist and anti-discriminatory research in feminist studies. The failure to consider an intersectionality of factors that influence identity can lead to a further marginalization of migrant women. In this research, intersectionality is used as a methodological concept in order to bring out the often-hidden relational dynamics while exploring migrant women's identities (3). Intersectionality is animated by the imperative for social change on migrant women identities on the ground, the social change can be both on behalf of, or against, migrant women. In sum, many factors intervene while studying intersectionality, for example political and economic factors. It has been argued that intersectionality is an important methodological framework in women studies (4) as it recognizes the heterogeneity of various race and sex groups as an analytical tool that rejects the separability of identity categories. Intersectionality as a methodological tool aims first to study different involved factors separately. Then, it aims to analyze them together through their interactivity and intersectionality.

When intersectionality is applied to both privileged and less privileged women it reveals there are more similarities between, and common disadvantages among, women as a discriminated social group. In addition, migrant women face a continuum of discrimination from their country of origin to their host society. It could be questioned why migrant women are the most vulnerable migrant category. In answer to this it can be shown that vulnerability is a section of the chain of continuum violence that women are subjected to, from premigration stage in the departure country, during the

migration journey, and in the host country. This includes all forms of violence caused by war, conflict, the patriarchal practices or discrimination practices. Kelly (5) used the concept of the continuum of sexual-based violence (SBV) to make the case that Sexual and GBV against forced migrants represents a continuum of violence. As defined by Krause the different forms of GBV are interconnected across forms, spaces and as well victims of violence (6). As mentioned above, the structural violence against migrant women includes social, political, and economic factors in local resettlement contexts. Structural violence against migrants continues to shape women's vulnerability to both structural and physical violence, it became a state policy and this was intensified during the Covid-19 pandemic. According to the World Health Organization, 89% of the nurses in Europe are women, and it increases to 95% in the Western Pacific. Migrant women contributed to the health care system in the host country and played a prominent role in securing the health status of the rest of the population while they had no guarantees for themselves.

Migrant women face oppression in two ways: as a woman first and as a migrant second. Patriarchy as a major discrimination system might differ from one country to another but these conditions still have similar effects on women's life. Women fleeing patriarchal discrimination in the Global South are not safe when reaching Europe or the United States. In their home country, they survive GBV that prevents them from accessing education and vocational training. While accessing the labor market, women are victims of discrimination again, they are paid less than men who do the same work. When in the host country, there is discrimination on several levels, migrant women are paid less than migrant men, and also less than local women. These factors make migrant women the most vulnerable category in the host society.

Main focus of the research

This contribution aims to fill the gap on gendered migration studies considering the low percentage of intersectional analysis. Intersectionality is employed to understand marginalization and oppression faced by migrant women in the host society. By migrant women I mean women of color, black women, white migrants and all migrants with no distinction of ethnicity, religions or race. The main factors guiding this study is being a woman in a movement, those who have migrated voluntarily in order to ameliorate their socio-economic situation.

Scholars studying intersectionality faced by Black migrant women are a way of exploring how Muslim women for example, or women from other ethnic minorities, are marginalized. This type of work is needed and scholars could focus on more specialization in methodological studies. This lack of focus on intersectionality represents an academic injustice, and at the same time a call to define appropriate methodological frameworks while studying migrant women. In a separate qualitative research project, I am exploring the experiences of migrant women victims of female genital mutilations (FGM), and have seen that the multiple research methods are limited while studying minorities coming from different backgrounds and different cultures. The aim of the aforementioned research is to understand the practice of FGM within a migration context on behalf of migrant women living in Belgium but originating from Arab and Asiatique countries. As other women of color are not always visible on the anti-racist and the anti-discrimination paradigms, this study aims to contribute to the unification of female migration studies.

Initially Crenshaw chose to focus her research on Black American women, some argued this led to more fragmentation and dispersion of feminist research. She was criticized by numerous feminist researchers. Crenshaw argued that Black women cannot be true to themselves unless they demand recognition for themselves and those they represent (7). The call for a unified research framework that put together migrant women regardless their origins, ethnicities, class or colors was expanded. Later, Crenshaw (3) expanded her thesis to include all women of color while studying marginalization, identity politics and violence against women. She then applied intersectionality to understand the strengths of taking into consideration the multiple impacts of different aspects of marginalization to

understand racism. Crenshaw (3) supported the idea of multiple voices for the single cause, what I will call here a specialization for the common cause. While supporting migrant women, the unification of the various/separate battles is needed to serve the common purpose.

Despite the change of migrant women's social condition from the country of origin to the host country a continuum chain of violence against them remains. In their country-of-origin women face different forms of abuse and gender-based discrimination, they sometimes flee physical violence such as FGM or forced marriages. While arriving in the host country, they might face new forms of violence such as racism and discrimination based on their gender and on their origins. Multi-form discrimination makes migrant women a vulnerable social group. Therefore, my aim consists of interrogating the interlocking and continued way of discrimination and marginalization against migrant women while drawing attention to the existing knowledge in a way that responds to current analysis. While studying migration, gender migration was not included in most of the analyses, and while studying gender migration was interfaced by a segmented framework, for example the pre-mentioned categorization into women of color, Black, Muslim, etc. This fragmentation sees a single research framework (e.g., gender migration) dispersed into different frameworks. Intersectionality is a key method to end this fragmentation and to pull together and analyse factors that made migrant women a most vulnerable group. Crenshaw originally included gender, race and class in her definition of intersectionality and considered how these collective factors affected individual factors in combination. However, intersectionality allows a wider integration of other socially defined categories, such as age of the migrant, sexuality, nationality. Taking into account the interaction of the dimensions of inequality stress the interwoven nature of these categories and how they can mutually strengthen or weaken each other (7). Furthermore, intersectional research should be designed to illuminate the multiplicative effects of different but interdependent categories and factors to fill the gap of the methodological analysis while studying female migration. Intersectionality categorizes inequalities in its various levels, social structures, including the identity process construction (micro/personal level) and the macro institutional level (7) to the international level.

The interlocking of colonial powers

Transnational feminism as a critical research analysis reveals how globalization and capitalism affect people's movement and how this leads to the feminization of migration flows. The feminization of poverty in the underdeveloped countries leads to the feminization of the international migration flows from colonized countries to the capitalist and imperialist centers, from the ex-North African colonies Algeria and Tunisia to France, or from Congo to Belgium as well. Feminization of migration flows leads to more diverse and new forms of GBV and marginalization. The interlocking of power affects those who are more marginalized in the host society. Hancock considers intersectionality as a normative and empirical tool (8). From his approach, studying intersectionality goes beyond the analysis of the causal complexity of marginalization to estimate political change, reciprocally construction phenomena that shape complex social inequalities (9), in this case marginalization as faced by migrant women in the host country.

The coloniality of power (10) shapes relations in the host society and which sees migrant women experience a certain social hierarchy. However, there is no neutrality in knowledge production and the way that gender, class and sexual hierarchy shape the whole world system is manifested while studying intersectionality in feminist studies. Colonial legacies define the international migration system due to the continuum colonial relationship and the reproduction in the presence of colonial relations. Since 2013, the Black Lives Matters movement (BLM) has shown how racism against indigenous people continues to define social relations. Coloniality of power as studied by Quijano conceptualizes a power matrix that constitutes the new colonial world based upon "racial" social classification of the world population. This leads to control of the labor force and more exploitation of indigenous populations throughout the planet for the sake of the emergence and consolidation of capitalism (10). Migrant

women classified from ex-colonies are more vulnerable than their male counterparts (11). Discrimination based on the gender aggravates racial divides and makes migrant women a most vulnerable social group since they face not only racism in the host country but also a GBV while accessing the job market or while making wider choices. The hegemony of the capitalist system within its new manifestation leads to more control over migrant women's path but also to more marginalization. For example, gender as a social construction is a factor of discrimination in the country of origin, the discrimination is enhanced within more border's barrier established by occidental states. Migration laws are not always of the benefit to migrant women. The Istanbul convention (12) is a tentative measure to fight violence against women but is not yet signed by all nation states. However, the simultaneity of oppression moves beyond additive models to study the multilevel faces of continuum oppression against migrant women.

The macro structural conditions represented by capitalist colonial systems make migrant women a marginalized social group who face multiple ethnic, racial, class and gender boundaries. They face a continuum of violence such as GBV and discrimination from the country of origin. This discrimination is aggravated based on race, skin color and physical features showing how social, cultural and political structure recreate the old and new form of racism.

Conclusion

The production of knowledge is as colonized as the international system itself, and decoloniality implies an epistemic critique of research practices and knowledge production. This is exemplified in some Eurocentric anti-colonial projects who have found that when doing qualitative research, it can be impossible to ask questions about the intersectionality of gender, race and class factors and propose the analysis of these different factors separately as an analytical step. To overcome this the first step to address these view is to consider ways to understand the interlocking of different factors that impact experience. However, despite the increase of several feminist contributions on how gender, race and class inequalities are often the result of interlocking modes of experience, this approach remains under theorized in mainstream development studies.

This paper aims to contribute to qualitative framework that can be employed when researching female migration. It analyzes the intersectionality of factors that make migrant women one of the most vulnerable social groups where the intersectionality of multiple factor lead to a concrete discrimination. During her migratory process, migrant women face various challenges that are not faced by the male migrants. International levels and structures can enhance the oppression against migrant women making the migration more complex.

Abbreviations and Acronyms

FGM: Female Genital Mutilation

GBV: Gender Based Violence

SBV: Sexual Based Violence

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HOW THE EXPERIENCE OF ANOREXIA CAN NOURISH SOCIAL WORK

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Abstract

This paper draws on the autobiographical experience of anorexia of the two authors and on some of the steps that shaped their course of care, in order to reflect critically on social work, the two authors' field of work. The research methodology is duo-ethnography, characterized by a critical, dialogic and multivocal tension in which the differences in meanings that the two researchers bring are entangled in narratives that try to open new windows on experience. The social worker's competence drawn on their experience of fragility can become a resource for recognizing the invisible spaces of the possible in complex and painful life stories. The act of caring took the form of new words and images that accompanied both authors to nourish their bodies with new sensations and to feel differently, albeit in different ways. This sensitivity, however, is not only witness to stories of suffering but also carries a different professional awareness.

Keywords: duo-ethnography, social work, anorexia nervosa.

INTRODUCTION

In this paper, we present the preliminary reflections of a duoethnography started in September 2022 in which we put our stories of anorexia nervosa into dialogue. We were interested in understanding how these stories nourish our professional practice as social workers and researchers today.

We are two women of the same generation - from the 80s, two young researchers and two social workers. We both have body training, Antonella in contemporary dance and Silvia in Feldenkrais Method. We are part of the same research group in Adult Education coordinated by Professor Laura Formenti at the University of Milano-Bicocca (Italy) and this has allowed us to get to know each other and share fragments of our personal stories (1). One of these was the experience of anorexia that we're now sharing for the first time within an academic context. Before today, we both maintained an attitude of extreme secrecy, as we felt the stigma associated to this experience in our youth. Our research has brought us into dialogue, encouraging us to question ourselves on whether our experience of anorexia has affected the ways in which we stand and give meaning to the professional caring relationship that we perform in our everyday job, and if so, how.

First, we analyzed the scientific literature. We were interested in connecting with those studies in which the researchers had drawn on their experiences as anorexics to enrich the knowledge on this topic. Starting with a scoping review based on a few key words (anorexia nervosa, autoethnography), we selected those studies that proposed a third way to the polarized debate between medical and feminist interpretation of the problem. While this kind of approach to the issue seems to be lacking in Italy, contributions from the international literature are numerous (2,3,4, 5, 6,7,8,9,10).

In this research, we found the need for the voice of anorexics to emerge explicitly, beyond the debate between the traditional medical perspective and the feminist perspective. In both perspectives, the voice of anorexics seems to be excluded from discourses because it is considered unreliable, manipulative and false (4,6). Indeed, while biological and medical explanations institutionalize the

problem through hospitalization practices, cultural explanations politicize the problem by placing it in the socially constructed nature of female identity. The feminist perspective therefore also lacks a space for anorexics to respond to the conceptualisation of the problem (4). In both visions, a split is reiterated (11): in medical discourse, it concerns the polarization between mind and body that produces a disembodied self while, in feminist theorisations, the split concerns the individual and the culture that produces a body without self (11).

The analysis of the scientific literature allowed us to have theoretical and empirical coordinates within which to place our discourse. Our interest in an embodied pedagogy (12, 13, 14) has led us to those studies that have approached the topic from the experience of the body, understood as a site of scientific awareness and as a place from which a story is generated (10).

We propose a systemic approach to stories. This approach conceives life stories as living, open and constantly evolving stories (15). From a systemic perspective, stories carry a threefold perspective: 1) the event being told; 2) the perspective of the storyteller; 3) the perspective of the reader. Instead of looking for cause and effect relationships within stories, the systemic approach aims to find ways of multiplying possible interpretations.

In order to encourage the moving of our anorexia stories, we have therefore chosen to approach them through duoethnographic methodology (16). Duoethnography promotes heteroglossia, a critical, dialogic and multivocal tension in which differences of meaning carried by different researchers and juxtaposition in the text provoke the emergence that illuminate the experience. The underlying hypothesis is that biographical and family history influence the motivations behind the choice to undertake educational work, but often remain unconscious (17). The educator's competence to draw on his or her own experience of fragility, including physical fragility, can become a resource for recognising the invisible spaces of the possible in complex and painful life stories (18).

In the following paragraphs we will tell our respective stories of anorexia. We will then try to rewrite them through the activation of a spiral of knowledge (19), in which we draw on different ways of knowing (20, p.1) our biographical and embodied memories (authentic experience - experiential knowledge), 2) some pictures and drawings connected to our stories (aesthetic representation - presentational knowledge), 3) dialogue and reflexivity in relations (activation of a Collective Mind - propositional knowledge); 4) the connection with professional practice (deliberate action research - practical knowledge).

STORIES OF ILL BODIES

Our stories of anorexia are different. Silvia shares her experience of light institutionalization while Antonella tells how the disease manifested itself during her transition to adult life. In this paragraph we share for the first time in an academic context our encounter with anorexia. Although several times in our lives we have been defined, or rather labeled, as anorexic girls, we do not consider it ethically and epistemologically appropriate to define ourselves as such. We won't therefore speak of being anorexic, but of having experienced anorexia at some point in our lives. In the following two paragraphs Antonella first and Silvia later will tell one another, and to readers, what is referred to in medical circles as the onset of illness.

Again, it seems useful to us, to question the medical paradigm that inserts anorexia nervosa as a serious eating disorder. Not because we think that the experience of anorexia does not express a person's deep discomfort and pain, but because the boundaries between what is defined as a disease and what is "normal" are blurred, vary throughout human history, and are not exhaustive in describing the variety and complexity of human experiences. In this direction, we observed in 2013 the update and revision within the Diagnostic and Statistical Manual of Mental Disorders, 5th ed. (DSM-5 (21)) of the diagnostic criteria for anorexia nervosa in order to include more in the diagnostic definition the difficulties of children and adolescents. We do not refute the importance of caring for people who go

through the experience of illness, but we feel the urgency to avoid labeling them as sick, confirming discomfort and pain in its problematic dimension to be solved as soon as possible, without observing its transformative potential for meaning seeking.

In the next few lines, you will read first a story written by Antonella and then one by Silvia. The text consists of two parts: the first part is extracted from our research conversations (in italics), while the second part is an afterthought.

Antonella: the weight of gravity

My story with anorexia began a few months before my 18th birthday. My father died when I was 11 and I was living with my mother and two sisters. It was May, I was preparing for my high school exams when my mother was diagnosed with cancer. At that moment I remember an image of my body standing in front of the mirror, wearing the costume for the end-of-year dance recital, and a feeling of deep unease and disappointment. In the next months following that news I began to control the quantity of food I ingested. I lost a lot of weight and my menstrual cycle stopped for almost a year. I remember the enormous concern of not being able to cope: What if my mother dies? Would I be able to go to university? How could I take care of my younger sisters? My mother had surgery and then began a long treatment cycle. At the same time, I obtained a part-time job and I enrolled at university. During those months, I met new people, I fell in love, and I had my first love story. I started contemporary dance and Release Technique. That approach to the body in movement was a transformative experience for me, very different from the rules and ideals of ballet. I remember lessons focused on feeling my weight on the ground, on the relationship with gravity and on the importance of learning how to fall. This makes me smile today, especially thinking about falling in love at that time and the English term used to describe this state (to fall in love). Anorexia made me obsessed with controlling my weight. At the same time, the severity of my mother's illness had broken down all my certainty about the future. It was as if I was prisoner between two polarities, extreme control on one side and the gravity on the other (fig. 1).

(Antonella, fragments from a conversation with Silvia, Milano, September 2022)



Figure 1 – Control and gravity (Ph. Antonella Cuppari)

Talking about her experience of anorexia with Silvia helped Antonella to reflect critically on the dynamic relationship between control and release (of weight). The crisis resulting from the loss of certain reference points in my life had made her feel the need to find a place in her-body where pain could be kept under control. The decision to leave the practice of ballet in order to approach contemporary dance, the first falling in love and the opportunity to open up to new experiences allowed Antonella to explore the possibility of finding her own way to be confident in the dialectical relationship between control and release.

Silvia: put one's heart into it

The first episode of anorexia was at the age of 15 after two painful events for me: my mother's miscarriage and the end of a relationship with a guy I was in love with. However, the most important encounter with anorexia occurred many years later during the crisis of my first marriage. I was 28 years old and decided to spontaneously access the Day Hospital service of a well-known hospital in Milan. On admission over the phone, they asked me how many pounds I weighed and how tall I was. They granted my request, telling me that I met the necessary severity requirements for urgent access (and avoided the waiting list). At the hospital, I met Dr. Manna (it means godsend in Italian). She was the one who told me how my heart was suffering because of the loss of muscle mass that anorexia had caused. That was the first time I felt that I did not want to hurt my heart. Her words were sweet; she was not judging me. I could tell she was saying it for my own good. During my illness I started drawing hearts to take care of myself or even just to have a dialogue with myself. I also wrote a sentence near the drawing as a message of caring for my heart.

(Silvia, fragments from a conversation with Antonella, Milano, September 2022)

Now, while talking to Antonella, Silvia realized for the first time the possible relationship between Dr. Godsend's words and her drawings. The theme of all her drawings is her heart. Through anorexia Silvia got in touch-with her fragility and, at the same time, her strength. She has a very -gentle heart. The picture below (Fig. 2) shows how Silvia's heart becomes the representation of her pain. Silvia has drawn hearts for inviting herself to flow with the live.



Figure 2 - Silvia's drawing was realized during the experience of anorexia.

ANOTHER POSSIBLE STORIES

The voices of women, and more generally of people, who have encountered or are going through the experience of anorexia have the right to be heard. Voice inequality is one of the most powerful components of any kind of inequality (22). People defined as "anorexic," both children and the elderly, are treated as incompetent witnesses to their lives. The same applies to the poor, the immigrants and those with disabilities (22). These are all people we encounter daily in our work as social workers. For years, we have kept quiet about our experiences with anorexia both in academia and in our workplace. Were we afraid of losing our credibility as early researchers and professionals? Difficult to find an answer. At the same time having gone through an experience where we risked losing our voice made us sensitive to the inequality of voices. Today we work with people who are used to being considered less competent, less qualified to speak, and less worthy of being heard because they are disabled, poor, or migrants (22). We know from experience that if you have felt devalued in the past, it affects the way you perceive yourself and it makes you less likely to speak up and participate actively. For these reasons, we believe that each human being has the right to be heard and to glimpse the possibility of self-transformation through not only listening to the other, but also through observing the resonances that one's own story produces in the story of the other.

It is clear in the previous paragraph that the onset episode of the illness has to do with the sense of loss and the experience of grief. For Antonella the illness of her mother, for Silvia the miscarriage of her mother and the end of a romantic relationship. So an experience of grief and disconnection with life. At the same time healing from the experienced pain takes shape in reactivating connections with life: social relationships and love for Antonella that allow her to look to the future, the experience of support in a helping relationship for Silvia that reactivates her creativity through drawing. In the following two subsections we try to give our stories another chance by rewriting them mutually: in the first Silvia tells Antonella's story, just as Antonella writes in her own words Silvia's in the next. The reader will notice two styles and two different modes of storytelling.

Antonella and the universal experience of pain

The experience of grief is assigned to the life of each of us according to mysterious ways and times: «Pain is the exposure to the radical danger of loss of self: said otherwise, pain, be it physical, psychic, moral, is to be considered the suitable circumstance and the proper place within which the feeling of anguish as a concern of the universal nests and matures.» (23 p. 25). Experiencing the death of one's father and the illness of one's mother or feeling the responsibility of one's family upon oneself are to this day in the Western world experiences of adulthood. We are used to believing that they should not touch the lives of young people who in their youth have the need and the right to do other things: meet new people, fall in love, dance and go out to have fun. Antonella's life story, on the other hand, shows how life does not respect the order we have culturally given ourselves and at the same time shows that it is possible to find meaning in one's life without being undone by lacerating pain. Pain needs to be danced with. One can try day after day, one falls to the ground, to let it out and entrust it to the force of gravity. This creates spiraling movements and entanglements that make us willing to hold opposites together, that is, to go through suffering without giving up living, falling in love, meeting new people, and studying what we are curious about.

(Silvia, Antonella's story rewriting practice, 3rd March 2023)

Silvia and the heart that breathes

I am Silvia's heart, a piece of her flesh, the most undisciplined: she cannot control me! I sing and dance with her all my life; Silvia is a company that never bores me. When she is happy I jump, when she is sad I follow her slow steps. I measure my relationships with others by the rhythm with which I beat: it is not easy to read the world in this way but, somehow, I got used to it. I have developed a certain sense of feeling. For example, I can tune into the rhythms of other hearts (human and non-human) or perceive their differences. There were times in our life together when I went deaf. I stopped feeling. Let's say, it was as if I had lost a bit of rhythm, even my own. There is no worse thing for a heart than going deaf: it's like going blind!

But then I don't really know what happened. In any case, what happens to Silvia is out of my control. This not controlling each other has been our deal from the very beginning. The fact is that slowly my ear started to work again, even better. I started to feel the rhythm again, but I also began to perceive something new, the flow that my beating produced in my body. That flow modified my rhythm and amplified my feeling. The rhythm and flow became breath. I am now a heart that breathes, feels, resonates, and dances.

(Antonella, Silvia's story rewriting practice, 1st March 2023)

HOW ANOREXIA CAN NOURISH THE EMBODIED SENSITIVITY IN SOCIAL WORK

In both our stories, the theme of severity is present in its embodied aspects, as the weight of the body, in its medical aspects, as the diagnosis of pathologists, and in its socio-relational aspects, as the catalyzing effect of the illness on the gaze of others. In our lives today this condition of severity has probably lost the distinct boundaries of the anorexic syndrome, but we are both aware that it is still present in its embodied aspects, particularly in the feeling of being precariously balanced on the edge of a black hole. We believe that this sense of precariousness is not only witness to stories of suffering but can lead to a different professional awareness. In fact, the sense of precariousness is central not only in anorexia, but also in social work. There are millions of people in precarious socioeconomic situations in Italy, and social workers themselves are going through a deep crisis due to low wages and increasingly uncertain work situations because of a political scenario that does not recognize the social value of their work. Furthermore, the bureaucratisation of professional practices, the use of tools that classify, observe, and evaluate people and their vulnerabilities are elements still very much present in the dominant culture in which services are immersed. In this scenario, our experience with anorexia makes us more sensitive to people's bodies and the materiality of life because we know what it means to feel pain and not feel heard.

Each of us tries to keep our own sensitivity alive and share it with colleagues in a personal way. Antonella tries to bring this renewed awareness with the coordinators and social workers of the services she coordinates. In particular, she is interested in reflecting with them on the postures habitually acted out in the care relationship and the transformative learning possibilities that can arise from falls, critical incidents, and crises. While Silvia tries to find ways to show herself as she is to others. She no longer thinks that a coordinator has to be strong, determined and confident. She declares that she is as vulnerable as any of us. At the same time, she believes that everyone, like our experience with anorexia tells her, has a potential powerful core that already knows what they need to feel a little better and be a little happier.

Beyond the hubris of the social workers who knows everything and resolves everything, and beyond the sense of impotence that sometimes pervades the practitioner, there is the possibility to stand, first with the body, in a precarious balance between these two postures and, through it, to find ways to feel the fluidity of change, having trust in the invisible potentialities of life.

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IN THEIR SHOES: TRAINING EDUCATORS EXPERIMENTING SPECIFIC LEARNING DISABILITIES THROUGH SIMULATION

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Abstract

It is important to identify representations operating in the field of education (1) both in professional practices and in the training of future educators (2). Pedagogical consulting integrating reflective and socio-material practices (3) requires the design and experimentation of “active” learning models even when addressing to teachers and educators.

Specific learning disorders (SLD) challenge European education systems for inclusion of learners with invisible disabilities, like dyslexia (4).

SLD require a complex and non-simplifying pedagogical approach having to consider factors such as the teacher/educator as mediator and protective factors (5), technological tools used in a strategic/integrated way with learning strategies (6); accompanied by the disclosure of students with SLD in their own context of life (5).

This participatory research intends to define training processes for teachers and educators to problematize the subject of SLD in its complexity, involving eleven groups of university students in education sciences and one of teachers specializing in special needs (a total of 386 students) throughout 8 academic years.

The proposal to each group consisted of a one-hour simulation activity, with a modification of the socio-material context (3) that created a distortion of usual reading-writing approach; and a two-hour discussion about the lived experience, emotional dimensions, difficulties and strategies. These were mapped "live" with the software presentation tool SimpleMind to share and organize information, or collected through the web-based app Mentimeter. The objective was to foster debate and to arrive at a shared / shareable mapping of the lived experience by the entire group, giving voice and identifying common elements such as those of singularity.

The analysis of the data led to mapping the descriptive richness of the experience across the twelve groups, albeit with peculiarities. The findings, when compared with the analysis of the experiences of adolescent students with SLD (5), are superimposable.

This showed that the activity used as a formative experience instead of a verbal explanation, opened the debate about experimenting with different tools and strategies (29); involved the participants in an embodied cognition about the subjectivity of experience in which everyone attributed and discovered meanings, compares with others and, despite the singularity and peculiarity of their own path, came to retrace and understand "from the inside" the point of view, that research related to people with SLD (22; 5).

Keywords: Specific Learning Disabilities, simulation, university training.

IN THEIR SHOES: THE PROJECT OF RESEARCH

The role of educators towards Specific Learning Disorders' inclusion

It is important to identify representations operating in the field of education both in professional practice and in training future educators (1, 2). Pedagogical consulting integrating reflective and socio-material practices requires the design and experimentation of "active" learning models (3).

Specific learning disorders (SLD) challenge European education systems to include learners with invisible disabilities like dyslexia (4).

Dealing with SLD in education requires a complex and non-simplifying pedagogical approach, which considers as relevant: the teacher/educator as mediator and protective factor (5); the importance of technological tools used in a strategic and integrated way with learning strategies (6); and the understanding towards students with SLD in their own life context (7).

This participatory research was created to experiment training processes for teachers and educators to problematize and introduce SLD, exploring its complexity both in initial training and in a lifelong learning perspective.

Some international research had investigated teachers' misconceptions of SLD (8), relationship between previous training (9) and scientific knowledge (10, 11, 12), with structured questionnaires, but these did not involve educators.

It is relevant to reflect on key role that educators have when working reflexively from an inclusive perspective, taking into account SLD student's specificities and needs not only expressed in the context of school learning. In Italy some educators will meet students with SLD at school, or in specialized study support extra-school, specializing as a learning tutor, but also in sport/cultural activities.

This research reflects on which training imprints can be offered to educators in their third academic year within the "Pedagogy of social inclusion" course at the University of Milan Bicocca.

The research

Research question

The research question aimed to explore three complementary directions:

- How to introduce, at university /professional level, relevant educational elements for inclusion of SLD, basing on a reflective approach mixed to a socio-material perspective?
- Which representations of SLD emerge in training educators in educators/teachers' representations?
- Which similarities and differences can be found in comparison with lived experience of adolescents with SLD, according to the previous research carried out (7)?

Incidence and lived experiences of people with SLD – epistemological framework

The incidence of SLD in a given population depends on the dominant reading and writing system but also, according to a social model of disability applied to SLD (13, 14), on the social structure in which it is located. In Italy, the most recent epidemiological surveys by the Ministry of Education (2022) (15) show a diagnostic incidence in the school population of 8.4% in Val d'Aosta to 1.6% in Calabria, with a national average of school year 2020/21 which stands at 5.41%. Regional differences can be attributed to underestimation due to lack of diagnosis (16). It should be noted that in English-speaking countries there is at least 10% of incidence because of a less transparent and regular spelling than in the Italian one (17).

Moving towards a socio-contextual model (14, 18) is a possibility to move beyond the medical

approach to disability. In a medical approach SLD is clinically defined as a significant deficit compared to the norm in the speed and correctness of reading, writing, and calculating (19, 20) proposing perspectives of "diagnosis" and "rehabilitation". It is possible to follow an interpretative perspective, based on life stories and phenomenological interviews involving people who experience SLD as co-researchers (14), paying particular attention not so much to characteristics described by the clinical diagnosis, but to the protective and risk factors acting in the context and to the individual's personal and formative history (13, 18). There are analysed peer-reviewed qualitative studies using IPA, grounded theory-based approaches, and narrative approaches, 6 with adolescents' participants, 18 with adults' and one systematic review (7).

Previous phenomenological research by the author, involving Italian adolescents with SLD, revealed the importance of self-disclosure as a critical element for unlocking their own life, relationship with peers and learning path. If they fail to disclose their condition, they may have a high risk of experiencing feelings of shame, need to hide, feelings of being misunderstood and incommunicable, as well as academic failure, avoiding helpful measures such as computers, extra time, and compensatory supports of memory (7). The relevant role of key educational figures in facilitating this process of disclosure in class contexts is also noted (5). During the pandemic period of the first lockdown (March-June 2020) adolescents detected a lower perception of their SLD in terms of barrier and stigma, thanks to greater accessibility to learning through technologies (21).

Participants of the present research

Participants were eleven groups of university students in their third academic year in Educational Sciences (ES) and one group of teachers Specializing in Supporting Special Needs (T) of the University of Milan Bicocca (Italy). There was a total of 386 participants over 8 academics years (a.y.), from a.y. 2015/2016 to 2022/23, excluding 2019/2020, due to pandemic.

In table 1. the groups are divided by academic year, group number, course of study, number of participants, mode of conduction (online/in presence), together with the codes assigned to the groups.#

a.y.	Group n.	Course	n.	Use of <u>Mentimeter</u> (Yes/No)	Mode (at University-U /on line O)	Code
15/16	1	E	40	N	U	ES1
16/17	1	E	42	N	U	ES2
17/18	1	E	38	N	U	ES3
18/19	1	E	35	N	U	ES4
18/19	2	E	30	N	U	ES5
20/21	1	E	25	Y	O	ES6
20/21	2	E	26	Y	O	ES7
21/22	1	E	28	Y	U	ES8
21/22	2	E	27	Y	U	ES9
21/22	-	T	25	Y	O	T01
22/23	1	E	40	Y	U	ES10
22/23	2	E	30	Y	U	ES11
			386			

Table 1: participants

Intervention methodology – the simulation

The three-hours-activity proposed to each group set up a modification of the socio-material context, which led to a distortion of the usual ways of reading and writing, and also of the contextual conditions linked to the structuring of times, spaces, deliveries (3, 23).

Projecting the activity looked at other experiences, such as Dialogue in the Dark⁷, a project in Milan, which offers sighted people a journey in the dark guided by blind people; and the American video “How can it be so hard? Documentary on dyslexia⁸” – which shows a simulation that put the adults from the educational network in the condition of living with a SLD.

This activity was based on a theatrical structure (24), in a “partitura” (25) in which the researcher played a character and “improvised” from time to time on the defined track.

The researcher-conductor’s use of body, voice, words, gestures were based on specific and different characteristics, inspired by typical aspects of some Italian teachers according to the perception and narrations of adolescents with SLD encountered in the research (7).

For two groups conducted online effectiveness was not lost; on the contrary, according to the participants, it resulted in amplifying the discomfort experienced. The best way to use the simulation took place in spaces where the conductor had the possibility to move easily among participants, shortening the distances, making the interaction closer.

Participants were firstly asked some question relating their knowledge about SLD. Then one-hour-long simulation was presented to the participants, as an experience where one lives an “as if ...”.

The researcher declared that exercises would be evaluated and that some materials had already been delivered by the teachers in previous days (never actually done). The researcher shared some simple academic tasks of reading and writing with some specific rules: participants were asked to change the hand in charge of writing; to make spelling mistakes typical of dysorthography; not to take notes because of poor working memory; to comply to required restricted times.

Participants were asked to actively participate, not to make their own reflections explicit, but to keep track of these for a later discussion. If asked by participants, the conductor could decide which compensatory and dispensatory tools to use.

Initially participants had to listen to a request read by a text-to-speech; then to read a text with alteration of characters, line jumps, inversions and exchanges of characters, illegal mergers, characters and lines, not well spaced, determining a visual crowding described in the literature for the SLD (29). This situation led the readers to a phonological type of reading, preventing lexical access and making analytical reading difficult for the normal reader. Single participants were asked to read aloud and to summarize.

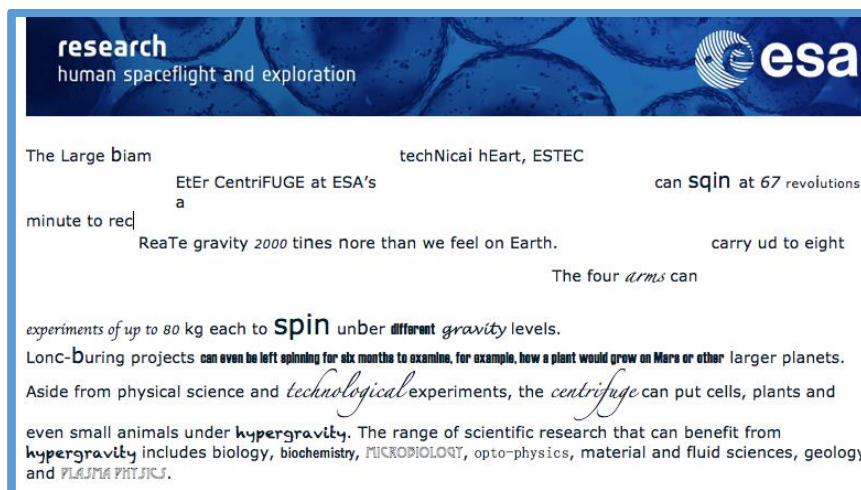


Fig.1 Text taken from the website for children of the European Space Agency www.esakids.it and graphically adapted for the simulation

⁷ <https://www.dialogonelbuio.org/index.php/it/il-percorso>

⁸ <https://www.youtube.com/watch?v=9Wb7vS3k2Lc>

Participants were allowed to work in pairs, dividing the roles between "navigator" and "pilot", thus dividing the executive aspects (reading, writing) from the conceptual ones (understanding, planning). As an aid, the text was subsequently offered also by listening via text-to speech, set at the same speed for collective listening.

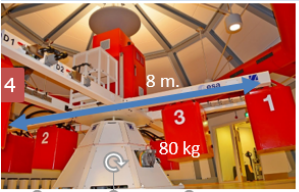

Finally, a reworking of the text read in a journalistic key was required to be written with the non-dominant hand and typical errors; then texts produced were exchanged between participants and they were asked to evaluate the text and return the outcome to authors.


During each of the previous steps, there were continuous interruptions of the activity and comments from the conductor-researcher, who gradually "took aim" at different students.

The limited time given for each activity and the atmosphere created in the classroom made deliberately difficult for the participants to successfully complete each activity.

Finally, the end of the simulation was declared.

THE LARGE DIAMETER CENTRIFUGE



The diameter is **8 metres**. It has **4 arms**. Each of which can support **2 gondolas** with a maximum payload of **80 kg per gondola**. In practice however, up to **6** six **gondolas** can be used for an **experiment** plus **1** one additional gondola in the centre for **control or reference purposes**. The **hyper gravity field** inside the gondolas is **simulated by the centripetal forces** due to rotation.

Methodology for conducting the reflective discussion after the simulation

Immediately after the simulation, began the second part of a reflection on lived experience. This consisted of: a reflexive approach (3; 14; 26), which aimed to share the participants' experience on different levels; and, according to a socio-material perspective, analysing how socio-material barriers and facilitators affected learning.

The discussion was led by questions to analyse various aspects of interest, in particular: emotional dimensions; causes and reasons of discomfort; difficulties encountered in terms of reading/understanding the text/writing; strategies used and useful tools; the role of the conductor; the role of the group. For the last two groups was also required an original metaphor.

The discussion followed free interventions from participants, used as an opportunity to highlight concepts, which the researcher underlined and abstracted, connecting to what emerged from the research on the field, in particular from the Italian research with adolescents previously conducted (7).

There were relevant mediators for the discussion: the activity was supported with a "live" mapping through SimpleMind software tool, for sharing and organization of information, to encourage debate and to reach a shared mapping of the experience.

The use of Word clouds and posts on Mentimeter web-based app (7 groups), projected in real time, was introduced as a survey tool, to incentive discussion and to allow a greater participation of all students.

superimposable.

Knowledge and representations about SLD

Participants' knowledge of SLD, before the beginning of simulation, had increased over time (from 2015 to 2023). In general, they were centred and increasing specifically on the disorder and difficulties encountered, primarily in reading, writing, calculating. However, they rarely mentioned difficulties/differences in visual perception, working memory, information processing methods, or other specific aspects (language, coordination, comprehension, production). There were few references to specific needs for compensatory methods and to the importance of the context.

The subjective perception of the experience imagining the point of view of a person with SLD - carried out only for the group ES10 - appeared particularly interesting for the role assigned to the context ("It (SLD) is an obstacle if made so by those responsible [...] It depends on the socio-cultural barriers encountered") (ES10). The perceptions described were diversity, inadequacy, inferiority, incapacity, discomfort, fatigue, perceived difficulty, shame, embarrassment, related to the school context, to the relationship with others or to differentiating tools. The theme of stigma and one's perceived limits in comparison with others emerged. This question allowed an important passage to a much more "useful" level for understanding of the situation and the person's experience with respect to pseudoscientific "definitions". The perception of experiences was very accurate, admittedly through direct knowledge of a family member, relatives, or students.

Lived experience of participants

During the course of the activity, all the participants from different groups experienced a first phase of simulation of "freezing", for 10 to 20 minutes, in which no one tried to ask for clarifications, rarely someone asked to go out or laugh. Occasionally, only in four groups and never in online modalities, one or two members of the group became defiant. In general, they suffered requests and tried to avoid being asked.

After the experience of the simulation, the participants reported a wide range of "typical" and dysfunctional descriptions of the lived experience, similar to those living with a SLD, in a superimposable way. These were a sense of inadequacy, loneliness, thinking of being the only ones, feelings of not being supported and understood for their own characteristics, feeling unable to communicate and judged, by the teacher and classmates; anger; fear of having "lost pieces"; low sense of self-efficacy; frustration and anxiety; confusion, diversity, discomfort, lack, disorientation, invisibility, inadequacy, resignation, physical discomfort, tiredness, impotence, nervousness, feeling misunderstood, pressure, shame, humiliation, impatience, loneliness, discouragement, disorientation, strangeness, fatigue, paralysis, loneliness, oppression, weight, suffering, judgement, uncertainty, evaluation, chaos, sense of ineffectiveness, despondency.

These are aligned with dyslexic adolescents' perceptions (7). In addition, for adolescents' there was the constant fear of the judgment of the teacher, the feeling of inability to communicate one's condition with others; fear for one's condition; the concern of not being accepted by the peer group (7).

Occasionally (1/2 per group) participants also reported: a sense of challenge, serenity, curiosity, surprise, enthusiasm, panic, sadness, alienation, identification, empathy, inferiority, strangeness.

Metaphors

Only two groups (ES10; ES11) were asked for metaphors of the experience. Metaphors were analysed by grouping into three areas: closure (elements that refer to a situation with no way out) and obstacles;

confusion and overload; paradoxes. The elements of closure (“quicksand; being sucked into a whirlwind, dog to the kennel, a person closed in a room with no doors or windows, who screams but no one can hear him”) (ES10) were assimilated into the macro group of obstacles (mountain, wall, gate) – comparable to what emerged from the research with adolescents (7).

Confusion and overload emerged as a different and new dimension compared to the metaphors of adolescents. An un-purposeful doing, which did not reach the goal: “a battery that overheats and explodes; an overweight hamster spinning in a wheel; the rusk that falls into the milk on the jam side” (ES10). This was connected to a waste of energy, frustrated commitment, confusion which is effectively referred to the experiences of adolescents (7), even if not in the form of a metaphor.

The paradoxes constituted an interesting new emerging theme in both groups: “playing blind fly on the highway; with the beak fixed in time; a fish on the tree; a panther in Antarctica” (ES10); “a fish out of water; a dog forced to meow” (ES11).

Furthermore, the discussion started from metaphors allowing participants to explain lived experience in a non-reductive and exclusively cognitive way, but integrating affective and contextual aspects, with references to personal experiences and their personal way of interpreting world.

Reading as a dyslexic person reads: why? What can help?

The discussion led the participants to understand that the altered structure of the text led to a phonological reading and made lexical reading impossible, with visual crowding and poor spatial structuring which induces an effect similar to the eye fixation problems found in the people with SLD. Furthermore, it was described as a "difficulty in grasping the meaning of the text [...] because the effort was almost all in reading" (T1). Just as teenagers with SLD have said "Every two seconds I get stuck and I can't read a word, because I get confused all the lines. I read better in my head than aloud" (M4) (7).

Participants also identified some strategies used/desired to cope with it: “memorize words that I have struggled to identify as key-words” (T1); “ask for help” (T1). They understood the importance of using fonts with adequate line spacing, appropriate font size, and sans-serif characters; summary maps provided by the teacher; keywords in bold; use of text-to-speech with individual management, allowing return to the text and slow down.

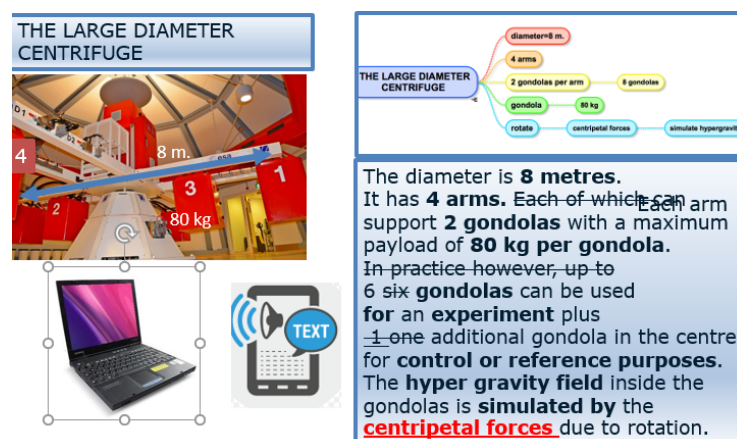


Fig.4 Different ways of adapting the text with a modified image, simplifying the text, use of dyslexia friendly fonts, use of textual indices such as bold, use of a map with relevant information, use of digital text and listening with text- to-speech

These perceptions and strategies were similar to those reported by adolescents (7) who, however, present a much broader and more personalized repertoire of strategies, based on their own experience. For them, strategies are one of the categories in the metaphors: “Dyslexics are superheroes with gadgets and magical objects that are calculators and diagrams, a superhero has always helpers and magical objects” (S5); “in a car race the SLD driver, even if he has the slowest car, thinks how to go faster, finds better strategies, can even win” (E1) (7). Adolescents also highlighted the misrepresentation that non-SLD people have about the use of maps and computers as a means for complete compensation, while instead an enormous effort remains; more, the availability of tools risked being harmful on a social level, generating teasing, competition, jealousy from peers, and is therefore often avoided. Failure to “disclosure” SLD prevent them to exploiting useful tools (7).

Writing like a person with SLD writes: what a struggle! How to?

Writing with a non-dominant hand brought discussion to the effort of students with SLD, because grip and graphic gesture distract from the task. Some participants wrote in capital letters, only rarely asked to use computer, summarized to cope with slowness, shortened words and asked for longer amounts of time (“writing with an instrument that you can't grip, not having the stability of the sheet, being disturbed by all of these”) (T1). It was described as “a physical effort, which slows down the flow of thoughts and the linearity of a speech, so everything that went through my head on the subject seemed wrong to me” (ES8). It was tiring for participants to plan the text and, at the same time, taking care of incorrect spelling was not automatic. Using word processing with text editors did ease the effort.

These perceptions and strategies are similar to those by adolescents (7): “A mistake I make 60 times a day is writing the 'd' like the 'g' and vice versa. I don't quite know how to put them, so I put them at random. I lose some words and write others several times, but this is because of distraction: writing distracts you from remembering things (M5)” (7).

Role and attitude of the conductor

For all groups, role and attitude of the conductor appeared critical. It generated a feeling of “psychological terrorism” (ES6), in which it was difficult for participants to “expose themselves”; generated exclusion, since differentiations were only offered to some participants; took a number of aspects for granted without bothering to understand the needs of participants. “How, you don't understand!” “All clear, right?” “You can't write, why?!” “Whoever sits in front is always better!” (E6): the haste, the comments made, the “accusing tone” (ES8), the comparison with others and the competition triggered, “the sufficiency with which my difficulties were treated” (ES8) didn't help participants to afford the requests and generated the perception of injustice (ES8). The discomfort was developed by one's perception of limitation, not only objective (“writing, understanding, not understanding anything of what was happening, I felt stupid”, but also “not being able to communicate one's difficulties - because I perceived lack of listening, weighed about my lack of courage in asking for clarifications”) (ES8). Facilitating elements were constituted by intervention of classmates who asked for clarifications or suggested strategies, and by the rare offers of understanding from the teacher (“What would help you?”) (ES8).

These aspects, much more detailed, emerged from investigation with adolescents (5): each of them described many similar teachers during their school history, who they felt belittled them, reproached them in front of their peers, punished them; the most tiring aspect they perceived was the breakdown in the relationship. In fact, the most relevant functional aspects were not teacher competence and experience in the specific aspects of the SLD, but understanding, recognition and dialogue, i.e., the relational willingness to co-build with pupils the means, tools and methodologies that allowed them to learn; moreover, the encouraging and trusting attitude towards the student was also seen as an

important protective factor (21).

Results

This process brought participants to understand basic elements of an inclusive educational methodology, principally how to understand and analyse educational problems and how to hypothesize and project possible measures for students.

Mapping of the experience across the twelve groups and the comparison with analysis of experiences of adolescents' students (7) showed the activity of simulation involved the participants in an embodied cognition that made them understand the subjectivity of lived experience of SLD. Everyone attributed meanings during this process, compared them with others and understood from an insiders' point of view the lived experiences related to people with SLD (22, 7).

The comparison with research about lived experience of SLD Italian adolescents (7) provided an agreement with this the findings in this research, showing a deep and wide variety of emotions and thoughts, superimposable between participants and adolescents.

The formative activity conducted appeared a useful tool for a short initial training experience instead of a verbal and rational explanation, as every group opened debate, involved participants, made experiments with different tools and strategies.

Imagination could become the key to look at person with SLD as divergent creator. For this let's give the keys of imagination to educators not to answer in one direction, but to imagine questions and ways for meeting their students.

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ACQUIRED BRAIN INJURY (ABI) OF CHILDREN (0-18 YRS. OLD) AND THE EXPERIENCES OF THE FAMILY: A PHENOMENOLOGICAL STUDY USING CREATIVE RESEARCH METHODS

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Abstract

It is widely acknowledged and established that Acquired Brain Injury (*ABI*) not only impacts upon the individual but also upon their family, the caregivers (1). Having undertaken a literature review it demonstrated that there is very little literature showing the impact of these experiences, upon the relative/carers who are caring for their child with *ABI*. Nevertheless, it does suggest an abundance of studies around the areas such as mental health problems and learning disabilities (2). Furthermore, there is a wealth of studies on the effects upon spouses and, to a lesser degree, the children of adults with *ABI*. However, literature relating to childhood *ABI* and its effects upon the family is sparse. In addition, there is literature suggesting that professionals appear to lack awareness of the trials and tribulations involved in the journey of the *ABI* child and his/her family. Utilising the Creative Research Methods (*CRM*) methodology, this study will investigate families' experiences of caring for a child (0-18 yrs. old) with *ABI*, giving professionals a further insight into these families' lives. It will use semi-structured interviews, diaries and focus groups to gather data that will allow the development of knowledge, so that the experiences of families are more clearly understood and considered by healthcare professionals and agencies.

Background/context:

Definition of Acquired Brain Injury (*ABI*):

The World Health Organisation defines acquired brain injury as: 'Damage to the brain, which occurs after birth and is not related to a congenital or a degenerative disease. These impairments may be temporary or permanent and cause partial or functional disability or psychosocial maladjustment' (3).

According to Ross et al. (4) *ABI* also includes closed and open traumatic brain injury (*TBI*). Grace et al. (5) states that *ABI* is linked to road traffic accidents, assaults or falls, Savage et al. (6) reports that *ABI* is an umbrella term referring to damage that has occurred to the brain following birth (cited in Hartman et al. (7)), and this is echoed by Howe et al. (8) and Boyd et al. (9).

As reported by Pericall et al. (10) *ABI* is the main cause of mortality and morbidity in children. Long-term effects range from physical, cognitive and emotional well-being and between 5-72% of children have changes in their emotional, behavioural and cognitive status with most studies showing prevalence between 40-70%.

Epidemiology:

Children's *ABI* statistics showed that approximately 40,000/year under 16s suffered *ABI*, and of these injuries 6,000-7,000 (17.5%) could be classified as severe (NHS England, 2013 cited in 11). Also, Rees et al. (12) projected that 280 in every 100,000 children (28%) of under 14 yrs. in the UK, will suffer a traumatic brain injury.

Literature Review – Families’ perspectives on caring for their *ABI* child:

Introduction:

In the following section I will review and summarise the existing literature on families’ perspectives of caring for a child with *ABI*. Various themes ranging from emotions & coping strategies to areas relating to the professional aspects are discussed below. Other aspects were investigated such as hospitalisation and home transition, employment, and divorce as well.

The effects, couple relationship, bidirectional relationship, and behavioural difficulties:

The most prolific theme which arose was that of the impact upon the family and families. In other words, the effects are so profound not only on the family but mainly upon the families who need to adapt and modify their approach to their drastically changed *ABI* relative. Moreover Tyerman et al. (13) showed that some studies highlighted couple relationship was crucial to coping and adjustment whereas others spoke of the theme of disconnection within family relationships. As suggested by Taylor et al. (14) there is a bidirectional relationship whereby the functioning of the parent and child coexist with each other, having devastating impact intermittently. Also, Brown et al. (15, p. 1172) reports that the behavioural difficulties which materialise upon the onset of an *ABI*, have a profound impact upon families and families alike; namely through experiences such as “heightened stress, psychological symptoms and burden...”. Moreover, Fortune et al. (16) stipulates that both families and carers of *ABI* sufferers find caring for them more challenging than people with other conditions.

Grief, blame & anger, emotion-focussed coping and coping strategies:

According to Prihadi et al. (17) it is not only the *ABI* itself which has a profound effect upon the child but also upon the whole family. Moreover, families can experience guilt, blame, and anger in relation to the child’s *ABI* and can also be unknowledgeable about appropriate therapy and education for them. Thus, families must utilise their usage of their coping strategies to enable them to overcome the stress related to the early diagnosis and treatment of their child.

Furthermore, in relation to *ABI* patients some studies revealed increases in emotion-focussed coping within the (sub) acute phase following injury, and during the chronic phase it decreases, whereas in the acute phase this trend subsides. Whilst there isn’t much known about the coping strategies of family members, one study leads us to believe that families of *TBI* patients using more emotion-focussed coping strategies experience more distress than those who utilise more problem-focussed coping strategies. Nevertheless (17) stated that caregivers utilise more emotion-focussed coping styles in the acute phase, but the coping style decreases in the chronic phase.

***ABI* child’s unawareness of disability and personal interactions:**

A study by Yeates et al. (18, p. 156) did highlight those participants defined their respective index *ABI* loved one, as “unaware of an aspect of disability”, stating to relevant services that this was an issue of difficulty. Comments by the caregivers implied that it was ‘like a child growing up again’ and the person with *ABI* was described as ‘naïve and vulnerable’ ‘blissfully unaware’ of their brain damage. Also, the caregiver tended to have a powerful position over the *ABI* person who was perceived as ‘passive, disabled’ and dependent on their caring input.

Infinite loss:

Regarding the theme of sense of loss grief which is described as “loss of normative lifespan development” by Collings (19, p. 1499), families are not only having to come to terms with the *ABI* but also having to grapple with the feelings of infinite loss, in that they have lost the normal future and all the ‘hopes and dreams’ which encompass the normal development with children without such disabilities as *ABI*. This is a grieving process, like a parent losing a child. This infinite loss though is ‘constantly shifting’ and thus gives these families an insecure status, as they are unsure of the

“appropriate response to the various landmarks of their experience” (Hollins, 1985; Bruce and Schultz 2001b – cited in 19, p. 1499).

According to Bruce et al. (20) one comment made to a parent in relation to their severely injured child was, you are fortunate your child is alive. It seems that families are longing for the world that could have been and what he/she might have been and should have been. Well intentioned friends can lead the parent in the non-finite grieving process and compound the distress even more. This non-finite loss has parallels with grief reactions being experienced by others who have lost their loved ones through death. Also, this non-finite loss can change or even get worse and this in turn can exacerbate the grieving response to non-finite loss.

Lack of communication:

Another theme of ‘lack of communication’ was shown in articles by Thompson et al. (21) (Q method) and Sariaslan et al. (22). For instance, Thompson et al. (21) through observation verified that children’s participation in social domains was positive but was due to the families’ supportiveness and good community attitudes.

This lack of communication is also observed in relationship to the *ABI* sufferer and the relevant professionals, especially those connected with their treatment whilst in hospital. It was assumed by the professionals that once the *ABI* sufferer was discharged from their initial treatment in hospital, then their work was completed. Studies showed that this wasn’t the case, as the critical time for professional input was when the *ABI* sufferer was at home, as adjusting to their home environment was difficult due to their changed state of being. Also, the family needed support, and, on most occasions, they were deemed to be the forgotten ones Thompson et al. (21) & Sariaslan et al. (22).

Lack of support:

Along with lack of communication and lack of support, was a fundamental barrier to community participation, but public awareness of *ABI* enabled this community participation and social inclusion to be eradicated to some extent, thus lessening isolation from leisure activities. This lack of support was also verified by Tyerman et al. (13) who believed that further research into evaluation of interventions was essential for these families.

Furthermore, when the family, friends, peers, and other community members assist in the inclusion of people with disabilities, within the community activities, this enables participation to flourish regarding the disabled. This in itself is a valuable factor for children with traumatic brain injury Jones et al. (23). Ball et al. (24) also suggests that education of *ABI* children is an important factor in aiding the progress of their recovery and can be facilitated whilst still in hospital.

Deficiency in professional knowledge and the professional’s lack of awareness:

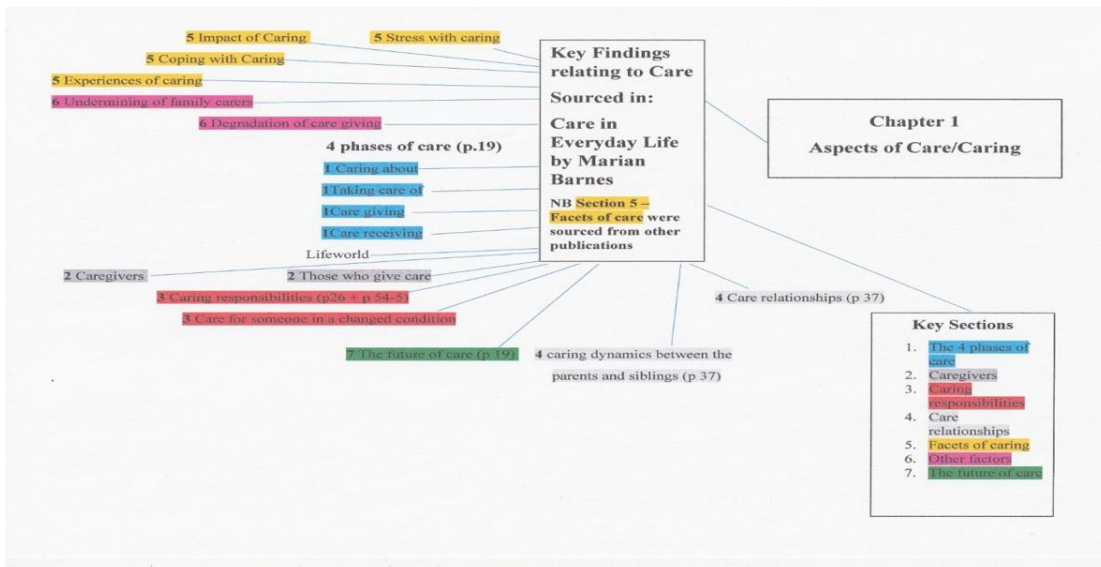
Moreover, other studies have shown when there is a deficiency in professional knowledge regarding *ABI* sufferers and their families having to improvise and utilise idiosyncratic sources of meaning, to make sense of their new situation. For instance, Nochi (25) suggests that people with *ABI* are having to readapt to their new existence as sufferers of *ABI*, such that they are forging new relationships and shared meanings, which allows them to establish over time a sense of identity and start their life again.

On a final note, Arksey (2003, p. 205 cited in 26) suggests that “professionals lack of awareness of family’s needs and under-identification of families are also recognised problems in health services, but to date no study to our knowledge, has explored this to relation to long term conditions (*LTC*) self-management”. Also, other literature suggests that some families believed that professionals lacked understanding of the social and cultural factors which affect families and their unique perspectives, as professionals were focussed upon a narrow medical approach rather than a holistic view Clark et al. (27): Roscigno et al. (28).

Research Design

After studying various factors which impeded upon the families with an *ABI* child/sibling, I decided to concentrate my PhD upon the 'care' factor. As shown below I devised a 'mind map' (Fig. 1) and found these key findings outlined after the 'mind map'.

Fig.1



I will focus on aspects of care including the four phases of care as shown in my findings:

- **caring about**; this aspect initially needs to be recognised, that there is a necessity for care, and involves documenting this need is essential, making an assessment and implementing it.
- **taking care of**; this step identifies the need/s, how to respond to it and assumes some responsibility.
- **care giving**; has incorporated “caregiving” and believes it involves the direct meeting of needs of care, such as physical work and that carers are mostly required to come into physical contact with the disabled person.
- **care receiving**; is depicted as the final phase of caring and this is the way in which the person receiving the care will respond to the care given to them.

Tronto (29)

along with other aspects of care including:

- **caregivers**; feelings of degradation can pertain to caregivers, whereas non-caregivers can fulfil their own lives, simply because they are not stifled by the rudiments of the caring practice.
- **caring responsibilities**; as argued by Tronto (30) it is essential that the environment where caring is taking place is within a setting where caregivers and care receivers along with other relevant parties, can contribute towards the caring needs discussion and ways in which to attain these.
- **care relationships**; arguably care relationships between caregivers and care receivers can become a form of a power struggle at various times, and such that the care receiver becomes

enraged, and therefore there is the possibility that the caring relationship might be abused by taking advantage of others.

- **facets of caring;** there are several facets of care, such as preparation of meals, shopping, cleaning, administering medications along with personal care, which encompasses social and emotional support Milne et al. (31).

Rationale:

This study will enable professionals to be able to understand the families' perspective and possibly be able to show more empathy when meeting them on their visits. This is why this study should be undertaken. After completing thorough research of various articles and especially Edwards et al. (2, Clark et al. (27), Kirk et al. (32), plus recognising the gaps, the aims and objectives of this project will be as follows:

Aims of the Project:

- To explore the families' experiences of caring for their child with *ABI*.
- To explore the coping mechanisms utilised by families of their *ABI* child.

Objectives of the Project:

- Critically review the literature on families' experiences of caring for a child with *ABI*.
- Compare and contrast the experiences of the families of *ABI* between 0-18 years old.
- To critically review and analyse 'coping strategies' adopted by the families caring for their *ABI* child.
- To explore factors of professional input through the family's feedback, which can facilitate and enhance the experiences of families, caring for a child with *ABI*?

Methodology:

My stance:

After considering positivism and interpretative stances, I decided to adopt the critical realism position regarding my study, as it is more akin to studies relating to feelings and emotions. This will enable me to observe the three domains the real, the actual and the empirical, as outlined in *Fig. 2*, & *Fig. 3* showing table 1:1 (33, cited in 34), (35).

Fig. 2

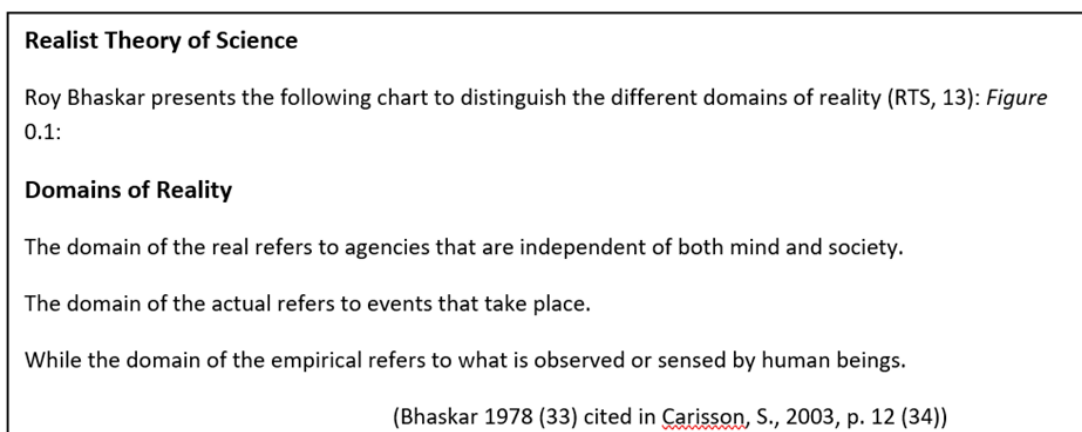


Fig. 3

Table 1: Ontological assumptions of the critical realistic view of science (Bhaskar 1978).

	Domain of Real	Domain of Actual	Domain of Empirical
Mechanisms	X		
Events	X	X	
Experiences	X	X	X

(table 1:1 by 33 cited in 34. p. 12)

Also, within this table there is reference to ‘structures and mechanisms, and relations; events and behaviour; and experiences’ and all intermingle with each other as follows:

‘The generative mechanisms, residing in the real domain, exist independently of but capable of producing patterns of events. Relations generate behaviours in the social world. The domain of the actual consists of these events and behaviours. Hence, the actual domain is the domain in which observed events or observed patterns of events occur. The domain of the empirical consists of what we experience; hence it is the domain of experienced events.’

(33 cited in 34, p. 12)

Creative Research Methods – regarding my PhD

Research Instruments/Methods:

Arts based methods can be utilised, when a researcher needs to obtain data from children using the draw and write method (Wetton & McWhirter, 1998 cited in 36), without being skilled in draughtsperson. For instance, anyone, can draw a picture, write a poem or make a collage (Pool, 2018 cited in 36), just because it may be deemed as poor artistic quality it is still suitable for research. In addition I will employ semi-structured interviews, participant diaries and focus groups.

The method of interviewing in its essence, will give me insight to relatives’ personal feelings, which will enable them to offload their challenges and aspirations regarding now and the future, of course at face value; although I would stipulate that the interview will not be undertaken for therapeutic purposes. Along with interviewing I will ask participants to keep a diary for four weeks. Furthermore, a diary can be used as a “precursor, an adjunct...” alongside the interviews (39, p. 25). Data will also be collected by focus groups. The goal of focus interview groups is to aid ‘positive group activity’ and to avoid a “thorough technical description relating to the products of focus interview groups” (40, p. 74). I will need to be mindful of the group’s interaction when it comes to differing points of view, although these are essential within a focus group, to stimulate a healthy and lively debate (41).

In conclusion, it could be suggested that at every stage of the research process, all the research is creative (37, 38). It is essential to realise creative methods are not meant to replace the researcher’s tools within their toolbox, but there to enhance it. Whilst creative research methods often are exciting and inspiring, nevertheless caution needs to be taken, as it is essential that the method utilised must evolve from the research question and not vice versa (36). As stated by Leavy (36, 37) there are intrinsic similarities in which art and science share, when endeavouring to highlight various aspects

relating to conditions of human beings. Art and science are steeped in exploration, revelation and representation and these assets facilitates the progression of human understanding.

Summary and potential impact:

This work will explore the experience and families who look after a child with *ABI*. The use of creative research methods, along with the semi-structured interviews, diaries and focus groups will give enriched data. It is important as there is a lack of knowledge in this specific area. This new knowledge might be utilised by professionals within in this work domain.

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'THE HOME DIMENSION IN RESIDENTIAL CARE HOMES': EXPLORING THROUGH VISUAL METHODOLOGY EDUCATOR'S PRACTICES AND IMAGINARY OF 'HOME' IN ALTERNATIVE CARE SPACES. FIRST REFLECTION ON METHODOLOGY

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Abstract

This contribution presents the first reflections on methodology of the PhD project 'The home dimension in residential care homes'. The project explores how professional educators use the idea and the materiality of 'home' in educating children in Residential care homes (RCH). The study adopts the collective case study strategy to gain a deeper understanding of the phenomenon. The interdisciplinary perspective of the study braids the pedagogical and geographical gaze, given the complex nature of the construct of 'home.' The research design draws three main phases. The first phase includes the collection of individual interviews with the educators in the RCH. Walking interviews were used, and graphic representation was produced to explore the functions, meanings, and pedagogical practices related to RCH spaces. In the second phase, a process of Participants-generated photography was led. The third phase involved focus groups with the educational teams, where participant-generated photographs were presented to conduct the photo-elicitation process. The analysis process is still under development and follows the phenomenological-hermeneutic direction. The adoption of a multi-vocal research methodology, characterized by a large use of visual materials, presents potentialities and criticalities that need to be explored. This study contributes to the pedagogical research field, which embraces the human context marked by complexity and highlights the importance of exploring the home dimension in alternative care for professional educators.

Keywords: alternative care, home, professional educators, visual methods.

INTRODUCTION: THE RESEARCH OBJECT

This contribution focuses on alternative care for children, specifically on residential settings. The UNCRC, particularly in Articles 9 and 20, enshrines the right of the child to grow up in his or her own family environment. However, when this is not possible, and according to the principle of the "best interests of the child", state parties are required to guarantee adequate care and protection (1). In the case of placement in residential settings, the Guidelines for the Alternative Care of Children underline the need to guarantee a safe environment, organized around the rights and needs of the children, as similar as possible to a family or small group situation (2). The Italian scenario, in the socio-educational field, is deeply irregular and full of critical points. We know, however, that the Guidelines for Care in Residential Services for Children (3) have contributed to the definition of standards. Among the general requirements, there is, for example, the appeal to an environment that presents the characteristics of the civil home with its typical spaces. A familiar and welcoming environment, that guarantee connection to a network of services and opportunities for inclusion for children. The literature also reveals the need to encourage a theoretical reflection on alternative care, in particular on RCH (4). In

fact, RCH represents fertile ground for pedagogical reflection, given its multiple connotations: it is simultaneously a 'home', even if transitory, a place of work and an institution (5). The dimension of the home has a deeply complex, multidimensional and multi-layered nature (6). It is both a physical place, a set of meanings and the relationship between these (7). The home is indeed a particularly interesting place for the study of the attribution of symbolic, value and emotional meanings that characterizes our spatial experience everyday (8, 9). Given the complex nature of the construct of 'home' - understood in its material and symbolic dimension - the project adopts an interdisciplinary perspective that interweaves the pedagogical and geographical gaze. In fact, the spaces that characterize the home determine very significant "design variants" (4) within the RCH works. In educational practice, space and its organized configuration emerge as key element able to mark relationships, stimulating or inhibiting the activities of a human being (10). Spaces, in other words, give to the inhabitants the framework of their own possibilities (11, 12). Given this premise, the project intends to explore how professional educators use the imaginary and materiality of 'home' in educating children in Residential care homes (RCH). This research object rises in the pedagogical research field: a horizon that embraces the human context, marked by complexity. As suggested by Denzin & Lincoln (2018), due to the proposal of naturalistic epistemology, the qualitative approach is particularly appropriate to capture human existence.

METHODOLOGY

The case study

Starting from the definition offered by Robert Yin, a case study is an empirical method that investigates a contemporary phenomenon (the case) in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident (13). In other words, "one would use the case study method because one deliberately wants to study contextual conditions that are considered relevant with respect to the phenomenon under study" (14, p. 45). The case study, synthesizing Yin's definition, is a research approach to be used when the phenomenon to be investigated is real or still present, is not clearly inseparable from its context, and in order to study it correctly, it is necessary to consider it as a whole, not precluding the possibility of analyzing all the variables that make it up or that intervene from outside in its occurrence (15). In order to gain a vast understanding of the phenomenon, seen in its singularity, and originality and without producing generalizations, the strategy of the collective case study was implemented (14, 13).

Specifically, the research project explored two case studies. The main criteria adopted in the selection of the two contexts are:

- RCH of educational type;
- A team composed of professional educators and pedagogical coordination figures;
- A declared focus on the domestic and family dimension of the setting;
- The position of the service in the Lombardy region.

In light of this, the selected contexts were: The 'SOS village' in Saronno (VA) and 'Comunità Bicocca' in Milan (MI). Both present the selection criteria identified above, but are marked by profoundly different spatial and architectural structures. As far as research participants are concerned, two educational teams were involved for SOS Village (N=6 Educators), and one team for 'Comunità Bicocca' (N=4 educators and N=1 Coordinator). The following section will detail the data collection process.

The data collection process

This paragraph will present the data collection process, highlighting its phases and research tools. The project was designed as a multiphase qualitative study and it presents three main phases. The first phase was devoted to individual interviews with practitioners, the second one to participant's photo

generation process, and the third phase to focus groups with the whole educational team involved (équipes). This methodological choice stems from two main considerations: first, the case study can be defined as in-depth research, which is activated in a real-life context and follows a different methodological philosophy than that activated in the laboratory or in surveys. For this reason, it is crucial to consider a plurality of variables through different methods. Moreover, as already emphasized, the object of the investigation lies in the field of pedagogical research and in the human context characterized by profound complexity. For these reasons, the research project adopted different research tools and languages in order to grasp a greater understanding of this complexity and enhance it. Furthermore, the project starts with an exploration of the individual experience of the professionals involved and then moves on to that of the educational team, creating a bridge and a space for dialogue between individual and group experience.

The documentation of the process crosses through the project in all its phases (16). Specifically, the researcher made use of field notes, audio recordings, and photographic documentation by an external observer. In addition, the research journal was a key tool for maintaining and sustaining a reflexive posture throughout the research process (from the literature review to the analysis process). The study was approved by the Milano-Bicocca University's Ethical Board (prot. N. 695) and conducted in accordance with the Declaration of Helsinki and the Italian Society of Pedagogy's ethical code.

Interviews

The first phase includes the collection of individual interviews with the educators in the RCH. The interview in qualitative research sees interviewees as possessing unique and important knowledge about a certain phenomenon, which can be ascertained and shared through verbal communication. Its validity lies in the fact that it can be shared intersubjectively - (17, 18). The purpose of the interview is to construct knowledge. The objectives of this construction process are defined by the research project and its design, especially the research questions (19). This communicative process takes place in the interaction between an interviewer and an interviewee. If in observation the researcher observes the actions of the subjects, the interview is intended to capture the thoughts, experiences and representations of the participants related to the meaning and significance of their actions. Quoting Merriam, "Interviewing is necessary when we cannot observe behavior, feelings or the way people interpret the world around them. Interviewing is also necessary when we are interested in past events that are impossible to replicate" (20, p.108). In hermeneutic phenomenological research, the interview gave access to the lived experience of the participants involved. Quoting, Chiara Sità (21) interviews are not just a contemplation of the subjective dimension, but on the contrary, as in all phenomenological research, the subjective dimension helps to develop an understanding of the 'structures' of experience.

Within the research project, the interview sessions were designed in two phases. At first, we used walking interviews (23, 24), in order to explore the functions, meanings and pedagogical practices related to the RCH spaces. Quoting O'Neil "The walking interview may also vary in the degree of pre-organisation and the 'set' format, its central feature is that it is 'on the move' – within processual experience (in time and space) – as participants traverse through social settings, or 'scenes'" (24, p.17). The author also emphasizes another crucial aspect: "is not simply that people are in 'motion', but rather that they are involved subjectively in 'passing' through social and material circumstances (buildings, streets, trees, and gardens, people met and left behind)" (24, p.17).

The participants were asked to walk into their workplace (the RCH setting), showing and talking to the researcher about the environment. The participants walk into the setting, talking about the practices, daily routines, and rules and also sharing pedagogical reflections related to specific objects. In the second part, we proposed a semi-structured interview in order to explore the link between the 'imaginaries' of home and educational practices for educators. More specifically, these three areas of exploration were covered:

- Exploring the personal idea of home (and gathering metaphors related to one's own idea of

- home);
- Exploring if and how, thinking about their context, the idea of home is linked to and adopted in educational work;
- Explore any existing reflections on the link between RCH and home.

Following each interview, we produced a graphic representation of the walking interview, starting with the floor plans of RCH. To do this, floor plans were printed for each of the investigated contexts. Four pairs of dichotomous descriptor criteria (personal-collective; open-closed; monofunctional-polyfunctional; fixed-mobile) were developed to represent the lived space portrayed by the participants, under lighting functions, rules, and characteristics of their space. In this way, as many floor plans were produced as individual interviews. This strategy allowed, firstly, to create of a dialogue between the geometric representation (25) of space, and the lived experience shared by the participants. The descriptors help in elaborating an early organization of participants' narratives, highlighting some of their characteristics. In the literature - even if applied to different objects of investigation - there are examples in the use of floor plans to explore everyday practices, among which we find, for example, the work of Jacqui Gabb (26). In our case, this tool was not used directly with the participants but created by the researcher for two fundamental reasons: The first has to do with the desire to create an elicitation stimulus for the focus group; the second has to do with the researcher's posture within the research project, a posture of closeness (27) to the research object and presence-not only physical-but also active in the process of knowledge co-construction.

Participants-generated photography

At the end of the interviews, participants were asked to photograph those spaces and/or objects that best represent how they use "their home dimension" in their work in RCH. Photography- especially when referring to educational research represents a tool with great potential (28). This potential is also underpinned by Siegesmund and Freedman's contribution (29) Images as research: Creation and interpretation of the visual. In the contribution, the authors identify at least five possible uses of the image in research: as record, data, study, theory and reporting. One of the founding principles that should always be considered when approaching photography in research, has to do with the idea that photography is never an objective fact, but is always generated. Also, quoting Rose, it is essential to study and research images because social life takes place through images. Participant photography (31) can be defined as a visual method in which research participants "are encouraged to visually document their social landscapes through photography and reflect on their photos to produce personal narratives, a technique that can be particularly empowering for human populations whose voice has been historically marginalized" (32, p.443). A total number of 54 photos were collected. The photographic material was used as a stimulus during the focus groups phase of the project. In the literature this process is sometimes described as an 'autodriven' interview (33).

Focus groups

During the third phase, focus groups (N=3) with the educational teams – already involved in the first phase- were realized. "A focus group is an interview on a topic with a group of people who have knowledge of the topic" (20, p.114). In a focus group, meaning is socially established: participants have the opportunity to listen to the perspective of others and to modify their original answers when they hear what others have to say. The opinions of individual subjects must be considered in the context of the opinions of others, moderated by the interviewer.

Specifically, participant-generated photographs were presented (34) to conduct the photo-elicitation process (35, 36). The Photo-elicitation Interview (PEI) strategy is based on the idea of including photographs within interviews (36,37). The main difference between interviews using pictures and text and those using 'words only' lies in the way the individual responds to these two forms of symbolic representation (37). According to Harper (36), this difference stems from a physical basis involving the human being's brain areas: the brain area responsible for processing visual information is evolutionarily older than that which processes information of a verbal nature. PEI leads the researcher

to make methodological choices that will influence the structure of the research and the actual application of the method. From a methodological point of view, it is crucial to decide who will take or select the proposed photographs, as well as their provenance: these images may in fact be taken by the researcher, generated by the participants, or represent pre-existing photographic material (34). Photographs can be taken from historical archives or collectors, produced by the participants themselves, be taken for the purposes of the research, 'found' in family albums, or even co-produced during the study by the researcher and the research participants. Traditionally focus groups require the presence of an observer and a moderator that should:

- Create a relaxed, supportive and non-judgmental atmosphere;
- ensure for participants have the opportunity to speak and express their viewpoints;
- monitor time (38, 39).

Furthermore, in order to give the first feedback on the walking interviews and to elicit conversation with participants, a new map - starting with the individual floor plans collected (see paragraph 2.2.1) in each team - was graphically produced. During the first phase and the focus group, a strong relation between 'home' and 'village' emerged. For this reason, we decided to conduct a focus group involving all the coordinators of the residential pedagogical services of SOS Village of Saronno. Here, the participants produced a subjective representation of the space (40) in small groups.

CONCLUSIONS

In conclusion, adopting different research trajectories - including less traditional and more creative languages - is a potentially very useful aspect to explore and enhance the human experience. However, it is crucial to underline that the adoption of visual tools - such as photography - especially when applied in more vulnerable research contexts (as in the case of alternative cares) deserves a specific reflection on the ethical dimension of doing research. As already pointed out, the project was approved by the university ethics committee. Before entering the field, information and presentation meetings were organized with the contexts involved. Informed consent and data treatment forms were shared and explained. The photographic materials were, according to protocol, archived in encrypted folders accessible to the research team.

However, the literature shows other ethical considerations, like the importance of establishing a specific session on the ethics of doing research with photography together with the group of participants (41) in order to present and discuss potential obstacles, considerations and strategies. Furthermore, Wang and Redwood-Jones (42, 43, p. 563-564) highlight a number of specific ethical considerations for researchers using participatory visual methods, including photography: "(1) individuals have a right to privacy in both private and public spaces; 2) participants need to understand and identify the contexts in which consent is required; (3) participant safety must be considered, as photographs produced may cause embarrassment among the people photographed and may result in retaliation against the participant; (4) participants should own the prints and negatives they produce to avoid commercial exploitation and appropriation; and (5) Researchers may intentionally or unintentionally influence the type of images produced through the guidance they provide to participants".

The process of data analysis is still developing and is following the hermeneutic phenomenological orientation (19). From the first stage of analysis- considered a circular process- some initial themes of attention emerge, including the relationship between specific objects and educational functions; the fluidity that distinguishes the concept of home (strictly connected to its inhabitants), and the relationship between 'feeling at home' and space appropriation. The next steps of research will lead to a sharper definition of these first reflections. Also, specific attention will be given to the process of photographic analysis, through the supportive question matrix developed by Hannes and Wang (44).

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