Environmental Entanglements

Cultivating sensory awareness through materials and the materiality of the physical body.

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The candidate confirms that the work submitted is his own and that appropriate credit has been given where reference has been made to the work of others.

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Dedication

This thesis is dedicated to my parents who have always endeavoured to support my eclectic career path. Thank you for sharing your love of gardening, art and community.

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Abstract

The intention of this thesis is to illustrate experimental engagements with pedagogical, artistic practice developed through an emergent creative process that sought to enrich ways a sentient individual can perceive the environments in which they are immersed. This investigative research explores a robust yet adaptable multifaceted pedagogy that foregrounds the agency of the individual as a means to (re)embed them in a damaged planet. As evidenced in the twenty-first century, the cumulative effect of human activity in the world demonstrates a perceptual misalignment that consistently negates our inherent ecological entanglement. Whilst scientists across the globe evidence a substantial correlation between a severely depleted planet and detrimental human behaviour, this has not (so far) inspired a seismic shift in people's sense of accountability.

The challenge of this research investigation has been to identify ways to evoke the sensory tools needed to help people resonate with the immediacy of a *felt* ecology and connect their actions to broader ecological consequences. In order to facilitate the variability of participants' sensory attunement, four interdisciplinary workshop case studies were designed to explore arts-based and somatic learning processes. Insights drawn from articulating the participants' embodied experiences highlight the transcorporeal nature of subjective sensory stories, whilst demonstrating meaningful ways to destabilise habitual behaviours and in turn disrupt conceptual territories that may be recognized as ingrained in the human mindset. Through this engagement with *lived* experience, the research makes an *active* contribution to practical applications of future environmental education.

This thesis also documents the design and illustration of a supplementary guidebook dedicated to self-directed environmental awareness. Conceived in response to the social isolation of Covid-19, *This is a Guide to Noticing* uses surreal and instructive imagery to inform, challenge and invigorate practitioner sensorium. Invitations to sculpt, draw and collect litter explore the sensorial relationships between materials and the materiality of the physical body. I argue there is inherent learning potential in cross-pollinating creative and embodied thinking seeking to blur personal, local and global environmental boundaries and draw attention to an environment that meets and permeates the sensory borders of the individual.

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These drawings were originally used as teaching aids within the practice research. They have been embedded within the thesis as landmarks between chapters to encourage the reader to reflect upon how sensory information is absorbed by the human body.

Chapter 1

Introduction

Environmental thinking

This research investigates the complexity of humanity's relationship to the biome that sustains us as a species. Against the backdrop of the climate crisis, a global pandemic and the continuous consumption of the planet's finite resources, our day-to-day lives consist of a constant relationship to the physical environment. Our human senses cross-pollinate what we touch, see, hear, smell and taste to cultivate a unique perceptual world. The composition of this awareness curates an environmental relationality that situates the sensed self at the centre of each person's perceptual ecology. As a co-regulating species, however, humans also greatly influence each other's behaviours, daily choices and aspirations for the future. In this digital age of capitalism, industries entice global consumers to purchase goods and services from a network of transcontinental suppliers. Satisfying consumerism has transformed the Earth's surface into a network of resources and commodities. The continued extraction and burning of fossil fuels in this process has caused the climate emergency by destabilising the planet's atmosphere and adversely impacting global temperatures and rainfall.

The consequences of extreme weather and unpredictable forecasts have put further strain on overburdened resources and the production of food. Humans have striven to develop technology to mitigate these ecological variations whilst simultaneously accelerating the extraction of the last remaining resources to maintain an ever-growing global market. These countermeasures have caused further ecological damage and continued loss of biodiversity across the planet. Our reliance on fossil fuels, deforestation and countless other environmental concerns have all been repeatedly documented as negatively impacting the planet (IPCC, 2023[1]). However, the global nature of these practices challenges any cohesive

[1] AR6 Synthesis Report: Climate Change 2023: The Intergovernmental Panel on Climate Change (IPCC) is in its Sixth Assessment cycle has refined three reports which will be released in March 2023. This is also the year in which the panel will assess how the aims and objectives of the Paris Agreements have been implemented regarding its key goal of limiting global warming to below 2°C.

attempt to bridge perception between impact and responsibility. Their scale and complexity distances the sensory individual from the interconnected ecological systems unravelling under the strain of detrimental collective human decision-making. Life in this abstracted bubble has altered our perception of the world over time. Feelings of responsibility for our collective actions have been desensitised, our notions of accountability deflected towards those that facilitate flourishing capitalist markets. The situation is exacerbated further by the international community's disconnected response to establish a unifying set of principles for why people should change the way they live their lives. We need to address the beliefs and values that inflate our failing social, political, and economic bubbles to invigorate change. As a species, we breathe the same atmosphere and walk upon the Earth's surface. Yet, there is an inherent disconnect between a desired (and primarily materialist-focused) quality of life and its ecological consequences.

This research investigates how to draw focus back to the immersion of the physical body in the sensorial environment of our damaged planet. It aims to foster sensory, somatic and spatial awareness of a materially complex world that bears the ecological scars of our collective actions. The exploratory nature of the research illuminates the intersection of personal, local and global perceptions of the environment by attending to the perceptive world humans create for themselves. It is through these embodied narratives that the methodology proposes alternative educational ways to recognise the embedded nature of our existence.

The tapestry of this research weaves together somatic and artistic disciplines to embed the sentient organism in environmental education narratives. Threaded within this material composition are scholars, scientists, artists and creative practitioners that address our inherent ecological misalignment in very different ways. Contextualising the variability of these approaches has led to the attentive, careful curation of a constellation of influential voices, each of them resonating with the objective and aims of this practice research. By aligning these different approaches to critical environmental thinking, the thesis

acknowledges a spectrum of existing research and practice that aims to impact people's connection to the world around them.

The research specifically seeks to create mechanisms for immersing individuals within their own perceptive world, curating subjective experience as a form of ecological awareness. In alignment with an array of artistic and somatic practitioners, the inquiry explores a vibrant domain of creative thinking that contextualises our urgent need to reform how we perceive the world around us. It does this by merging perceptual experiences that foreground a hybridised materiality manifesting through the psychosomatic experience of the individual.

The experimental and embodied nature of research that investigates the *lived* experience of physical sensation draws influence from the ecological ethos of Australian philosopher and conservationist Val Plumwood. A passion for conservation led her to thread environmental philosophy into her daily life, engraining a critical perspective on humanity's self-enclosure and systematic destruction of non-human habitats. Plumwood's writing on living in the midst of systems that perpetuate a multi-faceted ecological crisis highlights an irrational rationality embedded within our commodity culture (2002, p. 16):

> Because the system is self-prioritising and has eliminated or colonized political, scientific and other potential critical and corrective systems, it has little capacity to reflect on or correct its increasingly life-threatening failures and blindspots. This kind of rationality is irrational, despite its hyper-rational trappings.

My intention has been to interrogate my own *rational* choices in day-to-day life, to cultivate a relational and reciprocal dialogue between the osmotic materiality of the research and my own *felt* experience of experimenting with alternative modes of environmental thinking. My objective here has been to pay close attention to, and question, the habitual ways I reinforce privilege over other species based on my own subjective experience. These instances of embodied reflection have ultimately impacted how I help others connect personal experiences with broader environmental narratives.

This thesis experiments through, and documents, integrated practice cycles that contextualise the physical body's immersion in its surroundings. This is explored through the frame of facilitated creative practice in which engagers are invited to experiment with sensory awareness, using the physical body as a learning tool to interrogate and enrich ways of thinking about the world. It documents a series of workshop case studies that build upon these embodied approaches to knowledge. In tandem with the workshop practice, I have designed an illustrated guidebook to support self-led environmental enquiry. The thesis takes the reader through each iteration of the teaching practice before circling back to highlight creative intersections through which the guidebook's design process evolved in response to the narrative of the workshop practice.

Practice research and the Covid-19 pandemic

This thesis charts a period in which seismic tremors in social, political, economic and personal parameters reverberated around the world. From the initial reports of isolated cases in Wuhan, China, in November 2019, the Covid pandemic has had an unprecedented global impact. Locally, and in relation to this research project, I had just embarked upon preparations for my second case study when the U.K. went into a national lockdown in March 2020. The government advised against any nonessential travel and the University of Leeds insisted everybody stay off campus. The complete decimation of the arts sector also meant that I could no longer earn a living as a dancer and artist. Therefore, I took a short break from my research to work full-time in a fruit and vegetable shop.

I documented my lockdown experience in an autoethnographic writing practice that charted my own psychosomatic resonance to the turbulence of a world experiencing a huge value shift. As the pandemic progressed, and people's behaviour seemed to become ever more erratic, the practice of writing enabled me to reflect upon the perceived strangeness of my day-to-day interactions. This open-ended, personal exploration brought into focus the felt sense of living in a fractured world and afforded the creative space to explore how to destabilise figurative and physical boundaries. Within this text-based frame, I contemplated the perceptive stories we curate to contextualise our sensory locality in the world and its

relationality to other sentient organisms. Detailing these perceptive stories, scaling from a sense of physical proximity to the enormity of a global pandemic, amidst the climate crisis enabled focus on the sensorial body as a conduit for cultivating alternative environmental narratives. The following short exert touches upon how research, activism, environmental perception and Covid-19 intersected in this creative writing process:

> For myself, as a sensory organism embedded in this damaged planet, I have experienced the challenge of differentiating between what is possible to address within the frame of this practice research and what will stretch out into future projects and my role as an environmental activist. My intention is to advocate for and strive towards an empathetic mode of engaging with the environment of the everyday. This has become even more complex since the pandemic, suddenly everyone is hyperaware of the nature of this particular global issue. Individual freedoms have been curtailed; social, economic, and political networks have ground to a halt- we have been required to pause (Skinner, notebook entry 18/7/2020).

Intersecting environmental narratives

This section of the thesis touches upon the contours of the climate crisis and explores the perceptual narratives our species cultivates. By contextualising how humans compartmentalise the environment that sustains them, this thesis seeks to illuminate what perceptive details are being missed within the disconnected nature of these relationships. The twenty-first century encapsulates a time of social, political and ecological strain as humanity grapples with the challenges inherent in maintaining capitalist markets and global trading networks. The excavation of vast quantities of minerals from the Earth's strata and its replacement with biohazardous waste, plastics and other human detritus prompted Austrian philosopher Glenn Albrecht's conceptualisation of the *Anthropocene* epoch, as a new definition of geological time (Macfarlane, 2016). Humans are a force of nature that reform Earth's geological archive, imprinting evidence of our relatively short period of evolutionary history onto it. The term Anthropocene can now be found in a broad spectrum of literature beyond the scientific domain, emerging in popular culture and the Arts.

Climate and environmental scientists have sought to broaden and enrich our collective understanding of the ecological lens, by publishing and communicating empirical evidence as to why it is so important to address a planetary-wide phenomenon. The detrimental day-to-day choices of eight billion individuals on this planet demonstrate how crucial individual human behaviour is to the survival of our (currently) only planetary home. Yet, our behaviour does not correlate with the alarming climate data disseminated through international research, government bodies and community organisations. Our collective impact continues unabated, despite there being meaningful support for change across society. Thus, it is essential that we identify alternative immersive perspectives. We need stories to situate ourselves within the context of a world that meets and invigorates our collective imagination regarding the importance of environmental awareness.

In *All Art Is Ecological* (2021) philosopher Timothy Morton sets out a bleak narrative of humanity's role as the second asteroid wiping out life on this planet, suggesting that 'climate change' is an ineffective term for the current Sixth Mass Extinction event taking place globally (p. 7). In *Dark Ecology* (2016) Morton demonstrates how human identity has changed dramatically in the twenty-first century, impacting senses of broader environmental curiosity by abstracting the mind from the realities of our perceived world, making it harder to create stories about what is actually going on around us. As cyclones, landslides and forest fires are reported in the media on a daily basis (and whilst we may be empathetic to those affected) a digital flood of information soon overtakes anyone climate-related event from our collective consciousness, replacing it with the next wave of global news. These events are global markers that reference an unravelling planetary narrative, the scope of which can be difficult to comprehend through the psychosomatic capabilities of the individual human. In their investigation into this sixth extinction event, Heather Davis and Etienne Turpin propose that "arts *labour* is both a sensing and a spacing of the shared separation of the Anthropocene" (2015, p.21). The anthropogenic environment is perceived as a relational spatial dynamic, a simultaneously macro and micro scale of interactivity. This research investigates ways creative practices can help to contextualise conceptual and physical spaces to reflect upon the composition of perceptive relationality. In doing so, the

exploratory nature of the practice shows evidence of how art can osmotically blend ways of thinking about the world, challenging behaviours and conceptual territories ingrained into the fabric of the human mind-set.

Scholars, such as social-environmental studies scientist, Gregory Bateson, have spent their careers acknowledging the importance of personal, local and global relational scales when thinking about the importance of maintaining an ecologically rich biome. A pioneer in his field, Bateson (1972) questions why, and how, we have lost the knowledge that glues together the planet's biodiversity, noting that we, as a species, no longer connect "the starfishes and sea anemones...[with] human committees" (Bateson, 1972 p. 5). As an academic he strove to write for a lay audience, encouraging people to take time to perceive the world differently, explaining the importance of protecting our finite resources. The year-on-year quickening of carbon being released into the atmosphere stands testament to an assumed presumption that the planet can somehow provide, absorb and replenish itself indefinitely.

Bateson is part of a scholarly lineage that has continued to expand and diversify its efforts to tackle this entrenched global perspective. His daughter Nora Bateson, president of *The International Bateson Institute* in Sweden[2], advocates environmentally focused, interdisciplinary methodologies that invest in research narratives beyond qualitative and quantitative realms of data. In contrast to empirical evidence, *Warm Data* as the institute calls it, welcomes multifaceted forms of creative learning that manifest beyond these traditional research frames. This is where art intersects and incubates the potential power to merge perspectives and discourses regarding the state of the world and whose responsibility it is to address environmental issues. Processes of art-*making* further support this by situating the interactive physical body at the boundary between the sensory system's periphery and an internalised sensed space within the corporeal form. As Bostic and Howey (2017) point out: "Art, in its varied forms, requires interactive interpretations which can

[2] The *International Bateson Institute* is dedicated to researching interrelational environmental dynamics through arts, social and multi-disciplinary methodologies.

help bring people to realisations about the way problems, anxieties and ambiguities are shared, drawing us away from an inward focus and towards action" (p. 107). Before her death in 2008, Plumwood was a key advocate for the inclusion of creativity and emotional expression in environmental research. She suggested that, whilst alternative ways of conceptualising ecological thinking had been devalued in the past (due to their complexity and resistance to commodification), there was always an opportunity to incorporate them to promote a sense of relational empathy and understanding:

> Narrow anthropocentric cognitive and aesthetic relations to nature can be countered in a variety of ways: for example, by promoting alternative caring and attentiveness towards the land, learning about non-anthropocentric models other cultures may be using, and generating local earth narratives which can place local relationships with nature in a deeper, more storied and a less narrowly productivist framework of attachment (Plumwood, 2002 p. 113).

This research draws on a range of experimental work undertaken by a discrete group of scholars and practitioners tracing developmental threads of their work as they devise and critically examine their own experiential environments. Experience drawn from 'live' critical thinking inherently grapples with the continuous interplay of human and nonhuman processes and relationships that change from moment-to-moment. The intention in adopting this approach is to engage with the complexity and multiplicity of emergent interconnections and actively provoke the specificity of subjective knowledge this position evokes. Therefore, the premise of this thesis does not rest on a single theoretical perspective but uses the tensegrity of a vibrant investigative web to contextualise the interface between matter and perception. Environmental philosophers, such as Val Plumwood (2002) and Timothy Morton (2018), emphasize the theoretical messiness of encouraging people to think about what Nature actually entails and how we might each choose to position ourselves within it. As a comparative approach to addressing the anthropocentrism and abstraction of the twenty-first, new materialism seeks to invigorate the agency of all matter and address the biopolitical and bioethical concerns this perspective changes through in-depth scholarship (Coole and Frost, 2010). Political theorist and philosopher Jane Bennett (2010) and feminist theorist Karen Barad (2006) write extensively about what constitutes the entangled nature of agency and causality but the conceptual framework of the phenomena they describe reinforces the perspective that

agency can be objectively observed and categorised. This research seeks to harness awareness of the same matter by foregrounding direct lived perceptual thinking. By contextualising the relationality between bodies and spaces, this thesis connects theorists and practitioners that encourage drawing from the lived experience of the individual to foreground the problematic environmental relationships inherent in the world today.

Engaging with making processes within creative practice affords opportunities to enliven complex spatial and sensory stories. It furthers interdisciplinary educational trajectories and cultivates an embodied state of agency manifested through physical awareness. Therefore, this research has sought to craft pedagogical pathways that shepherd participants through a series of branching creative habitats. The narrative seeks to draw attention to where the physical body ends and matter, external to the corporeal form, begins. To explore these perceptual learning possibilities, the inquiry asks the following primary question and sub-questions:

In what ways can sensory perception be enhanced so that it can support environmental awareness?

i) How can creative practice (re)frame the relationship between materials and the materiality of the physical body?

ii) In what ways can creative vocabularies explore personal, local and global opportunities for perceiving differently?

iii) What are the benefits of cross-pollinating pedagogical approaches with environmental thinking?

The research has fostered four primary objectives within each iteration of pedagogical and artistic practice:

1. To offer an opportunity to playfully respond to sensations afforded by engaging with the physical body.
2. To appreciate the detail, immediacy and importance of environment by slowing down and distilling sensations, thoughts, and images we process moment-by-moment in our daily lives.

3. To illuminate the potency of skin contact as a conduit for channelling a sense of relationality between different facets of awareness.
4. To consider the complexity of materials, both natural and manmade within the environment, and to explore opportunities for sensory learning by engaging with the materiality of the physical body.

These research questions and their objectives have been investigated and facilitated within the frame of four workshops. The table on the next page aligns each iteration of the practice and includes specifics of each case study.

Workshop	Date	Location	Duration	Number of participants	Follow-up communication
Case study 1: Environmental Perception.	1st-5th April 2019	Union 105, 105 Chapeltown Road, Leeds, LS7 3HY[3]	2 hours 30 minutes	7	Four informal follow-up conversations were scheduled for the 9th of April 2019. Three took place and one cancelling due to prior commitments.
Case study 2: Material Encounters.	27th November 2020	Online via Zoom	2 hours 15 minutes	9	A follow-up email was sent to the participants on the 28th of November 2020. The email invited participants to share their creative responses to the guidebook tasks - three participants responded.

[3] Meanwood Valley Urban Farm, Sugar Well Rd, Meanwood, Leeds, LS7 2QG

Case study 3: Material Encounters.	3rd July 2021	Yorkshire Dance, 3 St Peter's Buildings, St Peter's Square Leeds, LS9 8AH	2 hours 10 minutes	6	An email was sent out on the 2nd of July 2021 to those that had to cancel due to Covid-19. The email invited them to participate through self-directed practice – four individuals and two family groups replied with exerts of text and photographic examples of creative practice.
Case study 4: Environmental Sensitivity. Supplementary teaching practice.	27th November 2021	The Granary, The Quadrangle, Shoreham Road, Shoreham, Kent, TN14 7RP	2 hours	20	No follow-up communication was attempted in relation to this supplementary teaching opportunity due to the host organisation prioritising its own feedback form.

Table 1: Details related to each case study workshop.

Thesis outline

Prior to delving into the practice elements of the research, this thesis examines theoretical, artistic and somatic approaches to environmental thinking. Chapter 2 compares different means of perceptive knowledge and reflects upon how humans engage with the world and its impact on how the climate crisis is contextualised. Chapter 3 focuses on artistic and somatic practitioners that disrupt these dominant environmental narratives and investigates the ecology that sustains the sensory organism. Chapter 4 discusses a methodology that situates the artist as a nexus of creative thinking and recognises the evolving nature of exploring creative practice. Chapters 5 and 6 lay out two intersecting strands of creative research documenting four workshop case studies and the creation of a guidebook- *This is a Guide to Noticing*. In the final chapter of the thesis, insights gathered from the participant's experiences are analysed to highlight how creative thinking impacts personal, local and global forms of environmental knowledge.

Chapter 2 | Environmental narratives: The world[s] we perceive and the stories we tell ourselves explores how humans in the twenty-first century interact with the environment. In this chapter, I touch upon critical thinking fostered by empirical science before exploring the perceptive power of the physical body and its capacity to cultivate alternative narratives of knowledge. The research proposes Stacy Alaimo's (2010) *transcorporeality* as a pertinent way of framing the merging sensory and material channels it evokes. I present somatic experience as a resource for foregrounding and furthering environmental education based on sensory parameters and highlight how it contests the humancentric perspective of our anthropogenic age. Detailing the perceptual nuance of the sensory individual in this chapter illuminates the physical and metaphorical boundaries that disconnect humans from the ecological biome that sustains the species.

Chapter 3 | The Cross-pollination of creative, somatic and environmental thinking highlights a selection of artistic practitioners currently working to cultivate imaginative approaches to environmental awareness. I foreground possible educational synergies in this field of creative engagement by focusing on a range of practitioners that specialise in

investigating the composition of the physical body (whilst simultaneously testing the tensegrity of the environment the sensorial system activates). The chapter illustrates how body-based thinking processes help to dissolve perceptual boundaries by nurturing an integrated sense of identity. I discuss the learning possibilities of weaving creative thinking into existing conversations regarding the climate crisis and reflect upon the impact of the *felt* experience within environmental educational paradigms.

Chapter 4 |**Research methodology** outlines creative approaches to cultivating knowledge and situates the artist-researcher within the complexity of an immersive investigative practice. By acknowledging the porous nature of artistic identities, the chapter reflects upon ways of holistically contextualising the subjective experience of the artist *as* an environmentalist. I consider different ways of approaching embodied experience within the frame of alternative knowledge-building processes before designing a multitiered pedagogical practice.

Chapter 5 |**Exploring pedagogical practice** examines four workshop case studies facilitated within the frame of this practice research. I contextualise each teaching engagement and examine how the participants interact with different aspects of sensory awareness to foster alternative modes of environmental perception. I demonstrate how the practice evolved in response to reflections and feedback gathered from the participants by detailing the design of each phase of participation. One-to-one conversation, group dialogue, email correspondence and reflexive art-making created a multifaceted resource from which my insights were gathered. The chapter highlights the sensorial potency of clay as a learning medium and reflects upon the importance of acknowledging the impact of spatial dynamics. Lastly, the chapter appertains my experience as a facilitator and the different methods used to propagate imaginative thinking that navigated the impact of the Covid-19 pandemic.

Chapter 6 |**The development of a self-directed guidebook: *This is a Guide to Noticing*** portrays a design process that used investigative drawing as a way of provoking sensory and spatial engagement from participants. The chapter delves into how drawing can be used to illuminate physical sensations that are difficult to communicate with language. Examples of illustrative practice combine surreal and instructive imagery to inform, challenge and invigorate sensory awareness. I weave together somatic and artistic methodologies that help locate the perceptual identity of the individual based on litter-picking and autoethnographic illustrations that record the sensory experience of eight sites of interest in Sugarwell Hill Park. This chapter circles back to intersect with the second, third and fourth case studies detailed in chapter five to demonstrate how each interlaced iteration of the workshop practice contributed to the guidebook's evolution. Through a reflective evaluation, I summarise how imaginative thinking builds towards an empathetic perspective through personalised, site-specific environments defined within the sensory capabilities of the individual.

Chapter 7 |**Conclusion** returns to the core research questions posed in the introductory chapter to identify themes and pertinent observations that bind somatic and artistic methodologies within environmental narratives. By mapping an overview of each pedagogical pathway, I demonstrate how the practice enhanced sensory knowledge and sought to foster meaningful experiences for the participants. The chapter details the challenges and limitations faced in the methods used to facilitate and gather insights from those taking part in the practice as well as the limitations of the practice itself. I examine the applicability of Stacy Alaimo's (2010) *transcorporeality* as a methodological lens through which to locate a porous and multifaceted research practice. Proposed avenues for future research are sketched out, with particular reference to ongoing collaborations with The Quadrangle, Kent. Finally, a reflection on the pursuit of creative research within a scholarly frame draws the thesis to a close. I emphasize the importance of art and somatic practice as vital to ongoing environmental dialogues in the twenty-first century.

Illustration 1: *Skin cells- the porosity of the physical body, 2022* © Skinner.

Chapter 2

Environmental narratives: The world[s] we perceive and the stories we tell ourselves.

This chapter seeks to bridge a breadth of perceptive knowledge that spans between the individual sensory organism and global ecological imperatives. The research touches upon the dominant position of empirical knowledge-building processes by reflecting upon the stories told from the perspective of environmental science. Science is valued for its objective and rational processes that will, judging by advocacy for advancing geo-engineering projects, pioneer a way out of our current environmental predicament (Kulkarni et al., 2019, Zhang et al, 2022). Philosopher Michel Serres highlights how reliance on scientific and technological solutions disengages the individual from the immediacy of the felt perceptive world: “The age of science created new iconoclasts, this time of the senses, and totally destroyed a prodigious body of knowledge in the realm of the perceived. All we have preserved are ruins, remains, fossils” (Serres, 2008 p.253). Philosopher Timothy Morton suggests that it is the traditional representations of ecology found in scientific thinking that make it hard to engage with, deeming the term *Nature* problematic for its provocation as an external force that exists beyond an embodied sense of being. In a 2018 lecture at Radboud University, Morton suggested that conceptually we are being asked to respond effectively to ecological malpractice through narrowing perceptive parameters as an environmental apocalypse looms.

Comparatively, environmental narratives that maintain an alignment between ecological dependency and what is culturally valued (sustained in some indigenous cultures) have consistently been usurped in the Western world (Abrams, 1996, 2011). A flawed set of cultural and economic values exists in capitalist markets that maintain a fictitious belief that there is an unlimited amount of material resources. This presumption, when coupled with a misguided supposition that humans are cognitively superior to any other species on the planet (and therefore have the right to reap beyond our share of resources), forges an unsustainable cycle. The challenge lies in illuminating how this problematic attitude manifests and intersects across multiple domains. This research focuses on how to cultivate alternative ways of disrupting this succession through the design and facilitation of a

multifaceted arts practice. In doing so, this research seeks to position itself alongside scientific narratives to illuminate healthier reciprocal cycles of relationality.

Scientific and cultural narratives needn't be polarised to such extremes. Noteworthy scientists merge rigours inquiry with imaginative methodologies for cultivating alternative forms of knowledge. Botanist and member of the Citizen Potawatomi Nation, Robin Wall Kimmerer (2013) recognises the currency of experiencing the world through interwoven stories that interconnect encounters with other cultures and communities. She posits that this social relationality is achieved by mixing mythology with childhood memories and lessons in the importance of maintaining gift economies. In her book, *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants* (2013), Kimmerer outlines a commodity exchange culture as a viable alternative to capitalism and in doing so explores an alternative life philosophy to acquiring more than one needs. The attention and degree of care required for this pathway binds environmental responsibility into the equation, maintaining a reciprocal rhythm between humanity and the Earth's resources: "The market economy story has spread like wildfire, with uneven results for human well-being and devastation for the natural world. But it is a story we have told ourselves and we are free to tell another, to reclaim the old one" (Kimmerer, 2013 p. 31). She suggests that these relationships are inherently present in nature, and are nurtured by acknowledging how much the physical labour of the body engages with the ecological fecundity of the biome.

Climate-focused public education strategies have comparatively, yet to find resonance with such an embodied understanding of environmental learning. Policies for engagement seek a cohesive way to communicate the severity of the situation to the general populace (Linde, 2018, Wibeck, 2014). The disparity between how the environment (and the imminent climate catastrophe) is conceptualised has resulted in a fractured response from individuals, governments, and scientific bodies alike. A passionate speaker at the forefront of environmental public engagement, atmospheric scientist Katharine Hayhoe lectures audiences about valuing the environment, capturing people's imaginations through her

advocacy for identifying common ground with other people in one's community (Aczel, 2021). In her popular TED Talk, Hayhoe suggests those with children find allies with other parents wanting the best for their offspring, or followers of religion find common values through environmental stewardship (Hayhoe, 2019). Yet, within this search for shared values, momentum for behavioural change is primarily based on the reflexive nature of her listeners and their collective capacity to envisage a brighter future. Whilst extremely skilled at scaling down climate information for people to see its applicability in how they live their everyday lives, Hayhoe's message for change relies on a rational distribution. Scientific rhetoric is presented as a choice between what is detrimental (but adversely feels beneficial) for the individual versus what permits future generations to thrive.

Organisations specialising in environmental education, such as the UK-based charity *Climate Outreach,* use digital media (such as image libraries, videos and podcasts) as a primary mode of communication. As a researcher, I took part in a *Climate Ambassador* programme run by *Climate Outreach* during my second year of study at the University of Leeds. The initiative required participants to attend a series of online networking engagements designed to help researchers discover similarities in research domains and to identify shared goals. My impression during these meetings was that whilst participants had the best intentions, collaborative dialogues soon fizzled out. Academic and research-related priorities left little time to sustain new networks based on shared intentions. Firmly positioned in social science research, educational organisations such as *Climate Outreach (2023*), *UK Student Climate Network (2022)* and *Climate Action* (2022) in association with the University of Bath, are constantly faced with the challenge of how to capture and sustain researcher connectivity with the public's imagination on digital platforms. A range of freely available photo archives, online reports and guides from the *Climate Outreach* website, such as *Britain Talks COP26: New insights on what the UK public want from the UN climate summit (2021)* and *Communicating climate justice with young adults in Europe (2022),* use bright colours, large font, and simple diagrams to communicate how the individual plays a crucial role in climate advocacy. Yet the provocation for change primarily exists as text or pictorial directives that depict different subdivided environmental impacts. The authors focus on projecting perceived impact and in doing so miss an opportunity to address the absence of the

sensory, physical body in climate communications. Without this acknowledgement, environmental narratives around climate perpetuate the assumption that this is something that can be framed from an objective viewpoint. This abstracted perspective ensures future vulnerabilities and uncertainties can be dismissed as conjecture whilst the immediacy of the sensed experience is kept out of the equation.

The nuance of the perceptual body

This section addresses the potency of knowledge cultivated through the corporeal body. It explores why it is essential to foster sensorial porosity and acknowledge the body's ability to investigate the materiality of the world it is immersed within. Evidence of an anthropogenic age suggests that we humans have culturally forgotten how to sustain knowledge that binds us to the environment. In writing about how the individual conceptualises a relationship to physical spaces, design academic Paul Carter posits that we are all negotiating our own "homeostatic system of self-other coexistence" (2019, p. 46). He highlights alternative stories told by the Aboriginal people that foretell how the landscape of the Earth was carved by the movements of ancient beings, and how a culturally maintained ecological ethos inspires a sense of connectivity to them. Australian Aboriginal philosopher Bill Neidjie (2015) emphasises an inherent spirituality in these cultural connections of integrated systems that extend beyond individual mortality, intertwining the land's present dwellers with past and future generations. This synergy of agency and spirituality challenges the dualism of Western traditions, infusing topography with an infinite sense of ecological reverence. Such storytelling invites the listener to imagine a living, responsive topography, engrained with an embodied and culturally valued heritage. These integrated and mindful ways of perceiving space exist in stark contrast to assumptions of it as a commodity with little sense of agency.

This research draws from this sensuous materiality of co-existence, imagining an environmental topography that manifests *being* a body embedded in space, as opposed to simply situating a brain, in the body, upon a landscape. Within these spatial dimensions, subjective experience, consciousness (awareness of self and others), information processing (awareness of environment), and self-organisation, intermingle within the sensory organism

to inform a sense of identity. The body processes sensory information continuously to maintain this. It cultivates knowledge and balances neural registers through "the interoceptive (including not only the viscera but also the skin), the proprioceptive (based on musculo-skeletal investments) and fine touch which involves the conduct of the whole body and not just the brain" (Thrift, 2000, p. 37). These multifaceted forms of corporeal awareness have been explored by geographer Nigel Thrift to understand the composition of how the body learns through movement. Thrift points out that it is through attunement to the body's kinetic capabilities that environmental perception starts to shift and change. These are the neurological ways in which the mind (conceived as the integration of body and brain) learns about the specificity of the habitat it exists within. This psychosomatic experience can be very complex. Yet, this thesis endeavours to unpick its entanglement within the frame of creative practice to illuminate the multiplicity and porosity of sensory information informing us from moment to moment. By honing the skill of attending to this information (the ebb and flow of sensation) the mind has an opportunity to gain a sense of perceptive clarity, to rediscover the felt agency of the biome.

Professor of Psychiatry Dan Siegel differentiates between a sense of attunement and that of presence in his explanation of how best to integrate the body with the environment (and by extension the other people we come into contact with): "Presence is our openness to the unfolding of possibilities. Attunement is how we focus our attention on others and take their essence into our own inner world" (2010, p. 34). He explores how nonverbal information resonates, and how the brain extends throughout the whole physical body, allowing it to make connections that simultaneously shape internal and external worlds. Creative practitioner Miranda Tufnell suggests how to unify the multiplicity of so much sensory information through the specific use of physical touch: "All the time we live in a welter of so many sensations, thoughts, images that simplifying is very helpful. By focusing on just one bone in the shoulder, the edge of the scapular […] we open a door into a multitude of perspectives, a distillation of information" (Interview with Miranda Tufnell, 2020).

Neurobiology has highlighted facets of our psyche, such as mirror neurons (discovered at the end of the last century), that suggest behavioural responses are set in motion when repeated perceptive patterns are detected within the mind (Gallese et al., 2007, Sheets-Johnstone, 2011). If these arguably detrimental, habitual patterns that mitigate environmental empathy, are disrupted, there is an opportunity to recalibrate sensory parameters towards a *felt* sense of reciprocity. This mode of thinking has robust implications for people to re-encounter the duality of tuning into themselves as sensory organisms as well as cyclically cultivating environmental awareness. Siegel highlights that- "Uniquely in humans […] it is the anterior insula that is invariably activated when people have awareness of the internal state of their body- the important process of our sixth sense, called *interoception*" (Siegel, 2010 p. 40). By cultivating a capacity for *interoception,* the sensing body has the opportunity to effectively re-imagine porous corporeal boundaries between interior and exterior domains.

The nuance of this perceptual resource equips each individual with a modulating sensory net to filter information that impacts the perceived boundaries of the body. This research investigates how to invigorate our sensory apparatus by magnifying this form of perceptual *noticing* and explores practices for it to manifest in day-to-day life. In doing so, the interactive nature of sensory engagement evokes ways for environmental knowledge to coalesce that embed the physical body in broader ecological spheres of effect.

The threshold of the body

This section focuses on the sensorial potency of human skin as our outermost edge, exploring the body's capacity to 'read' the environment around it through touch. Philosophical psychologist Kym Maclaren emphasizes that: "The intimacy of touch [..] enables a subject to establish herself in her own place, both separate from and in communication with others, and thus makes possible a place of mutual engagement between two subjects" (2014, p. 96). She describes a two-way flow of information that cultivates a modulating corporeal boundary shaped by encountered surfaces. Published in 1978, Ashley Montagu's book *Touching: The Human Significance of the Skin,* explores the evolution of human perception, emphasizing how touch contextualises the individual within its sensory habitat. According to Montagu, this is because cutaneous stimulation is the first of the senses to develop in the womb, enhancing the potential for postnatal perceptive development. Montagu suggests that in the gestation period, the child experiences the primacy of tactility: "Initially it is passively tactile, experiencing tactile sensations that are gradually converted into perceptions" (1978, p. 301). This form of sensory learning differentiates between the body's primal response to its surroundings and an evolutionary younger channel that refines sensitively complex situations that require precise movement and coordination.

In *The Body has a Mind of its Own* (2007) Sandra Blakeslee and Matthew Blakeslee explain how sensory avenues come together in the brain to create composite experiences. These structures inform the sensory system of its open capabilities and relationality to the world around it. They affirm that sensory receptors are not distributed evenly and are densely concentrated in those areas in which the body requires increased sensitivity such as the hands and lips. These sensory channels manifest in the form of body-centric maps that are profoundly malleable and responsive to change, adapting to the fluidity of information feeding into it. In drawing information from these maps, humans rely on language or gesture that denotes specific connotations: "Between language and the world, each society establishes its own seamless fabric of lived sensory and semiotic realities" (Le Breton, 2017 p. 12). However, the relationship between language and sensory perception must navigate

the subtleties of the *felt* experience. Whilst sensation might be fleeting and intangible, words wedge experience into categories of affectivity. This is where the cultivation of a sensory register can enrich perceptive knowledge. It enhances the parameters of what relationality physically entails, acknowledging the learning possibilities of sensory storytelling. Skin simultaneously provides a permeable and impermeable boundary for this knowledge to coalesce, a place of awareness in which internal worlds blend with a continuously shifting environmental plasticity.

Michel Serres (2008) poetically draws attention to the immediacy and grounding impact of this sensorial boundary: “a capricious locality that defends and feeds us, like a porous breast-plate” (p.247). Body movement enables us to experience a tactility that fosters spatial knowledge. It also simultaneously provides the nervous system with a wealth of information regarding the nature of our own physiological dimensions and orientations. As our physical outer edge transforms, meeting new surroundings with renewed cells, our skin encounters more of the materiality of space external to the body, collating awareness in relation to the subject- be that another body or the materiality of our environment. Such perceptual unfolding enables us to experience “the dual movement of coming into contact and moving from the contact that this presents” (Abrahamsson & Simpson, 2011 p. 337). Attending to physical touch deepens this state of awareness, drawing attention to the potency of sensory contact and the richness of haptic sensation. As anthropologist David Le Breton lyrically suggests, physical contact affords “a rupture with emptiness and a confrontation with tangible limits” (2017, p. 97). Within the context of this research skin contact facilitates spatial awareness, challenging subjective boundaries and affording a perceptive window to investigate ways of detailing material relationships.

The research intends to test the tensegrity of the sensory system of touch to study how to map the body’s edges beyond *felt* territories. There is potential here to embrace a sense of perceptive liminality by tapping into how the physical self resonates beyond the skin’s surface. According to Le Breton, this capacity is inherent to the sensory organism: “Every

minute, we are perceptually decoding our surrounding world and transforming it into a coherent familiar fabric" (Le Breton, 2017, p. 4). By detailing and modulating the surface of this netted awareness, there is an opportunity to foreground the vibrancy of successive perceptive interactions encountered by unfurling the physical body through space.

Philosopher Thomas Hanna defined the word *somatics* in 1976 to encapsulate an approach to integrating an understanding of the mind with the physical sensorial experience of the world. I encountered the world of somatics through dance education where it was used to refer to a supplementary technique that supported, what was deemed, the more rigorous training of contemporary dance and classical ballet. However, its capacity to acknowledge the variabilities found in human physiology always made sense to me as a practice, welcoming variations in how physical bodies recognise a sense of embodied connectivity. Cultivating somatic knowledge is an integral component of this project's methodology. Michael Polanyi's (1967) writing on the multifaceted nature of tacit knowledge within sensory experience, underlines the need to draw upon the potency of this *felt* domain. Whilst challenging to differentiate and codify within embodied movement, Polanyi emphasizes the interactive nature of how somatic knowledge, through physical contact, is cultivated. By invigorating a sense of presence, the physical body draws attention to the interception of environment and consciousness. Although challenging to find language to subjectively discuss movement, this research pursues a somatic approach to identify common threads of sensorial potency within each facet of investigative practice.

Moving through worlds within worlds

Anthropologists Christopher Tilley and Kate Cameron-Daum (2017) differentiate between perceiving the environment as a blank void and the possibilities inherent in imagining a lively and reciprocal landscape with "scents and sounds, diurnal and seasonal rhythms, places and paths" (2017, p. 5). Tilley and Cameron-Daum depict a multifaceted sensory resource capable of sustaining and enriching spacio-temporal relationships. Yet, twenty-first

century humans have the propensity to cocoon the physical body within artificial structures that hermetically seal them from the multiplicity of sensory stimulation (Knippers & Speck, 2012). It could be argued that the design and manifestation of Western architecture show what is currently valued in the manifestation of human habitats. Architect Juhani Pallasmaa accentuates how abstracted the human subject is from sensorial stimulation within the urban environment by striving to turn "the soulless physical world into a home of man" (2009, p. 128). This sterile perception of landscape foregrounds how necessary it is to recognise and [re]discover the value of being in close proximity to the ecology that sustains us. In *Spheres. Vol 1, Bubbles* (2011), philosopher Peter Sloterdijk writes about the materiality of the spatial containers we build for ourselves in an environment that differentiates between an interior and exterior sense of boundary. He depicts an interconnected temporal and spatial sensitivity through which we encounter the world, and the world encounters us.

I find particular resonance with Sloterdijk's curiosity in foregrounding the physical body as a tool for exploring the tensegrity of these expanding and contracting perceptive bubbles. He references the cyclical nature of the human respiratory system to reinforce the contradiction of our current environmental misalignment, as humanity continues to poison the atmosphere it draws into its lungs. In challenging this sense of ecological irreverence, Val Plumwood (2002, p. 223) writes about the cellular building blocks that compose all life and the hypocrisy of seeing ourselves as something other than completely bound within the formation of other matter:

> Given the western tradition of devaluing and backgrounding materiality and identifying the human essence with disembodied reason rather than with the lower 'animal' body, there is an important sense in which what we need is more materialism, not less, a better awareness of ourselves as materially embodied beings in a material universe in which we are all material.

By contextualising the configuration of this hyper-connection, humanity's material toxicity in the twenty-first century can be drawn into focus. Professor of English and Environmental Studies, Stacy Alaimo points out that, "matters of environmental concern [...] are always

“here”, as well as “there”, simultaneously local and global, personal and political, practical and philosophical” (Alaimo, 2010 p. 2). As multifaceted and highly porous organisms, humans are capable of the sensory awareness to feel the resonance of our detrimental impact on the world. The anthropogenic toxicity of daily decision-making processes suggests afferent abstraction beyond this sensorial knowledge, unfeeling of an ecology that meets, and permeates, the boundary of our being. This research seeks to sensorially [re]discover how to sustain an awareness of the environment that responds to these cyclical relationships.

In *The Ecological Thought* (2010), Morton demonstrates how to contextualise and shift subjective experience through the use of *hyperobjects* - defined as objects that transcend the temporality of a human lifespan (p. 130). Morton uses the plastic that remains long after a seabird’s body has decomposed as an example of synthetic material outliving that of a biological form. As an example of temporal and spatial relationality, the plastic bag embodies a scale of time that stretches beyond the lifespan of the embedded organic structure. The twenty-first century human is saturated by these artificial compounds that, in a multitude of ways, impact the physical body. These impacts can be recognised through a myriad of different scales and, as Morton points out with one stark example, humans are not always aware of their consequences even if they are investigated with the best intentions: “Radioactive materials are already “over here,” inside our skin, as Marie Curie discovered to her cost” (Morton, 2010 p. 130). Here Morton highlights the dangers that can co-exist in the pursuit of scientific knowledge by emphasising our porous capacity to absorb matter (including its toxicity) into the biome of the physical body.

Comparatively, Stacy Alaimo (2010) seeks to identify a position of creative environmental post-humanism by diverging from Western cultural assumptions regarding the divides that enclose humanity within a superior domain of intelligence and materiality. To do this she draws from *transcorporeality*, a term she uses in the field of environmental humanities to communicate the omnipresent and interconnected way substances are linked throughout the material world. Alaimo (2022) also emphasises how abstracted humanity is from ideas

of the Anthropocene that manifest in photos, graphs and data. The cumulative archive of these qualitative and quantitative portals of information negates our embedded position and diverts attention from the immediacy and sensorially mixed-up nature of *felt* experience.

Curiously, the term Nature often evokes pristine wilderness that negates the pollutants, decomposition processes and toxins produced within the context of this abstracted worldview. One has only to browse an adventure holiday catalogue to get a sense of what Nature should look like. A distinctly human reluctance to grapple with the challenges posed by unmasking this fictitious purity, according to Morton, fails to recognise the complexity and *queerness* of ecology (2010, p. 247). They draw on gender theorist Judith Butler's theoretical proposition that an assumption of heteronormative behaviour correlates with thinking about Nature as a closed and limited system. Morton challenges this union by pointing out that "all life forms, along with the environments they compose and inhabit, defy boundaries between inside and outside at every level" (2010, p. 274). Morton seeks to evidence a mosaic of ecological entanglements that disrupt systemic parameters by highlighting several species that switch between genders and the capacity for a single cell to reproduce asexually. This research investigates how engaging with ecological porosity contextualises opportunities to acknowledge and explore the complexity (and identities) of matter, and the materiality of other species, encountered as part of everyday life.

The overarching narrative of the literature discussed so far demonstrates why it is critical to immerse the sensory human in the materiality of their surroundings. The research pursues accessible and habitual opportunities to cultivate the extraordinary from an experience that might otherwise be considered ordinary. In *Affective Habit Ecologies: Material dispositions and immanent inhabitations,* J-D Dewsbury suggests that human and ecological circumstances continue to unfold amidst "material agency, affect, habit and immanence" (2012, p. 74). Dewsbury accentuates the potential for impacting the ongoing and multidirectional dialogues between matters that go unperceived yet inform and percolate below the surface of a curated perceived reality.

Ultimately, the physical body cannot exist without a wider ecological sense of familiarity and relationality. However, humans in this century are failing to recognise the intricate nature of this environmental reliance and therefore must incessantly mitigate ecological repercussions that emerge as a result. As practice researcher and academic Margaret Somerville puts it, a Western environmental narrative seeks to bypass "…an ontology found in the bodies of things", which might be what is fundamentally impeding the cultivation of a sustainable empathetic psycho-somatic perspective of ecology (Somerville, 2011 p. 21). In her journal documentation, Somerville writes of combating this environmental disconnection on a personal level by creating a vegetable patch in her garden, in order that she might directly engage with the (potential) reciprocal relationship between soil and body. The *hands-on* nature of digging in the dirt provides a physical space in which to nurture a sense of co-dependence as the body continuously comes into physical contact with the soil at her fingertips.

In the interdisciplinary fields of science, technology and consciousness studies, prominent feminist scholar Donna Haraway challenges the environmental cynicism that encapsulates the rise of humanity's perceptual isolation. In her book *Staying with the Trouble. Making Kin in the Chthulucene* (2016) Haraway points out that: "It matters what matters we use to think other matters with; it matters what stories we tell to tell other stories with ...what thoughts think thoughts ...it matters what stories make worlds, what worlds make stories" (p. 12). An advocate for the evocation of science fiction and imagination to assist in recognising co-existing patterns in all things, she suggests that humanity is linked through response-*ability,* through the giving and receiving of information between sensory entities. The sensory stories we tell ourselves lack boundaries and are, according to her philosophy, all part of an ongoing living world that we cannot afford to lose. Haraway renames our current anthropogenic age the *Chthulucene*, a period of braided multispecies allegories that desire the making of kin beyond that of the immediate family to provoke a sense of moving beyond a human-centric narrative.

The dangers of ego-centric philosophies have long been explored in literature by authors such as Ursula K. Le Guin. I have chosen here to touch upon Le Guin as exposure to her literary work at a young age questioned what, up until that point, had been theologically inspired assumptions regarding the rightful dominance of humanity over the Earth. In her 1972 novella, *The Word for World Is Forest,* a peaceful forest-dwelling species is terrorized by human's intent on harvesting the planet's resources. The 'civilised' aggressors do not recognise the native colonies living in arboreal cities as an advanced species and therefore go about exterminating them in a variety of horrific scenarios. Set behind the prism of science fiction, it mirrors an alarmingly relatable perspective regarding our inherent lack of ecological awareness and capacity to justify the brutalisation of indigenous communities.

Whilst architect Pallasmaa equates modernity to designing architectural space, Le Guin recognises the dark shadows cast by these anthropogenic constructions, illuminating humanity's propensity for environmental destruction and the mentality of those that evoke it at all costs. Plumwood (2002) also makes use of science fiction to question what humanity will perceive when it visits other worlds. She suggests that we are destined to be tragically lonely due to our self-enclosure and lack of imagination regarding the possibilities of what constitutes life and self-awareness. Le Guin, Plumwood and Haraway emphasize that humanity must find meaningful ways to engage with temporal and spatial spheres of sensory and perceptive worlds, fostering connectivity by interlacing the interpersonal with the interstellar.

To impact the destructiveness of environmental thinking, Arne Naess penned his acclaimed paper *Deep Ecology* in 1973. As an environmental philosopher, Naess emphasised the value and sanctity of all life on Earth, insisting that humanity find ways of re-establishing its enchantment with nature. As a philosophy, *Deep Ecology* differentiated between a shallow perspective of ecology that combats systemic industries (and their damaging impact on the planet) and a need to unearth embedded cultural and ideological imperatives that have let such detrimental processes flourish. The implications of immersing the physical body within the ethos of the *Deep Ecology Movement* (Naess, 2021 p. 2) endeavours to enrich an

empathetic lens of environmental learning and recognise *interbeing* as an educational formula. Interbeing here is defined as a psychosomatic capacity to investigate the potency of our human relationality within an ecology that surpasses social and cultural norms.

This sense of interbeing appears as a provocation in a range of literature and mindfulness practices. Comparatively, Vietnamese Buddhist monk and scholar Thich Nhất Hanh (2017) offers a spiritual perspective on sustaining a sense of cognizant enchantment with the natural world, proposing that humans maintain a state of reactivity to their surroundings. The narrative of their prose aligns terms like 'togetherness' with 'inter-being', and in doing so connects the sensed self to a commune for organisms, imagining a meshwork of all life, from the single-celled organism to the solar system. Nhất Hanh submits that humanity must do more to cultivate opportunities to recognise this sense of *inter-being* and *ecological being* as integral to everyday life. This is where the cross-pollination of creative and environmental thinking could invigorate a dormant sensory domain. Before exploring these possibilities in the next chapter, this research returns to Timothy Morton (2021, p.105) to instil a sense of future hope for humanity:

> The problem with ecological awareness and action isn't that it's horribly difficult. It's that it's too easy. You are breathing air, your bacterial microbiome is humming away, evolution is silently unfolding in the background. Somewhere, a bird is singing and clouds pass overhead. You stop reading this book and look around you. You don't have to **be** ecological. Because you **are** ecological.

In summary, this chapter has sought to explore how environmental knowledge has been objectively and subjectively approached in recent decades. By contextualising current methods in the field of climate communication (Hayhoe, 2019, Aczel, 2021) the chapter highlights the limitations of relying on visual, numerical and text-based methodologies to communicate environmental thinking. Whilst some scientists (Bateson, 1972, Haraway, 2016) have shown how to broaden and enrich an ecological lens, environmental philosophers, such as Val Plumwood (2002), Timothy Morton (2021) and Robin Wall Kimmerer (2013) suggest how a relationality can be developed in a myriad of perceptual

ties, including embedding the physical body in its immediate surroundings. This sensual and somatic grounding draws attention to the potency and unity of physical sensation and the inherent ways these sensory parameters cyclically evidence how we move through other matter (Sheets-Johnstone, 2011, Siegel, 2010). This chapter has explored the groundwork for establishing a robust creative practice of educating these perceptual parameters by investigating alternative, relational stories capable of tackling a deeply rooted anthropogenic self-enclosure (Abrams,1996, Plumwood, 2002). The literature has also evidenced how encounters between different materials (including the materiality of the physical body) can be framed as hybrid channels of knowledge that exist amongst the rigidity of empirical thought and scientific thinking.

The next chapter delves into ways of cultivating imaginative thought that nurtures modes of environmental education and unifies personal, local, and global perspectives on sustainability. Before exploring how the research methodology intends to further these narratives, however, it investigates work undertaken by a range of practitioners that nurture sensorial learning possibilities within a variety of environmentally focused domains.

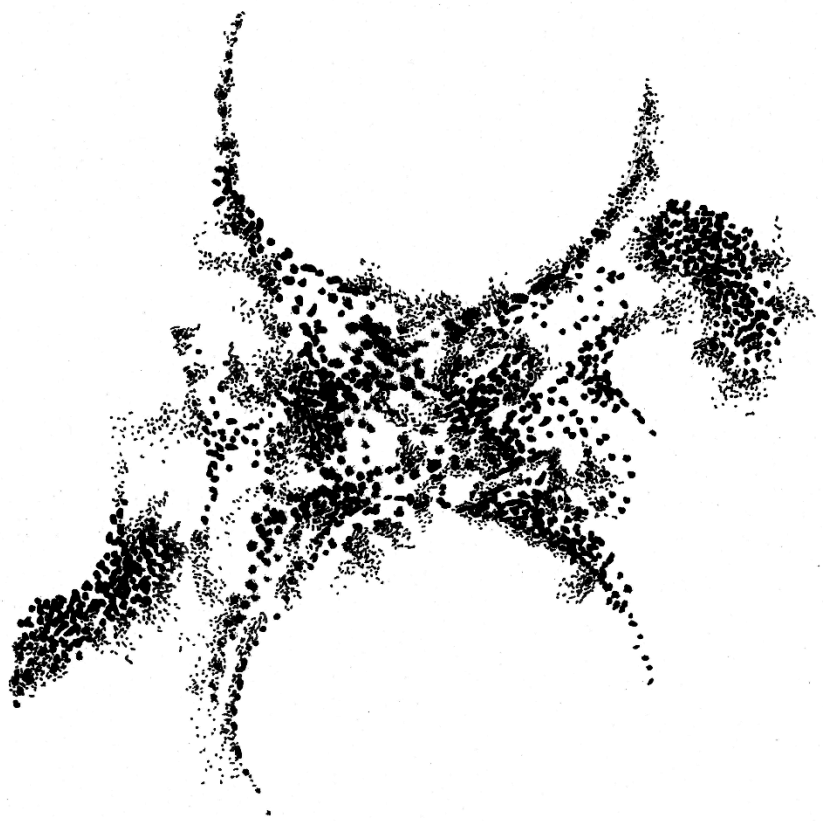


Illustration 2: *Connecting internal and external worlds, 2022* © Skinner.

Chapter 3

The cross-pollination of creative, somatic environmental thinking

The intertwining threads of this chapter investigate educators and somatic practitioners who seek to stimulate creative and environmental thinking. It also examines the work of a range of arts practitioners who pioneer imaginative ecological narratives and frame alternative ways of gathering information about the world. By approaching knowledge in this way environmentally focused creative practitioners chisel away at the conceptual walls that divide us from Gregory Bateson's (1972) intermingling ecological communities. It is the artists, in arts-based researcher Patricia Leavy's words, that "build networks for those interested and committed to these innovations [by] experimenting with cross-pollination" (2015, p. 320). In turn, this promotes the analysis of how creative thinking and practice support the synergy of perceptual tools, using the sensing body to draw attention to the world it is physically immersed within.

Psychologist Celiane Camargo-Borges suggests that: "When imagination is unleashed, meanings gain freedom and new knowledge can arise. This is because imagination adopts a fluid and less fixed view of meaning, encouraging ingenuity, spontaneity, and novelty" (2018 p. 93). In our digital age, public engagement educators, such as *Climate Action* (2022), have sought to evoke behavioural change through the representation of socioeconomic, cultural and ecological vulnerability and future uncertainties. Comparatively, in the realm of the arts and somatic practices, teachers and specialists have channelled their energies into exploring the impact and complexity of what lies behind these modulating states of awareness. Collectively they provoke pertinent questions regarding how humans build a sense of relationality and suggest alternative ways of perceiving the immediacy of the world around the physical self.

Artist Jane Bailey has been exploring the synthesis of people, education and the environment for over twenty years, seeking to illuminate possibilities to "embrace ambiguity and open-endedness" in learning (2019, p. 188). Bailey here aligns with fellow

artist and researcher Emma Cocker in what she terms, “a field of desirable indeterminacy within which to work” (Cocker, 2013 p. 127). This inherently held potential for nurturing liminality in arts-based pedagogies foregrounds how we might become accustomed to a heightened sense of vulnerability by embedding creative practice within our day-to-day environmental encounters. By noticing the collaborative nature of socio-spatial interactions and our perceived dependence on particular materials (such as single-use plastics) around the home, creative enquiry unfolds into broader interwoven frames. Artists and educators can help people explore the specificities of these intertwined perceptual spaces and encourage individuals to reflect upon what aspects of their sensorial apparatus they pay the most attention to. According to Cocker (2013), engagers in arts practice are afforded the opportunity to embrace unknown possibilities, accepting the paradox that no matter how much is perceived, there will always be an insurmountable uncharted territory of knowledge to bring to light. Cocker draws attention to the alternative ways art approaches complex subject matter: “Some things cannot be viewed directly; sometimes you have to look away. Seeing shadows requires a degree of blindness to the light” (p. 128). Art propagates the conceptual seed of an idea, unleashing its creative potential to rewild the mind. Its affordance cultivates a form of alchemy capable of destabilising habitual perceptions through encounters with materials, objects, and the materiality of the physical body. Creative thinking, and those that advocate its use within a participatory practice, emboldens engagers to bring to light (or [re]discover) embedded relationships found in blurred boundaries of perceptual thinking.

In his teaching practice, geographer David Crouch (2010) uses artistic methodologies to demonstrate twenty-first century conceptions of spacing, landscape and the transience of the organisms moving through them. Crouch’s focus on art as a vehicle for articulating these dynamics explores how motion interprets an impression of space that constantly modulates and transforms perception. Within a similar vein, arts pedagogy specialist David Haley guides groups of participants on walking tours investigating flora and fauna that had infiltrated the urban architecture of Manchester, U.K. Haley specialises in shepherding groups through a collective interpretation of *conversational drift*- “a poetic means of synthesizing peoples’ psychosocial world-views for ecological resilience” (Haley, 2021, p.

136). Haley encourages groups of participants to explore what catches their attention, practising how to cultivate awareness on the move, suggesting that: “community participation within urban contexts can create a critical dialogue focused on ecology in action” (Haley, 2021, p. 135). This roaming methodology illuminates how people can collectively navigate particular sensorial pathways within an urban terrain. Haley identifies as a practitioner of eco-pedagogy, a teaching methodology that nurtures and explores the intersection of socio-ecological education and “transformative actions through deepened and widened reflection” (Misiaszek, 2020, p. 617). Emerging out of dialogue around the Rio Earth Summit in 1992, eco-pedagogy directly contests anthropogenic dominance and seeks to highlight these ideologies as contributing to the unsustainability of relationships that currently exist across the globe (Misiazek, 2022, p. 2).

Comparatively, through his rural exploration of the Southwest Coast Path in Cornwall, geographer John Wylie (2005) highlights the specificity of particular physical movements and incremental moments that offer a fleeting sense of intersubjectivity. Wylie summarises that it is the kinetic articulation of walking itself that creates space, delineating the boundary between affect and perception. Wylie proposes that this form of environmental knowledge, built through motion, “…produce[s] and circulate[s] within a non-subjective, sometimes intersubjective, relational spacing composed of moods, tones, postures and topographies” (p. 242). As an interdisciplinary author, Wylie depicts the process of weaving together critical and environmental analysis felt through movement. He narrates the sense of change inherent in a deeply *felt* understanding that the inside and outside of a sensed self exist in a constant state of (inter)change. My research seeks to emulate this continuously unfolding and enfolding of information composed of, and entwined within, a sense of environmental materiality gathered through physical experiences. As a tool for learning, this research investigates the physical body’s capacity to cultivate a sense of perceptual curiosity in the immediacy of environmental domains.

Art Education specialists Douglas Blandy and Elizabeth Hoffman (1993) recognised a shift in the relationality between art and environmentalism in the 1970s, as community-centric art

practices were gathering momentum (particularly in the United States). By foregrounding the demarcation of boundaries between communities, territories and species, practitioners at this time sought to deviate from capitalist-imposed environmental narratives. Many of the creative specialists who inspired the methodology of this research were part of this wave of community-centric artists and practitioners. Some scholars argue that little has evolved since this initial upsurge of creativity and that art now appears to be trapped in, as David Haley puts it- "the paradox of radical gestures performed in reactionary contexts" (Haley, 2008, p. 10). Yet there is compelling evidence of instances across a myriad of domains that proactively cultivate the interplay of environmental education and art.

Immersive eco-identities

As a specific example of interdisciplinary practice, researcher Margaretha Häggström (2019) conducted a creative project with fifty-one students in Sweden which sought to give those involved a sense of what it is to be part of a forest. The students were situated beneath the canopy of trees to experience the intersection of plant life cycles and local mythologies. This promoted the interrogation of science and Swedish literature simultaneously. As an immersive practice the methodology sought to inspire alternative ways of thinking about the future of trees that included an osmotic perception of self, based on reflecting on the feeling of taking on the characteristics of the trees (they painted their bodies to blend in with the birch bark and spent time in close contact with one particular tree). Häggström's teaching shows how implementing an alternative learning process has the capacity to enrich perceptual relationships by framing educational possibilities for recognising the threshold of the body and its porosity. This type of immersive practice subverts institutional structures, social constructs and other perceived divisions by demarking how students are taught about the anatomy and identity of the individual. Häggström's immersive methodology echoes Kimmerer's (2013) facilitation of ethnobotany classes in the isolated Adirondack Park of New York State. Kimmerer's teaching approach encourages students to build shelters by bending willow saplings and weaving cattail plants into nets and twine in tandem with their primary objective of examining the surrounding ecology with scientific instruments (p. 224). Pursuing these variations of interrelational practice broadens sensory parameters by

interlacing the potency of physical contact with the experimental and communal experience of site-responsive investigative practice.

As an artist and disability cultural activist, Petra Kupper studies the intricacies of personhood and particularities of inclusivity that are often bypassed in broader conversations regarding environmental thinking within an identity-rich public realm. In their role as *Center for Sustainable Practice in the Arts Quarterly* (2021) editor, Kupper interrogates the complexity of what engaging physically with ecological connectivity entails, highlighting artistic practitioners such as Edgar Fabian Frias (2022) who do not shy away from the multiplicity of their identities. As an environmentalist researching the toxicity and socioeconomic disparity inherent in sites of heavy industry in the U.S., Frias evokes a multifaceted sense of self as a nonbinary, indigenous and Latinx interdisciplinary artist who seeks to explore the transient success, curiosity and failure of sharing an embodied sense of (dis)integration with damaged ecological systems (2021, p. 13). Frias' intersecting frames of creative practice offer alternative and hybridised identities that delineate societal boundaries within the context of a site-responsive practice.

Michael Klien, Steve Valk and Jeffrey Gormly collaborated on a manifesto in 2008 that sought to (re)contextualise social identities by fostering a sense of unity through choreographed movement. In the *Book of Recommendations: Choreography as an Aesthetics of Change* (2008) the artists sought to make visible the intertwined threads that bind communities together, illuminating these connections through the facilitation of different art forms; "[These] …patterns are flexible and fluid constellations, appearing and disappearing, crystallising and dissolving, being born and dying" (p. 11). Their manifesto suggests how connecting physical bodies through the resonance of imaginative thinking transcends verbal and textural exchange of ideas in any one culture. As anthropologist Le Breton (2017) reiterates: "Every minute we are perceptually decoding our surrounding world and transforming it into a coherent familiar fabric" (2017, p. 4). These artists contextualise the *felt* knowledge of interpersonal and environmental connectivity,

conducting creative processes that overlay individual identities with synergised, community-centric perspectives.

Interdisciplinary creative thinking

Processes of craft, and artmaking, can also bring communities together to explore perspective commonalities and shared values. The *Crochet Coral Reef* is a globally interconnected initiative that fosters a sense of unity residing "at the nexus of art, science, mathematics, feminist community practice and climate change" (Wertheim, 2022). Australian sisters Margaret and Christine Wertheim started the project by crocheting wool, plastic, wire and acrylic to draw attention to the damage afflicted to Australia's Great Barrier Reef in 2005. The inclusive ethos of the project brought the practice into the community, using traditional women's handicrafts as a call for action: "the sisters held a series of community workshops in which they couched practical instruction with mathematical background, biological insight, feminist implication, and ecological alarm" (Weschler, 2011 p. 11). The active and tactile nature of the craft diversified and bridged conceptual and physical boundaries. It explored spatial, social and material relationships. As a making methodology, the manifestation of multiple toxic reefs across the globe encapsulates a participatory creative practice that continues to foster sites of interconnected action-based pedagogical experience as a way of empowering environmental awareness.

Artistic collaborators Miranda Tufnell and Chris Crickmay (2004) structure multi-faceted participatory platforms to learn about how the physical body intersects with the environment (2004, p. 53). Their objective is to share and inspire creative responses and to guide exploratory tasks in which the physical body is used as a multifaceted tool. Through encounters with different materials and the materiality of the physical self, Tufnell and Crickmay immerse the practitioner within a world rich in agency. The narrative of their book, *A Widening Field: Journeys in Body and Imagination* (2004), weaves creative practices together to investigate the potency of sensory learning irrespective of the readers' experience with body-based practices. The narrative of their guide requires the reader to simultaneously nurture and propagate the felt senses of the body to draw attention to

habitual states of awareness: “Whether we look at a rock or we look at a hillside we feel it in our body, it is a question of giving time. We are living in a time of speed therefore slowing down is absolutely key to cultivating attention” (Interview with Tufnell, 2020). By dedicating time to this form of creative practice Tufnell and Crickmay recognise the cumulative nature of sensory learning, the shifting perspectives afforded by engaging with the physical body over an extended period of time.

As a comparative body-based practitioner, Jamie McHugh investigates how to help people recognise the integrated nature of their physical bodies. In his article *Embodying Nature: Discovering Eco-Consciousness through Senate Experience* (2021), McHugh suggests that to understand physical presence we must invest in the sensorimotor choices we make from moment to moment. Here is an example of an exercise McHugh (2021, p. 127) uses to evoke a sense of physical and spatial identities:

Witness- be still, open and receptive.

Contact- use different qualities of touch and various body parts, i.e., use hands or feet, belly or back.

Mirror- become what you perceive through imitation simultaneously or in a call-and-response rhythm. Become the quality, the shape, the movement or the sound.

Respond- use your voice, movement and stillness in counterpoint/ reaction/ response.

Rest- pause and settle, taking time out from the concentrated focus.

In this exercise, McHugh highlights the necessity to broaden educational imperatives within body-based learning by making them as expansive as possible. In doing so, he questions the sense of how knowledge is delineated, or recognised, stating that “there is not a deliberate end-goal to accomplish or specific experience to be had from these experiments” (2021, p. 128). Such a sense of openness unbinds a subconscious imperative that there is a right way (and a wrong way) to approach engaging with environmental relationships. Similarly, to Tufnell and Crickmay, McHugh creatively frames the ebbs and flows of perceptual learning by drawing attention to embodied relationships that already exist and continue to adapt. These diverse practices demonstrate the potential for cyclical creative journeys, deepening

in significance the more participants cultivate awareness through an integrated sense of being.

Site-responsive practice

Long-term collaborator of Miranda Tufnell, and interdisciplinary artist Simon Whitehead (2019), facilitates residencies that explore the symbiotic call of nature in the wilds of west Wales. His *Locator* workshop series seasonally investigates the authenticity, or willingness to participate in extended periods of shared isolation in wild places. Through the exploration of ecologically significant sites, Whitehead cultivates awareness in nature, to contextualise a cyclical web of perception that weaves in and out of pre-existing bionomic systems in the landscape. Comparatively, dance artist Vanessa Grasse situates her choreographic and ecological practice in liminal urban spaces, requiring performers and audience members to move together through transitional patches of scrubland and peripheral green spaces. *Meanders* (2021), performed as part of Grasse's *The Land We Are* project series, asked audiences to witness the interconnected dialogues that manifested between performers and the knotted branches each carried with them. Grasse (2021) and Whitehead (2019) fundamentally draw on the knowledge of matter, both external to the corporeal body and the materiality of a sensed-self, in order to facilitate a shared space for material learning to manifest. These simultaneously emergent and immersive practices use movement vocabularies and physical contact with materials to cross-pollinate frames of environmental intelligence. The participants, audience and performers co-exist as part of a wider dialogue, instigating action and subsequently reacting to the nature of their own physical materiality.

Whitehead also works within a choreographic frame, embedding his interconnected ecological ethos into playful performance practices. He has been facilitating *Calling Tree* since 2014 in collaboration with choreographer Rosemary Lee. The performance work situates aerialists and performers in and around mature trees to share birdcalls from the canopy and engage with pedestrians passing by. The trees are also used as landmarks for community-based engagements such as spoken word performances and nature walks with birdcall specialists. Lee and Whitehead facilitated a *Calling Tree* walking workshop in

Roundhay Park, Leeds as part of Yorkshire Dance's Climate Encounters Festival in 2021. It was advertised as a live public site visit that curated different ways to engage with trees.

As participants, we were encouraged to experience an alternative view of the landscape by laying on blankets beneath tree branches or leaning with our backs against tree trunks. Whitehead spoke of gathering information about the surrounding trees, encouraging us to feel the bark and notice the body's proprioceptive response to moving through the park landscape. The exploratory nature of the workshop fostered a psychosomatic learning experience that brought what permeated the periphery of the sensory body to our attention. The experience of a green, curated spacious parkscape offered very different perceptual information to Vanessa Grasse's *Meanders* (2021) performance practice. The audience watched performers work with branches in a process-led creative performance, whereas Whitehead and Lee encouraged those engaged in the workshop version of *Calling Tree* to experiment with their own arboreal interconnectedness. However, Grasse has also sought to reframe city architectures as environmental landscapes through participatory choreographic practice. *Mesh* (2016), performed primarily in city centres, draws attention to the intermingling and flow of people moving through a particular space by asking them to take part in the practice. As a dancer for Grasse from 2016 to 2019, I experienced how direct physical interactions with pedestrians playfully disrupted their habitual patterns of movement. Within the performance practice, Grasse sought to illuminate a modulating net of interpersonal connectivity that binds people together in the particularities of a shared space. An immersed experience of these workshops and performance practices has helped to shape the trajectory of this research by illuminating how much the context of physical experience impacts perceptive knowledge.

So far, this chapter has examined artists and pedagogical practitioners who investigate sensory awareness in a myriad of ways. Before exploring a cross-pollinating research methodology in the next chapter, this final section highlights the ethos and connectivity of environmental activist Joanna Macy. An example of Macy's earliest interdisciplinary work, *Breathing Through the Pain of the World* (1984) epitomises her capacity to use simple, body-

based processes to deal with the complex challenges of absorbing the implications of difficult circumstances, particularly pertinent to those involved with advocating peace and climate justice in the twenty-first century. Macy refers to this work as a guided meditation that mediates a sense of pain that is itself the cost of caring about the planet (1984, p. 162). In the late seventies, she co-designed *The Work That Reconnects* as a pedagogical methodology that inspires transformative action in response to the many facets of the environmental damage inflicted on the planet. It incorporates ideas drawn from the *Deep Ecology Movement* of Arne Næss (2021), Buddhism and environmental activism. Macy sought to provide "a holistic process that engages the mind, emotions, imagination, and body to build community […] and transform perspectives and worldviews" (Hathaway, 2016, p.309). Her teaching practice recognises the importance of honouring the upwelling of psychosomatic feelings woven into any reflective practice regarding climate and environmental degradation. Joanna Macy continues to refine her practice by teaching and collaborating with scholars, artists, and therapeutic practitioners.

In 2019 the Covid pandemic brought Joanna Macy into conversation with environmental activist Jem Bendell through the *Deep Adaptation Forum*[4]. Bendell gained prominence in 2018 for his article, *Deep Adaptation: A Map for Navigating Climate Tragedy,* which emphatically states that we are already past the tipping point of making a substantial difference in rectifying climate change (p. 4). His narrative proved provocative with its damming critique of sustainable business strategies and the sluggish rate of change across a myriad of industry sectors. Since its release, Bendell has welcomed more holistic methodologies to disseminating knowledge. He has drawn from alternative approaches to the climate crisis that sustain universal values, endeavouring to invigorate behavioural change. In their online conversation, Bendell and Macy advocated for the combination of

[4] The *Deep Adaptation Forum* is a collective of activists, scientists and creative practitioners whose objective is to address the psychosomatic impact of the climate crisis.

active hope[5] and intentionality, stating that it is imperative to visualise and embody the change you wish to see in others and their attitudes towards the environment (2021).

This research resonates strongly with Macy's incorporation of somatic awareness practices and Bendell's willingness to integrate alternative pedagogies into his teaching methodology. Evident from his extended engagement with both online and in-person activities hosted by the *Deep Adaptation Forum*, Bendell's work embodies robust advocacy for furthering multifaceted environmental education initiatives. Aligning these avenues of creative thinking with the well-trodden conceptual pathways of environmental science requires a willingness to engage fully with the potency of sensorial resonance. This is where further research into the intersection of *felt* experience and the cultivation of alternative environmental stories might broaden humanity's perspective scope of future possibilities.

This chapter has focused on artistic and somatic practitioners who cultivate imaginative and entangled ecological narratives through which the physical body is used as the primary investigative tool. Whilst Crouch (2010) and Haley (2021) use the body to map variances in different terrains, (Häggström (2019), Whitehead (2019) and Grasse (2016) experiment with sensorial witnessing through embodying or by aligning with the material composition of a landscape, and perceptively merging with their surroundings. Comparatively, artists Kupper (2021) and Frias (2022) emphasize how identity emerges from ecological formation in relation to socio-economic habitats, highlighting the toxicity imposed upon the materiality of the sensed-self. In their work the physical body manifests as a site of protest against global narratives, delineating damaged landscapes by their physical presence in contested industrialised zones.

Each facilitator here demonstrates how to intersect body-based pathways to experience alternative ways of engaging with the world. Tufnell & Crickmay (2004) and McHugh (2021)

[5] "Active Hope is waking up to the beauty of life on whose behalf we can act. We belong to this world" (Macy, 2021) https://www.joannamacy.net/main .

focus on the interchange of sensorial information, drawing knowledge from our entangled relationality with material and the materiality of the physical body. Comparatively, Bendell and Macy (2021) demonstrate how a synergy of creative and embodied thinking processes the welter of emotive feelings cultivated and contained by the corporeal self. Through the merging of practitioner perspectives, this chapter details common efforts to inspire hope, bridge psychosomatic divides of subjective experience and encourage participants to forge ahead, to *feel* their way towards a more empathetic and embodied future.

The next chapter contextualises the methodology within a multifaceted research domain. It explores the entwinement of art, art-making and somatics as reciprocal methodologies for cultivating environmental awareness. The intuitive role of the artist-researcher is also touched upon in relation to how the practice might be used to curate and harness my own creative skills as an illustrator. At the end of the chapter, an overview of the case study's context and design is lightly touched upon to illuminate why particular choices were made in response to the Covid-19 pandemic, which greatly impacted the course of this research.

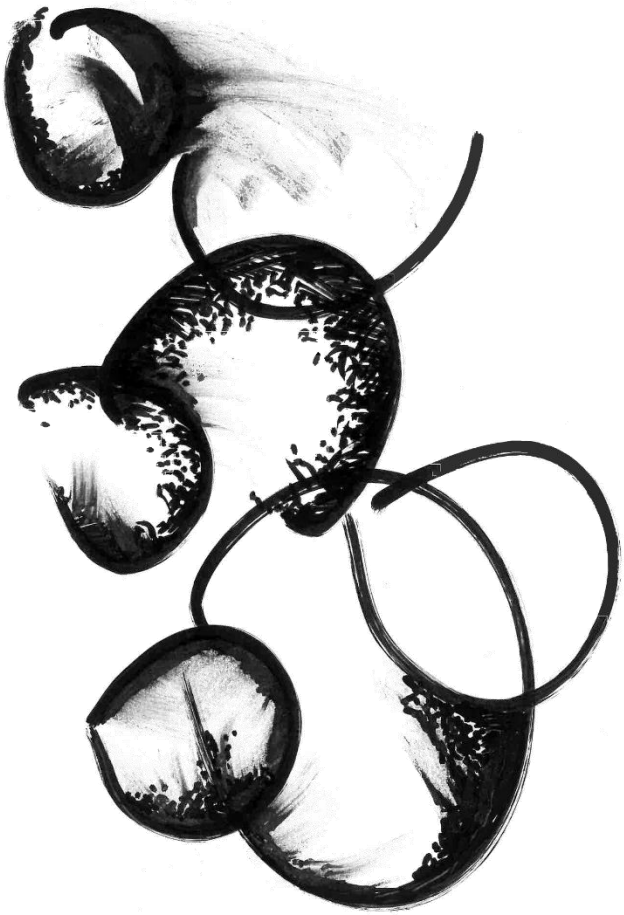


Illustration 3: *Perceptual worlds within worlds, 2023* © Skinner.

Chapter 4

Research methodology

This chapter explores how the research engages with arts-based learning processes within the frame of a hybridized creative methodology. Amidst a multifaceted provocation, my position as a researcher responds to a sense of artistic identity, and vice versa. Woven into the fabric of these overlapping lenses are values and beliefs that emerge from *felt* knowledge drawn from living in the midst of a planetary-wide ecological crisis. As an artist, I embarked upon this PhD with a deeply held belief that creative thinking can help challenge embedded environmental narratives; over five years of research, I have come to comprehend just how ingrained these ways of being in the world really are. Cole & Knowles (2010, p. 122) illustrate how enfolding the arts within research perspectives defines new understandings of where investigative practice needs to acknowledge the fluidity of identities:

> Rather than adhering to a set of rigid guidelines for gathering and working with research material, a researcher using art-informed methodology follows a more natural process of engagement relying on common sense decision making, intuition and a general responsiveness to the natural flow of events and experiences.

Chapter Two detailed the sensory channels that people rely upon to cultivate their individual perceptions of the world around them. Creative and somatic vocabularies discussed in chapter three demonstrate a spectrum of practices that nurture these perceptive sensibilities to foster embodied environmental thinking. The objective of identifying a multifaceted methodology is to welcome the divergent nature of subjective experience and to illuminate the porosity of learning experiences beyond qualitative and quantitative frames. The bedrock of this investigative research rests on an understanding that as a facilitator I must engage with participants where they are (perceptively), rather than where I want them to be. To support this ethos, each interdisciplinary method explored within the context of this methodology has sought to evoke curiosity in perception rather than foregrounding a sensorial destination for each participant. Environmental educator Jamie McHugh (2021) proposes that: “active, exploratory mindfulness with heightened sensory perception in spontaneous play is the foundation for the formalized play of art” (p.126). Within a sub-divided educational frame, the arts continue to jostle for

recognition as a way of cultivating environmental learning. Suzanne Thomas (2001) writes that crucially- “art as inquiry has the power to evoke, to inspire, to spark the emotions…to transport others to new worlds” (p. 274). Therefore, this methodology seeks to navigate beyond a propensity for empirical thought and further immersive environmental stories, nurturing learning possibilities found in those open to subjective sensorial experience.

This thesis has referenced an array of scientists and interdisciplinary practitioners who have sought to interrogate specific environmental systems to draw complex ideas encountered within the multiplicity of the natural world. In the 1980s, physicist Fritjof Capra proposed a unified ecological methodology that, instead of subdividing parts to interrogate the mechanisms of a whole, sought to analyse the dynamic qualities of the integrated unit. This involved shifting thinking from how individual elements are structured to how systems work universally. Capra understood that a complete knowledge of natural systems would never be possible, stating that: “scientific theories, then, are approximate descriptions of natural phenomena. They can never provide any complete and definitive understanding” (1985, p. 478). At its core, the interconnection of ideas and systems posits a mental shift from the world being composed of separated objects and identities to one of relational entities. Therefore, to understand the world, humans need to adopt an integrated approach to thinking. In *The Web of Life: A New Synthesis of Mind and Matter* (1997) Capra insists that cultivating a sense of consciousness can correlate directly with feedback patterns built into a living network, allowing self-regulation to emerge as a process of learning. This process of revisiting, responding and adapting to environmental information sustains a cycle of relational thinking in a myriad of ways. Arguably, the somatic learning practices detailed in chapter three demonstrate how embodied experience parallels and enhances these approaches to integrated thinking. This research positions the physical body as a nexus for these exploratory learning processes, drawing out Capra’s sense of cyclical relationality by experimenting with the porosity of embodiment in creative and artistic domains.

In *Methods Meets Arts: Arts-Based Research Practice* (2020) Patricia Leavy points out that arts-based methodologies do not need to be conceptualised as subdivisions of quantitative

or qualitative paradigms as they offer a holistic perspective on knowledge building, and "a broader palette of investigative and communicative tools" (2020, p. 19). Leavy goes on to point out: "The more we understand about human cognition, the clearer it becomes that narratives, stories, and the arts can play a major role in teaching diverse subjects and getting through to people on deep levels" (Leavy, 2020 p. 15). As Barry & Keane concur in their writing: "we [can] see creative measures as a function of the impulse to learn in situ by adapting, acquiring, and learning to affectively relate to the world-in-motion" (2019, p. 30). Here the uncertainty inherent in encountering any new learning process cultivates a fertile ground for cross-pollination, providing freedom to embrace a multifaceted approach to acquiring new knowledge.

Patricia Leavy also highlights that the terminology around this field of creative study continues to evolve as it finds its feet in a crowded theoretical world of thinking. Comparatively, the investigative field of research-creation is referred to in North America in alignment with arts-based research. In her book *How to Make Art at the End of the World: A Manifesto for Research-Creation,* Natalie Loveless contextualises different ways of advancing knowledge through creative practice, proposing that the analysis of "artistic production is no longer solely an object of scholarly inquiry but is itself a legitimate form of research and dissemination" (Loveless, 2019, p. 13). Loveless points out that engaging with art-*making* in different guises can cultivate participant-specific stories within multiple fields of research. Thus, the *in-practice* nature of a creatively integrated methodology welcomes all ways of *knowing*, whilst enfolding the physical body "in an active process of meaning making that is likely to have transformative potential […] presented with sufficient *ambiguity* and *humility* to allow for multiple interpretations" (Cole & Knowles, 2010 p. 124). This research methodology intends to cultivate these *felt* zones, allowing education to coalesce through opportunities for process-based learning that draw from cyclical encounters and bestow each physical body with a unique form of knowledge.

Identifying with a creative research methodology contextualises the somatic body as a territory to curate dormant capabilities and transcend the specificities of divisive thinking

between experience, learning and imagination. Loveless points out that the goal of creative research is to diversify and synergize the enrichment of learning possibilities: “What we have is our […] capacity to nurture critical and creative, passionate, and complex *theorypractice*. And in these pedagogical spaces […] the nurturing of *affective resilience”* (Loveless, 2019 p.106). Ultimately, this research methodology seeks to invigorate and diversify these learning spaces by drawing awareness out into the experience of the everyday, tapping into an archive of perceptive information that exists just below the surface of individual consciousness.

In discussing the positioning of these creative modalities, Australian academics Kaya Barry and Jondi Keane recognise how practice research enriches opportunities for self and societal reflection without prescribing where moments of enlightenment might take place. This research intends to build upon these “alternative modes of measure” that acknowledge the sensorial complexity of day-to-day experiences (Barry & Keane, 2019, p.20). My ambition as an artist and researcher is to re-orientate fields of scale, sensation, and materiality within the topography of this sensory context. Identified as interwoven learning channels for nurturing experience in the work of environmental artists discussed in chapter three, this research intends to investigate how to cross-pollinate these effective qualities to draw attention to the sensory parameters of the individual.

As Bill Gilbert and Anicca Cox document in their 2019 anthology *Arts Programming for the Anthropocene Art in Community and Environment,* it is the recognition of change and experimentation as a constant component of moment-to-moment experience in this anthropogenic age that makes art-based learning so distinctive. By expanding beyond the parameter of any one particular site of learning or artistic tool, arts research manifests “field programming [that] intersects and engages a broader array of options for art making”, imagining every material and perceptual sphere of sentience to be explorable within artistic frames of research (Gilbert & Cox, 2019, p.152).

In situating this enquiry amidst creative and experimental spaces, the research bridges an array of artists, environmental thinkers and somatic practitioners that investigate how to merge these branching exploratory methods. Bochner and Ellis (2003) suggest that the arts primary objective is to incite conversation and disrupt conventional thinking, citing how creative practice research directly combats "traditional standards of inquiry that emphasized facts, control, distance, and neutrality", they reiterate that arts-research is always "an embodied inquiry- sensuous, emotional, intimate" (2003 p. 506). In recognizing these provocations, the intention of this research is to reflect upon dialogues that occur beyond what is communicated verbally. This is where the allowance of time to experiment with each exercise reflects the ethos of interdisciplinary practitioners such as Tufnell & Crickmay (2004), Vanessa Grasse (2021) and Simon Whitehead (2021). Concurring with this ethos, Natalie Loveless reflects upon how to encourage slowness as a central research premise and considers it as a way of broadening the scope of artistic enquiry: "I turn to research-creation to encourage modes of temporal and material attunement […] that require slowing down in a way that does not fetishize the slow but in which slowness comes from the work of defamiliarization and the time it takes to ask questions differently" (Loveless, 2019 p. 107). Therefore, my methodological approach resonates with this broad sense of affect, acknowledging that it takes time for self-awareness to percolate down beneath the surface layer of daily sensory experience to embed itself in an ingrained sense of being.

Research design

The originality of this research lies in the intended flexibility of each interactive activity and its ability for it to be scalable to the participants. Each facet of participatory engagement is designed to weave together themes of artistic expression, embodied experience, and environmental thinking. The practical aspect of the research consists of four case studies and a self-directed guidebook. Key case study attributes, according to sociologist Arya Priya (2020), include the division of multiple methods or strategies for collecting information within complex fields of inquiry. Professor of Education Helen Simons (2020) acknowledges the pertinence of mixing creative methods to highlight the variability of these approaches to subjective knowledge that facilitates a shifting context for experiential understanding.

Comparably, social scientist Robert Yin summarises that the formation of a case study emerges primarily from a “desire to understand complex social phenomena” which does not negate the immersive nature of the lived-experience (2018, p. 4). Within the design of this research, each case study evidences its own evolving methodology that supports multifaceted perspectives on adaptive thinking. Rather than implementing a rigid criterion of exercises, the research adheres to a holistic perspective that recognises the embedded nature of existence and the divergent nature of evoking research data from people’s psychosomatic response to environmental engagement. The intention of each case study was to test a range of activities within different modalities for social interaction, relevant to the context of the participants and the physical setting of the encounter.

The methodology cultivated a multitiered artistic dialogue within which participants identify what fits best for the parameters of their own sensory experience. The pre-circulation of the guidebook and accompanying art materials gave people the opportunity to experience the type of tasks and exercises they would be asked to engage in prior to attending the workshop. The guidebook was designed to be informative, but it also sought to evoke playful provocations for the reader, encouraging them to explore habitual ways of noticing the environment of the everyday. The intention was for each participant to come to the workshop with a sensory archive of their own experiential learning. These refreshed perceptive relationships provided the foundation to engage with a range of artistic materials, including clay and charcoal, as well as found objects and litter. These material interactions could be curated within a myriad of different locations depending on the participant and their willingness to cultivate their curiosity in different sites. The variability of these spaces depended on the geographical locality of each case study, their imagination and the physical access requirements of each participant.

The research data drawn from each participatory framework comprises insights drawn from the following places: one-to-one conversation and group dialogues; email correspondence; my own autoethnographic writing and drawing; and physical artefacts created within the context of each artistic enquiry. By evaluating how participants respond to sensory, spatial

and somatic provocations, each experience of delivering teaching material informs the subsequent cycle of practice, guiding further analytical thinking and critiquing multiple branches relating to how the practice is shared with its participants. Delivering creative exercises and somatic material online affords a very different experience from that of in-person practice. The design process has sought to mitigate a felt sense of physical absence by providing alternative avenues of self-directed practice. Although extremely regrettable, the incapacity to share physical space during Covid-19 inspired some previously unforeseen avenues of research which empowered participants to investigate aspects of this inquiry in their own time. In the first case study (2019), audio recordings of one-to-one conversations formed the primary medium for participants to explicitly reflect upon their experiences. Discussions took place inside the studio and on the move, as participants walked to different sites of practice in the vicinity. Audio files of these informally structured conversations were transcribed and provided a rich resource of material to analyse and evaluate in preparation for the next iteration of the practice.

The second case study (2020) coincided with the second national lockdown and had to adapt its methodological objectives to mitigate in-person engagements. Using the online meeting platform Zoom enabled an alternative methodology to manifest within the frame of the research and subsequently welcomed participants from other countries who were able to join the investigation online. The digital event was affiliated with an online workshop series run by a private organisation and therefore administration responsibilities and technical setup were managed by a third party. Participants were made aware that the session was being recorded and that photographic screenshots would be used to depict the different facets of the practice participants were exploring. My evaluation process collated feedback from responses to follow-up emails in which people were invited to get in touch in the following weeks if they wanted to share further reflections pertinent to the practice. With the return to face-to-face gatherings, the third workshop encountered logistical challenges due to the continuation of restrictions regarding gatherings of groups, the requirement to use a facemask in some scenarios, and the necessity to adhere to social distancing. A high infection rate meant that participants (particularly families) cancelled at

the last moment and therefore those who could still attend were amalgamated into one group.

Conversations in this context were digitally recorded and transcribed to further the analysis and evaluation of the workshop's narrative. Each participant indicated that they were happy for their thoughts and opinions to be included by signing a workshop information sheet [a copy of which can be found in appendix A]. In the last iteration of the creative pedagogical practice, my own autoethnographic notation forms the primary body of reflective analysis. The fourth case study consisted of a supplementary workshop that reconnected with provocations for interpersonal contact, communicating embodied methodologies for physical touch in a post-pandemic environment. Consent to photograph or record the proceedings was not provided by the host organisation, therefore illustrations and field notes relating to somatic exercises formed an archive of material that was critically examined during the evaluation process.

Within each case study, participants were provided with verbal and text-based itineraries that detailed the trajectory of the workshop and specified the types of materials used in each exercise. As the facilitator, I responded directly to queries and requests for clarification prior to embarking on each exercise. In the rare occurrence when participants refused to take part in a particular activity, an alternative mode of engagement was made available to them if they wished to continue to take part in the investigative practice.

Research ethics

I sought ethical approval from the University of Leeds prior to meeting participants and engaging them in creative and somatic practices. Within the context of each case study, participants were informed about the interactive nature of the research and how their responses to each creative exercise would be examined within the analysis of each iteration of the practice. Accordingly, those taking part in each workshop were assigned a letter to anonymise their reflections and experiential feedback. Whilst the information I collated was not intended to be sensitive in nature, conversations required participants to consider their

physical and metaphysical place in the world which invariably involved emotive and evocative language. As facilitator and researcher, I was aware of people's psychosomatic signals and endeavoured to respond appropriately to how they projected their thoughts and feelings beyond what was verbally communicated.

This chapter discusses how the methodological domain of investigative practice connects to and draws from, the creative intuition of the artist-researcher, enhanced by a complex field of experience that nurtures each individual's evolving perspective. Patricia Leavy's contextualisation of arts-based research and Natalie Loveless' discourse on research creation both welcome the intertwining of different identities and the potential enrichment of learning possibilities. The methodology takes inspiration from Fritjof Capra's Systems Thinking as a comparative perspective that acknowledges the holistic nature of environmental thinking. As a process of learning the research combines somatic and creative domains of knowledge to reorientate self-awareness through scale, sensation, and materiality.

The knowledge gained by combining arts-based practices and somatic enquiry within a multifaceted methodology is reflected upon. By facilitating a combination of immersive creative experiences for participants, the research foregrounds the potency of the felt experience of the physical body and accepts the variability of subjective experience within each domain of practice. The methodology also recognises art-making practices as catalysts for aligning alternative modes of sensory knowledge cultivated in the everyday. Within a methodological frame that adapts to a range of parameters, each multisensory engagement also illuminates the integrated nature of the facilitator's psychosomatic experience whilst ensuring that the participant(s) remain central to the investigative practice. This hybridised methodology demonstrates how it welcomes the insights of each participant's dialogue or group conversation as reflections of a particular temporal social dynamic. Through its integrated composition, it also seeks to identify techniques of practice that illuminate the porous perceptual boundaries between the participant, the material, and myself as an artist-researcher.

The following chapter explores these methodological possibilities within the frame of four workshop case studies that support participants in somatic and artistic ways of cultivating environmental thinking. Each methodology is contextualised and evaluated prior to comparisons being drawn between subsequent iterations of practice.

Illustration 4: *Sensory spirals- weaving experiences, 2022* © Skinner.

Chapter 5

Exploring pedagogical practice

Introduction

In this chapter, I present how the research was investigated through a series of teaching engagements. My aim is to demonstrate how creative practice tools and sensory exercises evolved over a five-year cycle of inquiry. I begin by sketching out each territory these case studies were taught within, before examining how particular tasks advanced from one iteration to the next. Each case study engaged a group of participants and took place in very different contexts, therefore identifying methodological markers has helped to map out the narrative of the practice research. A cross-disciplinary analysis captures particularly pertinent insights and reflects upon how they emerged from a nexus of site-specific creative engagements. In the concluding section, reoccurring themes that interconnect participants' reflections illuminate the applicability of each specific exercise. In the evaluation process, a critique of my own experience delivering specific teaching material intersects with observations collated from participants' feedback regarding each method and how these intertwined dialogues impacted the research trajectory.

Case studies overview

My first case study took place within Union 105, a project space belonging to East Street Arts (a large interdisciplinary arts organisation based in Leeds). The location afforded access to a range of outdoor sites that were to be explored as part of seven one-to-one creative practice workshops with local artists interested in the environmental themes of my research. Between the 1st and the 5th of April 2019, I invited each artist to join me in a two-and-a-half-hour workshop that explored the intersection of sensory perception and environmental awareness. This was investigated in a number of ways including elements of interpersonal touch; creative exercises with clay and charcoal; the exploration of physical space (both inside and outside the project space); and reflective dialogue regarding what environmental perception meant to them as a concept. Recording audio and video footage allowed for reflections underpinning subsequent analysis and evaluation to surface after the workshop had been concluded. Informal interviews were arranged for the following week to gather further insights and reflect upon each participant's experience of the research.

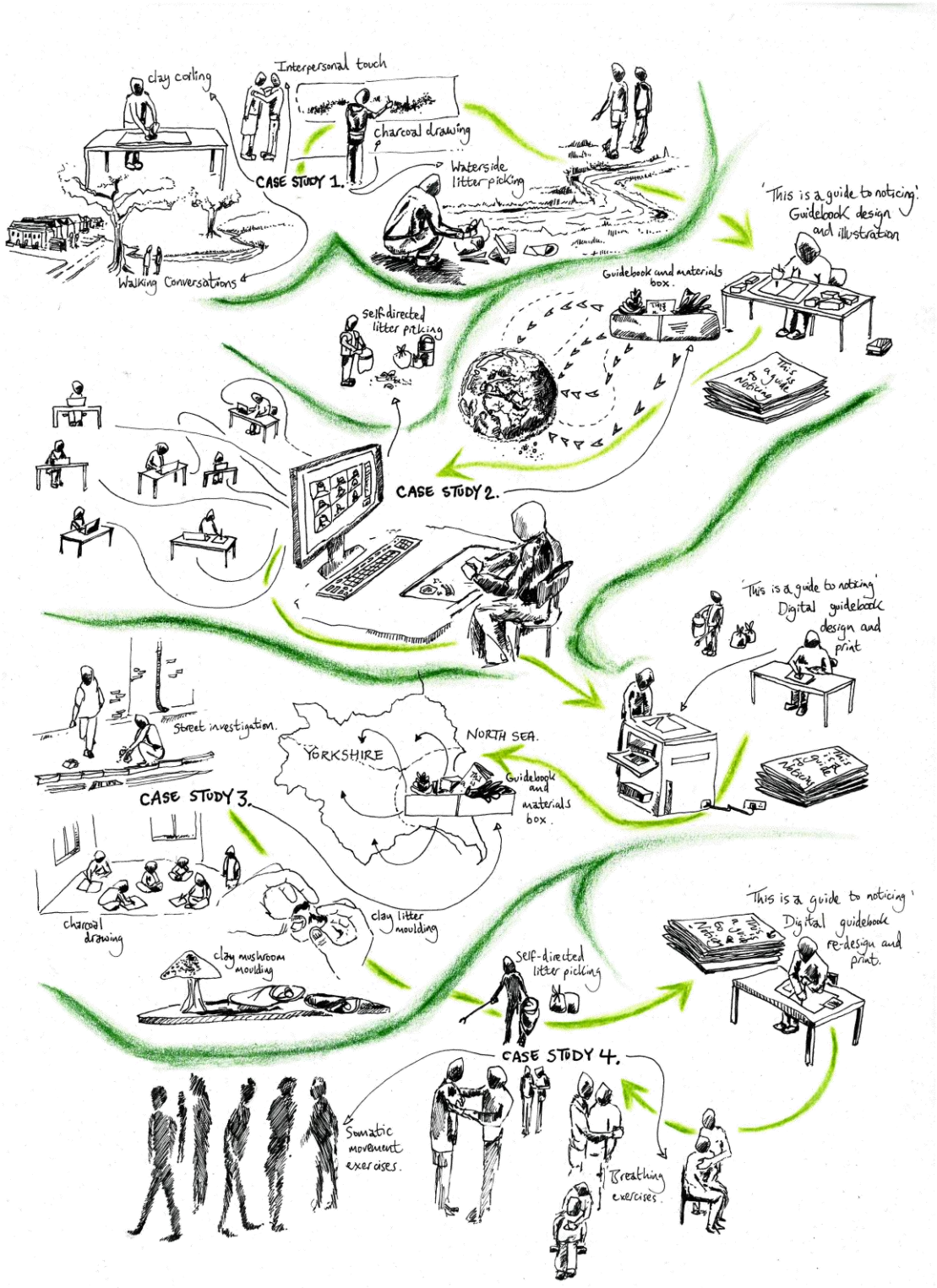
The second case study took place online on the 27th of November 2020. Nine academics drawn from the Northern Network of Medical Humanities, and participating in the *Thinking Through Things* seminar series, joined me online. The objective of the virtual two-hour programme was to explore sensory learning. It drew from experiences of self-directed practice and the division of tasks that utilised a range of materials that were posted to each participant. These materials, including clay and charcoal, afforded participants an opportunity to interact with the investigative practice prior to our online engagement. Consent was sought for the workshop to be recorded and a follow-up email gave participants the opportunity to send in pictures of their creative practice relating to the materials-based provocations detailed in the guidebook. The third case study was facilitated by Yorkshire Dance's *Climate Encounters Festival* on the 3rd of July 2021. Similar to the second case study, materials were posted out prior to the workshop, however, this iteration of the practice was eventually programmed to take place 'live' within the Yorkshire Dance building. Here, participants were able to experiment with elements of self-directed practice prior to attending the event as well as draw from their experience of the 'live' workshop. Participants who could not attend due to Covid-19 were invited to write about their experiences creating maps and exploring the revised, second iteration of the guidebook.

Throughout this five-year period of research, I have sought out opportunities to craft my teaching practice by responding to callouts from external organisations outside the University of Leeds that spoke to the intersection of my field of research. Teaching experience delivering a workshop for *The Quadrangle* in Kent as part of a residency investigating how humans relate to nature has been included in this chapter. Its analysis examines a supplementary narrative that enabled me to practice delivering in-person somatic teaching material to a group of participants drawn from organisations and businesses pursuing sustainability practices in different sectors. This was an important opportunity for the research because the impact of the pandemic's social isolation had changed people's capacity to engage in group experiences.

Each workshop and supplementary teaching opportunity has provided a rich tapestry of learning from which I have explored a sequence of creative activities that evidence why engaging the body provides such a vital conduit for environmental thinking.

In this chapter, I focus on how the use of clay has altered from one workshop to the next, exploring its multifaceted properties and participants' responses to its use as a tool for learning. This chapter also seeks to demonstrate how kinetic and sensorial information (particularly the haptic sense) highlights the possibilities inherent in enriching the boundaries of the physical self whilst simultaneously opening directives of environmental education. Insights emerged through analysis of the recorded footage drawn from the three case studies of specific creative interactions and dialogues that manifested within the frame of each physical activity participants embarked upon. My own experience as the facilitator for each iteration of practice set an experiential foundation from which to weave together the collective experience of those who attended. Satellites of practice orbited each workshop as those unable to attend in person were given the opportunity to contribute their thoughts and observations in response to the guidebook via email. Follow-up communication provoked a number of digital responses. However, in-person meetings, aiming to find out how people felt environmental thinking might have been impacted by their engagement, were hampered by Covid-19 restrictions and people's busy schedules.

Figure 1: *Practice research: An illustrated map of case study workshops, guidebook developments and self-directed practice,* 2018-2022. Illustration © Skinner.



The photographic collage on the next page depicts the range of methods that have been explored as part of this creative investigation. Combinations of paper, clay, charcoal, recycled litter, wood and the materiality of the physical body have offered creative encounters through which participants have explored their relationship to their environment. I draw particular attention to the photos in which the participant is being used as an investigative tool in directly shaping or touching materials near the body. The aim of this initial photographic collage is to conceptualise the immersive possibilities inherent in the practice, highlighting the experimental and multifaceted nature of each investigative inquiry.

Figure 2: *Practice research collage: Photographs from the research process, 2018-2022*. Photos © Skinner.

Clay sculptures shaded in response to the aspects of nature visit in the composition of a hedgerow.

Here, a participant is encouraged to explore the textures afforded by the different flora in the vicinity during the first case study.

Collections of clay sculptures accumulate around a prominent ash tree within the context of a supplementary teaching exercise.

This exercise invited participants to consider the sensitivity of their skin across their entire body, emphasising particular points of reference through skin-to-skin contact. Participants were invited to transfer the feeling of these brief moments of physical contact into a charcoal drawing.

Case Study 1: Environmental Perception.

Location: Union 105 East Street Arts, 105 Chapeltown Road, Leeds, LS7 3HY

Meanwood Valley Urban Farm, Sugar Well Rd, Meanwood, Leeds, LS7 2QG

Date: 1st-5th April 2019

Duration: 2 hours 30 minutes

Number of participants: 7

Figure 3: *Case Study 1: Research site. Union 105, East Street Arts, 2019.* Illustration © Skinner.

This case study was an opportunity to test out a series of creative practices with artists drawn from the local community. Each of the participants were selected for their interdisciplinary approach to arts practice and for their interest in investigating environmental awareness. The multifaceted methodology centred on investigating how the sensory system of the body responded to creative and environmentally focused provocations. As an artist researcher, I was curious to firstly engage with creative practitioners from different backgrounds. I had reasoned that by initially working with other artists, I might gain feedback relating to the suitability of each task, as well as how to communicate imaginative thinking, for those unfamiliar with creative practice.

This first workshop was highly experimental in nature, my objective was to offer a flexible frame within each one-to-one workshop that encouraged participants to follow their curiosity within each task. By interspersing periods of creative exploration with reflective dialogue, participants were afforded the opportunity to discuss the relationship between sensation and perception within the context of each exercise. During this preliminary stage of the research, it seemed important to provide as many experimental avenues as possible for practitioners to investigate.

Participants were asked to engage with a series of test sites within the studio space that sought to draw attention to the sensitivity of the physical form and the layering of sensory apparatus. Participants experimented with different ways of tracking sensory awareness using clay, charcoal, physical interpersonal touch and movement.

Each creative encounter sought to forge a link between the physical body and material, to reveal patterns and cultivate curiosity in the surroundings. Clay provided participants with a malleable material that responded to physical touch, becoming increasingly pliable and noticeably warmer when manipulated. The decision to use clay was motivated by the interdisciplinary practice of Miranda Tufnell and Chris Crickmay and their book *A Widening Field Journeys in Body and Imagination* (2004). Their experimental methodology makes use of a variety of materials, calling upon "innate skills and abilities rather than specialised training and experience" (Tufnell and Crickmay, 2004 p. x). The decision to shape a clay vessel that could feasibly be made use of once it had been fired was linked to Robin Wall Kimmerer's (2013) pedagogical provocations of crafting day-to-day implements and tools with students that could be used within the process of site-specific teaching engagements.

Each participant was taught how to coil a clay pot. The process consisted of winding clay in concentric circles, merging each layer with the one beneath it to create, traditionally, a spherical bowl. The process involved in rolling, pinching, scoring, and smoothing clay draws attention to the different surfaces of the hands and their dexterity. Once the basic coiling technique had been demonstrated, each participant was then allocated ten minutes to contribute to the building of a communal bowl. The technique is one of constant adjustments and alterations, as the clay vessel gains in height. Participants were left with the clay residue on their hands as they entered the next phase of the practice, which explored the skin as a boundary between a sensed self and an exterior environment.

Figure 4: *Case Study 1: Collaborative clay-coiling. Union 105, East Street Arts, 2019*. Photo © Skinner.

Each participant started coiling where the last had finished. This resulted in a communal bowl constructed by all the artists involved in the case study. The motion of the hands in this practice aligns with Tim Ingold's (2000) assertion that within a making process, the artist must cultivate a continuous sense of *doing* rather than consider what actions to *do*. Coiling the clay promoted an incremental exploration of its tangible properties. It encouraged a feedback loop between the material and the participant's fingertips. Participants appeared initially keen to focus solely on the physical haptic sensation of rolling and smoothing the clay, rather than transitioning into a movement based investigatory exercise. Yet, I witnessed instances, where touch became a primary mode of exploration once they were shepherded towards engaging with other sensory apparatus around the studio. It would seem that physical engagement transcended instances where one may have otherwise visually assessed the complexities of surfaces. The clay provided an investigative channel to engage the body in a physical activity, familiarising participants with tactile sensitivity and opening up a sense of contact to other possibilities.

The array of textures, imprints and shapes visible in the moulded clay, provided a way of archiving (and evidencing) the felt experience of each artist. These three-dimensional artefacts could then be returned to and reflected upon. In response to a question regarding what they noticed about the material, participant F stated: "As a material clay holds its form, a mouldable consistency means that it can be combined with other materials and holds the imprint of whatever is pressed into it" (Participant F, 2/4/2019). Participant feedback suggests that its adaptability and versatility made it a popular material to include as it could be recycled and reused for other purposes once the coiling process had been documented. The material's repeated use aligns with the research's ethos to foster sustainability within each iteration of the practice.

Clay afforded participants a specific material to focus their attention on within the experimental methodology that enriched sensory avenues for further exploration. Attention to its material properties required the participant to consider the relationship between the material and physical articulation of how they engaged with it. The process required finesse

and haptic dexterity, but it also evoked a playful sense of creative possibility as each participant had to respond imaginatively to the efforts of those that had already engaged with the clay-coiling process.

The intersection of body and clay

The clay-coiling participants were later invited to stand back-to-back with me in the middle of the studio. This transition was intended to cultivate awareness of both the physical contact of another body and the residue of the clay on their hands. We discussed how each sensation felt in comparison to that of clothing or jewellery in contact with the skin. The methodology here used the presence of the clay residue to anchor those less familiar with tuning into the specificities of languaging sensation felt through the body. The grainy texture of the clay provided a visual and haptic sensory stimulation to focus attention and return to when participants felt disengaged from the practice. During this period of back-to-back contact, participants shared thoughts and feelings regarding skin contact. Conversation orientated around the day-to-day experience of touch, its (un)familiarity and the degree to which the surface of the skin feels different across the body.

Moving away from this position, I used my hands to trace the circumference of each participant's feet. Next, I moved up to their skull, outlining the shape of the cranium, verbally referencing this as the furthest point away from the feet to give each individual an idea of the length of their physical body. From these two reference points, my touch became something of a point of focus for a shared sense of skin contact. I alternated the use of my hands with the weight of my skull, the curve of my spine, and the full length of my arms, offering my musculoskeletal system as a means of informing their sensory system. As the exercise progressed, I changed the regularity with which we established new points of contact, varying the degree of pressure applied through touch and allowing participants the time to move towards (or away) from a point of contact. The methodology sought to communicate the lightest of touches that informed the participant about their spatial surroundings. In doing so, the research investigated Ashley Montagu's (1978) assertion that

sensory knowledge can help bind together spatial awareness when it is explored within complex physical coordination.

For some participants, this degree of physical contact proved too much of an unusual sensory experience. Touch across the surface of the skin could feel overwhelming, even if points of contact are intended to solely orientate the receiver to other surfaces. When this occurred within the context of the exercise, we talked about the degree of touch they were happy to engage with, enabling them to work at their own pace within the parameters of the task. Participant B, for example, was very comfortable being touched within the first half of the exercise but then felt that the increase and variation of touch made them feel disorientated (Participant B, 4/4/2019). In this instance, we negotiated a mode of practice that led to us simplifying the task, drawing on a more familiar language of hand-holding (this was still a powerful and meaningful experience for the individual).

Comparatively, some participants felt eager to be tested in their response to my touch; points of contact became dynamic places of interaction between surfaces. This assertion was articulated by participant C, commenting that my touch was "stimulating awareness through its very specific presence and concentration through the body" (Participant C, 3/4/2019). At the culmination of the exercise, I asked each participant to spend a period of time alone in order to reflect upon the differences and similarities of touch within the exercise. My objective here was to open a space for ideas to emerge regarding all they had experienced of the investigative practice thus far. The reflective process was deemed as a mindful way of transitioning out of the "deep stillness of touch by gently retracing the steps of the exercise" by participant C (Participant C, 3/4/2019). The transition between clay-coiling and interpersonal touch demonstrates how an interconnected narrative within the methodology affords a window of opportunity to encounter a less familiar sensory register. The intersection of methods also blurred perceptual boundaries for participants and in doing so highlighted the way touch and the visual field are embedded within one another. The creative exercises sought to foster an alternative approach to cultivating sensed knowledge by playfully attending to each sensory register and interchanging one for the

other. If, as the facilitator, I had attempted to make physical contact with the participant before laying a sensory foundation in the form of the clay-coiling exercise, the response would have been very different for those less familiar with physical contact being used in this context.

Figure 5: *Case Study 1: Contemplating the Meanwood Beck, Meanwood Valley Trail, 2019.* Photo © Skinner.

The intersection of body and outdoor space

During this preliminary case study, I was intent on engaging the participants outdoors to ascertain whether shifting between physical spaces impacted what they became aware of. To explore this objective, we walked together for approximately fifteen minutes to reach the Meanwood Valley Urban Farm Conservation Site. I recorded our conversation as we walked along a route that passed through the narrow streets of Chapeltown, crossing the A61 motorway, before descending into the woodland adjacent to Sugarwell Hill Park. Each dialogue began by asking participants what came to mind when I said the word *environment*. Similar reflective markers emerged in conversation, linking ideas of habitat

and safety, ecology and green spaces. These conversational themes invariably drew from the landscape we were travelling through with a particular emphasis on the density of the housing and how the rumble of the motorway impacted our discussion. On reaching the conservation site, we traversed its periphery, pausing by the Meanwood Beck to take in the amount of rubbish embedded in the banks of the stream. In the final waterside location, squeezed between a recycling centre and an urban farm, the landscape held evidence of harbouring pockets of biodiversity amidst the detritus of synthetic packaging and other waste material.

The walking route was designed to facilitate the possibility for participants to experience a sense of how their environment could shift very quickly within a relatively short geographical distance. The disparity between urban housing and an expanse of green foliage foregrounded Val Plumwood's (2002) provocation to reflect upon what constitutes everyday life and what we habitually encounter on a daily basis. The physical resonance of what we witnessed together impacted our conversation over the course of the journey, aligning with the methodology of creative facilitators (Crouch, 2010, Haley, 2021, Linta, 2021) that seek to cultivate talking points by exploring the intersection of environments and the composition of different urban terrains.

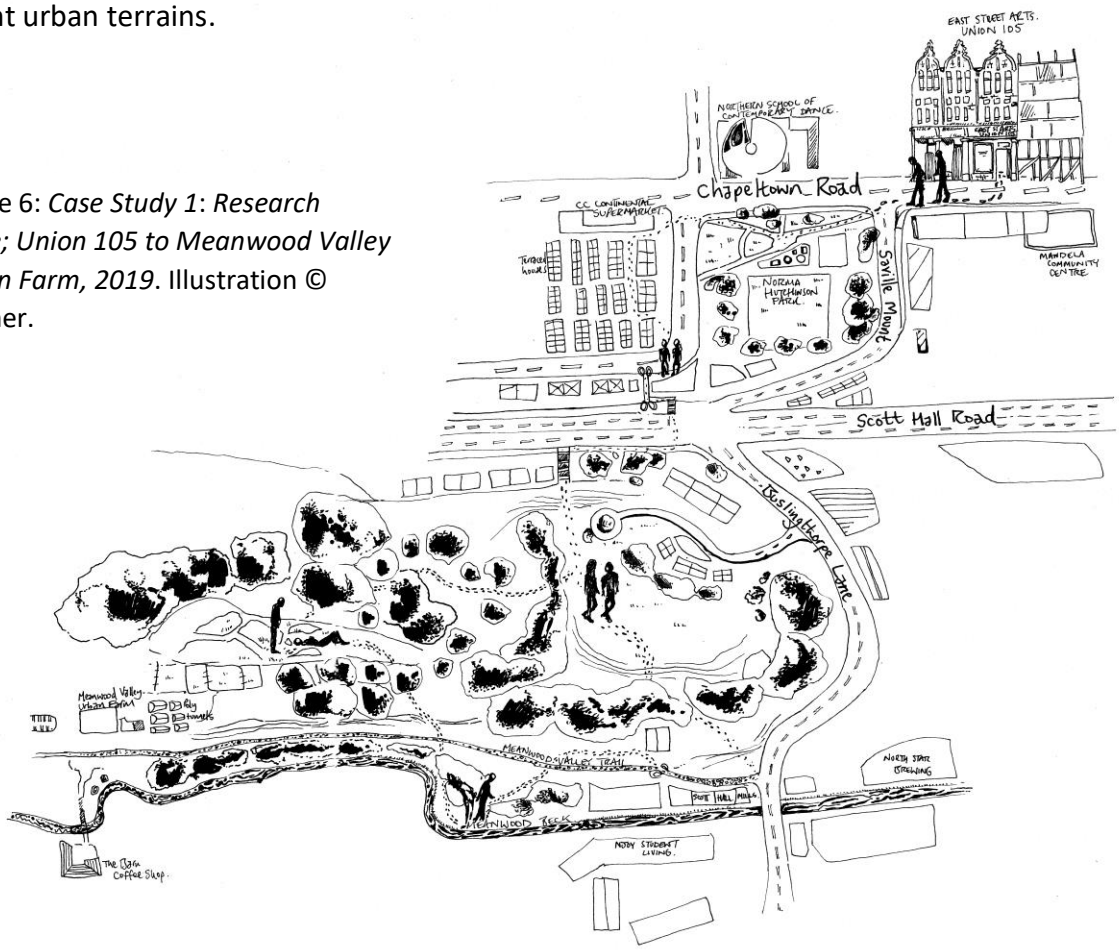


Figure 6: *Case Study 1*: *Research route; Union 105 to Meanwood Valley Urban Farm, 2019*. Illustration © Skinner.

Memories of experiencing Miranda Tufnell's workshop teaching practice in 2016 surfaced for me during this period outdoors. Within the frame of a group somatic inquiry, Tufnell encouraged participants to find a particular reference point within the room and compose an imagined narrative based on its material qualities. In a 2020 interview, I asked Miranda to reflect upon how she sought to provoke participants in their exploration of creative practice: She proposed that: "…in our heart, we are all human and that has to be the underlying principle I am working with […] our curiosity is something that we had as children, we are in direct response to what is around us, this is not a practice of being childish, it is a practice of being enabled" (Interview with Tufnell, 2020). My aim was to find a balance between an awareness of the material realism of the litter in the waterway and the possibility of drawing attention to how these meet and mingle playfully with the ecology they are embedded within. The visibility of the rubbish in varying degrees of decomposition evidenced the capacity of matter to be conceived as a state of *transcorporeality* (Alaimo, 2010). Conceiving materials as transformable and intermeshed with one another, *transcorporeality* subjectively blurs the boundaries between them, positioning the sensory human in the midst of the material world. Here, the research recognised the creative possibilities of actively engaging with this material porosity as we encountered them through the substantive motion of the physical body.

Standing on the bank of the waterway, conversation with the majority of participants touched upon a sense of personal responsibility when faced with such visible evidence of rubbish: "What stops us from just picking the rubbish up?", reflected participant B (4/4/2019). Time spent contemplating the litter caused a degree of discomfort and participants were keen to move on from the location. However, there was also an acknowledgement of personal lethargy, recognising that a lack of *felt* responsibility ultimately always outweighed any need to act immediately by reaching out and picking up the displaced materials. A pragmatic (if arguably short-sighted) response was put forward by participant F, who pointed out that- "I have access to food, I have a bed, I have a roof over my head- what need is there to fret. Therefore, why pick up the rubbish if it's not affecting me personally?" (Participant F, 2//4/2019). Such insular perspectives have emerged throughout the narrative of this research and their articulation has encouraged the research to consider how to go about contesting this point of view within my role as

facilitator. Whilst I did not agree with participant F, I felt reticent to contradict their perceived short-sightedness within the frame of the relationship we had established together, but also a reluctance to let it go. The objective of the research is to help people feel differently about their surroundings by drawing attention to their sensory borders. It is not perfunctory to chastise them for not immediately feeling the same degree of empathy towards the environment we encountered together. Therefore, as a facilitator, I continue to grapple with what to do when a participant misses the point of the exercise.

It was heartening to interview Miranda Tufnell about her perspective on proposing a multifaceted creative practice that challenges participants to reflect upon their own behaviour. Tufnell is an advocate for taking a "good old stomping walk in the wind and rain" (Tufnell, 2020) as a way of clearing mental pathways and letting go of unreceptive psychosomatic responses to the practice. Ultimately, it would be foolhardy to presume that I could alter participants' worldviews within a two-hour and thirty-minute window of creative practice. However, it was not until I acknowledged the resonance of these conflicts within my own mindset that I realised how frequently they would bubble up in pursuit of this form of subjective enquiry.

By venturing into these intermeshed localities, there were instances that incited complex psychosomatic responses from participants as they grappled with the immediacy of what they were being asked to reflect upon. Participant T was visibly restless at the bankside, they later commented: "There is something vitally important about waking up to a reality that is close to home- that is already here, happening. I mean, just looking at all the waste in the stream today was a really big impact, I had a moment with that when I was like fuck, fuck, fuck" (Participant T, 5/4/2019). This state of anxiety and the perceived helplessness in becoming increasingly aware of how much of our everyday complacent relationality to the environment is incredibly problematic provoked the participant to a state of physical agitation. These reflections demonstrate that some people care a great deal about humanity's detrimental impact whilst others acknowledge it as an unfortunate occurrence that has very little to do with a felt sense of responsibility. Arguably, the overwhelming immensity of environmental issues could feasibly manifest in the form of sensory paralysis and an insistence that there is nothing one individual can achieve. Yet, there is a balance to

be found between cultivating empathy through sensory awareness and provoking a debilitating visceral reaction from participants. The sensory exercises participants explored in the studio prior to venturing outside encouraged them to absorb their surroundings with sensory faculty other than the visual field. Invigorating the sensory borders of the participant's skin draws attention to the interchange of information and the sensorial potency of matter in contact (and embedded) with our own. The experimental nature of this case study fostered opportunities for participants to explore how the faculty of the senses can shift between an understanding of interior and exterior worlds. The activities built upon Dan Siegel's (2010) integration of embodied knowledge into psychiatric practice, encouraging participants to test the boundaries of interior/ exterior territories by gathering insights of the environment the physical body moves through from moment-to-moment. This was achieved through provocations to pay attention to the inhalation and exhalation of the breath and the shifting sense of clothing in contact with the surface of the skin.

This preliminary case study brought together verbal, creative and embodied reflections from participants to work towards an understanding of how trans-sensorial knowledge manifested within the context of each pedagogical exercise. In the process of threading together a wide range of insights, it has been useful to reorientate the practice to an objective that welcomes the diversity of perceptive responses, rather than designing a sensorial methodology that guides participants' thought processes in a particular direction. To achieve this directive, a range of material-based tasks were presented as equally viable options for the participants to follow their sense of curiosity. In doing this, the participant is afforded the opportunity to encounter self-determined ways of noticing sensory information, that might, over time, afford a sense of porosity to the materiality of the anthropogenic habitat each plays their part in creating.

Case Study 2: Material Encounters

Location: Online via Zoom

Date: 27th November 2020, 2 hours 15 minutes

Number of participants: 9

Figure 7: *Case Study 2*: *Online research. Working from home- 32 Miles Hill Crescent, Leeds. 2020*. Illustration © Skinner.

The research, up until March 2020, had been solely focused on programming face-to-face engagements with participants, however, the spread of Covid-19 and the subsequent national and international lockdown meant that the second case study had to take an alternative route of engagement. The research responded by investigating the possibility of transferring a 'live' creative practice methodology into a virtual teaching space. On the 12th of February 2020 (prior to the first Covid-19 induced lockdown) I attended the *Thinking Through Things with Wellcome* ECR training day, facilitated by the Wellcome Collection, London. My enthusiastic contribution to conversation and perspective as a practice researcher in the arts, led to an invitation to lead a workshop at a future date into sensory awareness and how to cultivate knowledge based on physical contact. In the context of the training day, it was unfamiliar for researchers based in the medical humanities to explore aspects of sensory awareness beyond the visual field.

Although greatly impacted by Covid-19, the workshop I was programmed to facilitate, manifested as an opportunity to engage online with invited academics drawn from the Northern Network of Medical Humanities. Therefore, on the 27th of November 2020, nine academics joined me to investigate different aspects of sensation in a shared virtual space.

In preparation for this workshop, I decided that a purely text-based communication contextualising the ethos of the practice research and its different components would be too much information to send via email. To navigate this predicament, I started to illustrate and annotate some of the concepts I had in mind to aid participants' comprehension of each creative and sensory narrative. These sketches, combined with autoethnographic illustrations, developed into a self-directed guidebook. I sent this out as a learning aid to the participants of the online workshop prior to their participation. Exercises, materials and directives were lifted from the first case study and adapted to fit the online pedagogical frame.

Figure 8: *Case Study 2: Parcel preparations, posting materials and guidebooks to participants*. Photo © Skinner.

Both the self-directed guidebook and the online workshop were restricted by our incapacity to share physical space. Therefore, my online objective was to foster a multifaceted opportunity for those engaging with the practice, irrespective of the format of the workshop. The provocation for each exercise was to immerse the participant in a network of sensory information to see what they noticed about their surroundings and what supported their investigation of physical awareness. The development, analysis and evaluation of this guidebook are explored in the next chapter.

In this section of the case study, I map out the adapted trajectory of the research and detail the experience of delivering the practice online. The narrative of this analysis also seeks to explain my hesitancy to pursue it virtually. Although the creative methods used to explore environmental perception branched further in this workshop to support a self-directed dialogue of exploratory practice, I focus here on the relationship between the physical body and clay as a material capable of cultivating the *felt*-experience. This manifested as an opportunity to explore comparative exercises in a shared digital space. The evaluation of the case study includes some of the scripted exercises that fed into the practice, as well as photo documentation taken through screenshots of my laptop that depict the creative journey participants embarked upon.

The online workshop schedule followed a preconceived itinerary that divided the allotted time into windows of interlinked creative engagement. The methodology touched lightly upon a number of sensorial explorations rather than guiding the participants towards a preconceived sensorial destination. The initial formation of the tasks proposed was designed to situate the participant within the boundary of their physical skin, before moving on to experiment with a selection of materials-based sculpting exercises that afforded a period of multifaceted creative thinking. Clay and found objects (collected within the vicinity of each participant's home) were analysed to investigate the comparative properties of each item. The group were given the opportunity to follow their own sense of curiosity within the structure of each creative task I set them, and they were encouraged to share reflections as they worked towards completing their sculptures.

The exercises sought to connect participants to the sensory information afforded to them by their skin and the sensitivity of their hands as dextrous tools. Physical touch is embedded within the pedagogical practice of Tufnell (2020), Grasse (2021) and Whitehead (2019) with each practitioner emphasizing the importance of the physical body as a site for felt knowledge to coalesce. Aligning with these facilitators, participants in the first case study engaged in the process of clay-coiling as a way of simultaneously warming their hands and attending to the malleability of the material. In this virtual space, self-touch became the first

point of contact as an alternative to working communally with clay. Participants were asked to comb the tips of their fingers across the contours of their skull, drawing attention to the bony structure beneath the skin's surface**.** The fingertips were then used to massage the perimeter of the face in concentric circles before rubbing the palms together and resting them over the eye sockets to feel the sense of warmth generated by the hands. Demonstrating these massage techniques required me to simultaneously pay attention to my own sensory system and maintain a sense of spatial awareness in positioning myself in front of the camera. Participants were encouraged to close their eyes and listen to the sound of my voice to guide them through the exercise; however, participants were hesitant to be without visual cues to communicate the information. The screenshot below demonstrates the positioning of the fingertips over the eye sockets and shows the hesitancy of some participants to soften their visual field even when the hands are effectively blocking their view of the screen.

Figure 9: *Case Study 2: Exploring haptic touch, online engagement with participants, 2020*. Photo © Skinner.

The specificity of my instructions focused on exploring the bony structure of the skull and the contours of the face as the group were encouraged to appreciate the haptic sense of reading and responding to their own three-dimensional architecture. I recall feeling a momentary sense of shock in light of both experiencing and guiding my own questing fingers within the context of the exercise. This cyclical capacity to experience moving from,

and to, a point of touch, highlights the skin's innate skill as a multifaceted sensory medium. This ability to attend to the surfaces of the skin as an investigative practice connected each participant to a very personal sphere of sensation. The intimacy of this touch also introduced the hands as sensitive tools benefitting from the skin's dual capacity to feel and be felt. The next objective was to refine the dexterity of this haptic sensation before the participants encountered complex materials. Task 2 (below) demonstrates the incremental shifts between exploring the contours of the fingers, attending to the reverberation of heat between the palms of the hands and the pressure afforded by rubbing them together. The positioning of my hands in front of the screen sought to demonstrate the clearest depiction of my own exploration. At the end of the exercise, the participants were left with a tingling sensation in their hands due to increased circulation.

Task 2: Waking up sensation in the hands.

(Eyes closed) Take a moment to notice how your hands feel; think about their shape, temperature, their points of contact with other surfaces, dexterity etc.

-Trace the bones of each finger as it extends through each palm- follow it to the end of your fingertips.

-Place one hand palm facing up upon the work surface in from of you: use the clenched fist of the other hand to flatten the hand upon the table (a similar action to that of a steamroller).

-Trace the outline of your fingertips with your thumbs – imagine the thumbs are traversing a mountainous terrain. Initially start in the same place/ then try the task starting in different places.

(Try not to look at your hands).

-Clap as softly as possible (just the fingertips).

Now clap so that you would be heard in the next room.

Louder, so that you will be heard in the next building…

(Allow yourselves to laugh).

-Rub your hands together- imagine you are thoroughly washing your hands.

-Rest your hands on the desk in front of you and rest.

(Skinner, 2021)

Figure 10: *Case Study 2: Demonstrating how to explore haptic touch, 2020.* Photo © Skinner.

One of my main concerns for this online workshop was that it would become too sedentary with participants reluctant to move away from the visual cues of their computer screen. To address this, I scheduled an opportunity for participants to stand up and walk around the room they were in, orientating to the sound of my voice as they moved. I drew attention to the feel of the body, encouraging participants to experiment with how their sense of connection stretched and contracted depending on how they articulated their physical body. The screenshot below demonstrates their absence from the digital interface we were all connected through. Experiencing this absence heightened a sense of anxiety within myself and my role as facilitator. Without the visual cues of engagement, I had been responding to up until this point, I became only too aware of the tenuous threads that bound us together within this virtual space. By following the inhalation and exhalation of my own breathing as I verbally directed others in their attention to my voice, I anchored myself to the immediacy of my own embodied experience. Attending to my own breathing cultivated a sense of visceral malleability that reconnected me to the constellation of bodies visible on the screen in front of me- the sense of anxiety eased, and the group engaged with the next task.

Figure 11: Case Study 2: Inviting online participants to turn away from their computers and listen to my voice, 2020. Photo © Skinner.

Figure 12: *Case Study 2: Participants take part in a breathing exercise designed to lower the heart rate and relax the body, 2020.* Photo © Skinner.

It was challenging to gather feedback relating to the effectiveness of each online exercise within the second case study. Whilst all of the participants appeared attentive to the investigative channels I was offering, our lack of physical proximity meant I felt desensitised to the rippling undercurrents of interpersonal relationality that so often make up the composition of how we communicate as sentient beings. Participants themselves found it challenging to communicate their experiences; as one participant commented: “It is always nice to connect with the environment in a different way…or more reflectively… but it is hard to recall a particular physical response I had” (Participant N, 27/11/2020). As the facilitator I felt an intuitive sense of misalignment as our relationships to interpersonal spatial dynamics were flattened by the digital interface, we were all using to find resonance with one another. Yet participants were overall appreciative of the opportunity to attend to sensations felt and cultivated through the body: as participant M asserted: “Not only was I deeply moved by our virtual time together as a group, but the experience returned me to my body and myself in ways I didn't even know I needed” (Participant M, 30/11/2020). It is this incapacity to identify what is missing within one’s sensory apparatus that somatic practitioners frame as indicative of our twenty-first century livelihoods. On a microscale these partially felt elements of awareness corollate with broader dialogues regarding

environmental perception and what, in this contested anthropogenic age, humans sensorially rely upon to contextualise themselves within the physical world. With this in mind, investigating how to cultivate instances for everyday lived-experience in practice became the primary focus of the self-directed guidebook detailed in the next chapter.

In the following section, I demonstrate how the use of clay evolved into a material nexus for the online case study, transitioning from a traditional medium for coiling pots into a multifaceted, relational and responsive material.

Entangled dialogues in clay and other matter

Figure 13: Case Study 2: Participants wrapped litter with clay to create hybridised material compositions, 2020. Photo © Skinner.

Two weeks prior to the online workshop I posted a small box of materials to each participant. The contents of the box included a block of clay, sticks of charcoal, four pencils and the self-directed guidebook. Participants were also encouraged to collect litter and discarded objects they came into contact with within the vicinity of the home. These materials were to be used in a series of sculpting exercises designed to explore how found objects and clay can be combined. It was the layers of plastic and mud visible within the banks of the waterway (Meanwood Beck) visited in the first case study (2019) that inspired this provocation to blend packaging and organic matter. These sites drew attention to examples of Timothy Morton's *hyperobjects* (2010), synthetic materials that have an extended lifespan and do not easily disintegrate. Collecting litter to create sculptured forms also aligns with the creative ethos of artists Margaret and Christine Wertheim (2022), whose community engagement workshops source materials by collecting and categorising plastic waste discarded from the packaging of everyday household goods. These materials are transformed into evocative landmarks that connect the everydayness of detrimental consumerist practices to the ongoing and escalating climate crisis.

The list below summarises the findings of five participants and details what each object evoked for them:

Participant L. (27/12/2020)

Item 1: **A Toblerone wrapper** was found outside the participant's front door, dropped by a neighbour currently living abroad. Toblerone evoked a strong association with travel and airports, which was perceived as alien in the current climate of lockdown and government rules on international and domestic travel.

Item 2: **Post Office collection slip**. The participant commented that more of these have been dropped as litter in lockdown as people were getting parcels delivered regularly.

Item 3: **Plastic coiled wrapping.** This was found rolling along the road. It caught the participant's attention because of its ability to seemingly harness the energy of the wind. Its movements were likened to snakes that wind their way at an angle up the sand dunes of the desert.

Participant M. (27/12/2020)

They highlighted a **Flower tag** from a neighbour's garden plot that contained an extraordinary amount of information about the plant and its origins. They noticed on closer examination that the tag itself was called a 'John Henry portrait tag' which inspired them to imagine what a portrait of a flower might be.

Participant R. (27/12/2020)

This individual took to collecting items from a communal bin near their home. They noticed that the objects they were drawn to could have come from their own waste. An empty packet of **indigestion tablets** made them think of Christmas and the excesses of the festive period; a **Colgate toothpaste sleeve** surprised them by still smelling of toothpaste.

Participant P. (27/12/2020)

This participant interpreted the task differently by searching for litter in rooms they were living/working in. They presented an **envelope** that had just been opened and thrown away, a spent **lightbulb** that had gone out that morning and the **string** taken from the parcel of materials I had posted out to them.

Participant Q. (27/12/2020)

They presented a **tissue** that was dropped by their partner (and retrieved) during a shopping trip. A **facemask** was also shown to the group as an item picked up off the street. There was a consensus that people were unsure about the hygienic implications of touching this kind of litter.

The following exploratory task was proposed to investigate to what extent materials could be bound together. The objective of this exercise was to test the tensegrity of the objects participants had chosen to work and experiment with, transferring the haptic information they gathered into a drawing or three-dimensional clay sculpture. This branching methodology stemmed from my own artistic interest in the plasticity of everyday materials and their capacity to be shaped into hybridised compositions.

Meeting Materials. (5 mins)

-Bring three materials together.

- Use the string from the parcel to combine the materials in any way you can. Bind them, wrap them, thread them etc.

(you have the option of unwinding the cords of the string/ those without string, use a substitute such as tape or twine).

(5 mins)

-Draw around your creation on the paper.

- Name the thing you've created.

-Mould a clay version of your object (5 mins).

-Using your clay, sculpt a model of your object. Think about your options here… do you want to mould each piece individually and combine them to create something more abstract by blending the shapes of your original materials together?

Use a pen/ pencil if you want to add texture.

(Optional extras]

Take your clay sculpture on a walk.

Find a place for it at eye level.

Walk away from it. Find a way to rediscover it, this could be as simple as turning away and turning back towards it.

Sketch it at eye level (or take yourself down to its level).

-Find a place in which you feel it is out of place. Make a note as to why that is the case…

-Return to your chair.

Some participants kept latex gloves on during this task.

Participant N focusing on deconstructing the natural fibers collected from their garden rather than the litter they'd collected from the surrounding streets.

Participant R wrapping their Colgate toothpaste sleeve in coils of clay and sticking it to the surface of the paper.

Figure 14: Case Study 2: Participants explored a range of found objects, combining litter with clay to create hybridised material compositions, 2020. Photo © Skinner.

Participants blended, wrapped, disintegrated, and wove items into messy sculptural compositions before presenting what they had made to the rest of the group. An additional objective of the task was to make it difficult to discern one piece of litter from another. As demonstrated in the photos (above and below) clay played an integral part in achieving this through its adhesive and moulding capability. Parallels were drawn between the complex and diverse properties of the objects and materials in front of them. There was some hesitancy in articulating what participants had been endeavouring to make. Participant R

stated: “I don’t really know what I’m doing…I’m just putting sausages of clay everywhere” (Participant R, 27/11/2020). In this instance, I had observed participant R construct an arched structure that merged through the plastic-coated cardboard of the toothpaste sleeve and indigestion tablets. They spoke of their methodological uncertainty but also proclaimed that the toothpaste sleeve they’d incorporated gave the new structure a minty fresh smell which surprised them as they had not consciously been paying attention to the smell of the composition. This suggests that the active, haptic engagement with the materials afforded space to cultivate new sensory knowledge. Though the participant professed to not know what they were doing, as they contextualised their creation, they continued to manipulate the clay in their hands and add to their sculpture as they talked. The positioning of each laptop camera afforded a fascinating comparative birds-eye view from which to observe each participant as they worked and shared how they had brought different materials together with the clay.

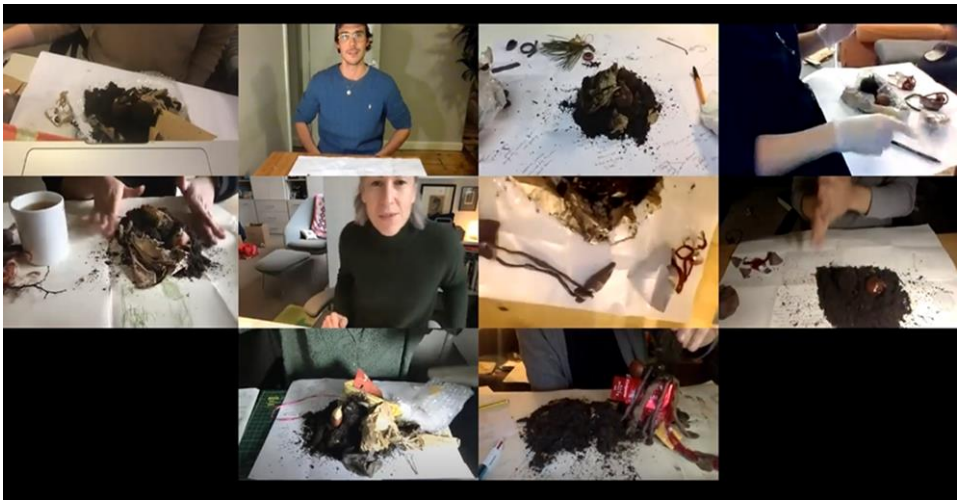


Figure 15: *Case Study 2: Presenting sculptures composed of soil, clay and litter to the rest of the group, 2020*. Photo © Skinner.

In the discussion that followed this task, a participant highlighted a primary trait of consumerism is that we value materials differently: “We automatically evaluate space or materials for its usefulness or monetary value and so I was trying not to do that with this kind of exercise. I think a lot of the time we think proactively about what we can extract

from land or build out of materials to make us money…these making tasks ask us to do something different, to think adaptively or at least differently about something in contact, like clay with our body" (Participant P, 27/11/2020). The activity of moulding objects together in this task encouraged participants to spend time in physical contact with the sculptural material, engaging with the sensorial particularities of meeting the matter at their fingertips rather than rushing towards a preconceived final design. Participant P highlighted one of the primary investigative objectives of this research regarding how to address and sustainably cultivate healthier relationships with materials present in everyday life.

Drawing upon Val Plumwood's (2002) writing concerning how we might sensorially encounter the materiality of the environments, this creative task highlights an opportunity to immerse the self within possibilities of relating differently to materials. The methodological directive here was to find a process that worked for each participant to support them in their perceptual journey as well as to give them an experience of creative uncertainty within a making process. Feeling hesitant and indecisive was itself an opportunity to recognise the potential in branching dialogues that split and merge back together within creative thinking. The provocation was to maintain a multifaceted practice of continuously doing/ making/ moulding and to see what emerged out of each task as the material shifted into form. The participants were indirectly practising a creative mode of Donna Haraway's provocation to engage with the hybrid nature of materials (Haraway, 2016) whilst physically experiencing Tim Ingold's (2010) sense of coming into form as materials move through, blend and influence each other within the context of their own compositional porosity.

Case Study 3: Material Encounter

Location: Yorkshire Dance, 3 St Peter's Buildings, St Peter's Square Leeds, LS9 8AH

Date: 3rd July 2021, 2 hours 10 minutes

Number of participants: 6

This workshop was programmed as part of Yorkshire Dance's *Climate Encounters Festival* which took place on the 3rd and 4thJuly, 2021. The festival had been scheduled for six months earlier but it was postponed due to the extension of the UK's second national lockdown. This was an opportunity to reconnect with facilitating in-person practice and to build upon a selection of the exercises explored in the context of the guidebook. Similarly, to the second case study, boxes containing an assortment of materials, including the guidebook, were posted out to each participant to engage with prior to the workshop.

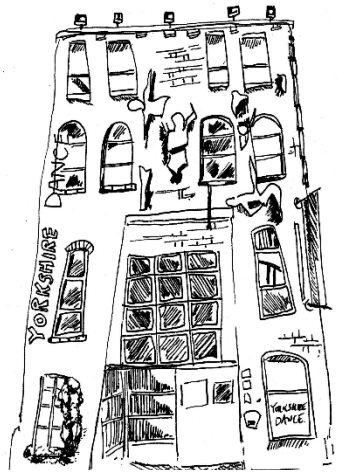


Figure 16: Case Study 3: Research site: The Yorkshire Dance Building, Leeds, 2021. Illustration © Skinner.

Figure 17: Case Study 3: *Parcel preparations, posting materials and guidebooks to participants,* 2021. Photo © Skinner.

This was the first live opportunity to engage participants since the onset of the pandemic and there was a great deal of uncertainty leading up to the event regarding whether it would take place. Fifteen spaces were made available, and the Yorkshire Dance administration team arranged the online bookings. Six people turned up to take part in the session and although participant numbers were small, the workshop gathered insights into how the pandemic had impacted people's sense of spatial dimensions. In light of this, the group engaged in a self-touch exercise to draw attention to the contours of the body in our shared environment. Participants used their fingers to trace the architecture of their faces and transferred those felt structures into a charcoal drawing. The objective of the charcoal drawing task was to help participants feel present and resonant with the sensitivity afforded through their questing fingertips. In the second case study, I guided participants by visually demonstrating (and articulating) how their questing fingers should approach this form of gentle touch. In this live iteration of the practice, participants followed their own sense of haptic curiosity, transferring their felt facial contours onto the paper in front of them. The objective of the task was to leave a lingering sense of touch on their faces in contrast to the resonance of a charcoal composition on the page in front of them.

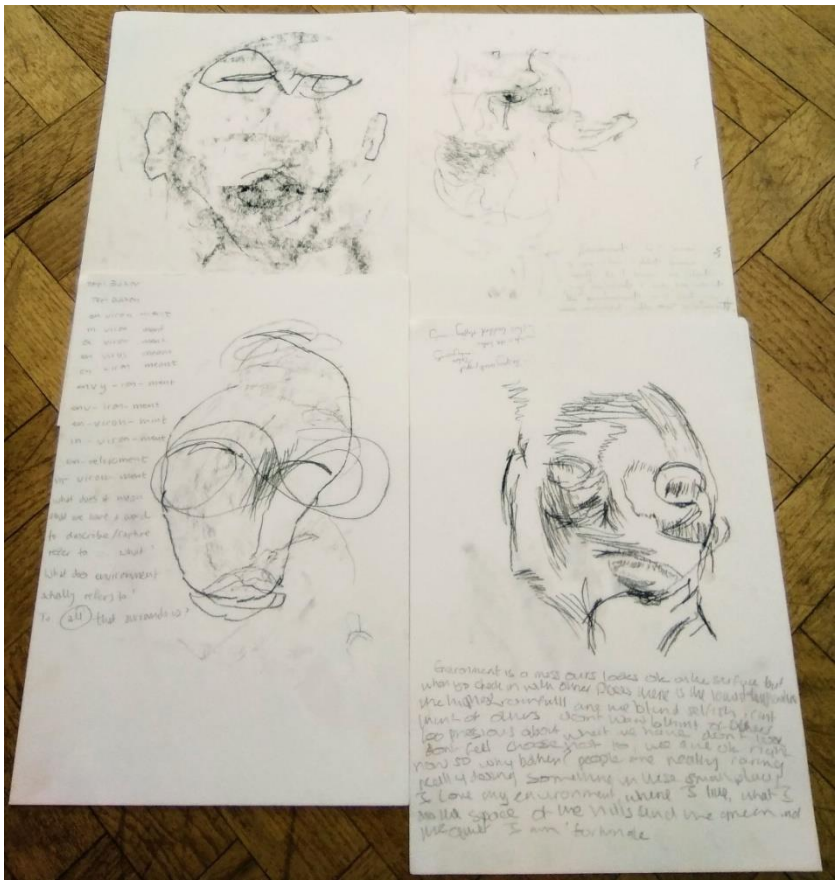


Figure 18: Case Study 3: *Charcoal self-portraits [with one hand drawing and the other hand exploring the architecture of the face], 2021.* Photo © Skinner.

The case study went on to explore clay's capacity to aesthetically replicate litter found in the context of outdoor investigative practice.

Moulding and re-moulding clay

In our opening conversation, participants were keen to learn about where people had travelled from to take part in the workshop. To aid the flow of conversation, they were asked to experiment with different ways of folding and marking a block of clay to experience the *hands-on* ethos of the research methodology. As they explored the clay's properties, they discussed their experiences travelling into the city centre that morning and how they navigated the streets of Leeds. This felt to be a communal way of grounding the physical body, one that, as voiced by much of the group, suddenly involved encountering and engaging with a lot more people. For some, the anxiety this produced heightened a sense of their physical dimensions and articulations. They expressed difficulties negotiating social interactions onboard trains and buses, suddenly aware that they were in limited and enclosed spaces. One participant reflected that dropping into this initial practice of meeting and moulding the clay whilst concentrating on the simplicity of their breathing helped to: "take the top layer of tension and stress off these potentially heightened social interactions" (Participant K, 3/7/2021). From my perspective as the facilitator, it felt like the group settled into a rhythm, they zoned into the specificity and interactivity fostered between the material and their hands. As a group they continued to share thoughts with each other, expressing sentiment and insight into their personal experience of the pandemic, whilst simultaneously channelling kinaesthetic feeling into the responsive and malleable material.

Participants were then invited to carry their blocks of clay into the street and to spend time exploring the materials they could identify in the urban cityscape. The outdoor task was connected to a guidebook exploration (figures 29 & 31) that focused on cultivating awareness of the objects and waste materials found in the streets surrounding the home. The intention was to curate opportunities for participants to experience the tangibility of

ideas drawn from the theoretical domain of environmental thinkers such as Stacy Alaimo (2010) and Timothy Morton (2016). Within the guidebook, litter-picking was imagined to be a way of *feeling* the environment by directly touching an array of discarded objects. Walking into the streets surrounding the *Yorkshire Dance* building afforded a comparative landscape in which participants could identify similarities and differences to their previous experience of the guidebook exercises. Participants were invited to sculpt what they discovered out of clay, emphasising that the task was about noticing the properties of what they picked up, rather than solely focusing on replicating the objects perfectly. It was noted that "the task brought me down to street level… it drew all these small worlds into focus" (Participant G, 3/7/2021). This participant recognised the incremental perceptive shifts experienced in attending to multifaceted spaces and their *felt* modulating perceptual scales and dimensions absorbed by the physical body in motion. They challenged Plumwood's (2002) interpretation of anthropocentrism using the task to oscillate between micro and macro worlds and reflect upon the behaviours and conceptual territories embedded within the human mindset. The intention of the exercise was for them to make connections through an alternative form of critical thinking. Venturing into the street just outside the building's entrance also revisited a physical locality each participant had encountered on arrival. From moment-to-moment the sensory system filters a wealth of information, therefore by encountering a previously experienced site the intention was to highlight the plausibility of conducting this form of investigative engagement in everyday habitats. In this instance, the group immediately dispersed when we stepped outside, following their own curiosity and intuition. I situated myself by a nearby rubbish bin and became a focal point to which participants returned to share how they were progressing with their sculptures.

Figure 19: *Case Study 3: Modelling clay sculptures: Participants created their own clay replicas of facemasks, cigarette packets, flattened coke cans and scratch cards, 2021.* Photo © Skinner

ss to

weather meant that the participants gravitated to places of shelter whilst they worked, conversing in twos and threes, sometimes hidden from my line of sight. Yet, the small group felt almost netted in its connectivity, there was little need to shepherd participants back into the building when the allotted time for sculpting came to an end. The movement of one person towards the building's entrance prompted others to follow. Their movements brought to mind Michael Klien, Steve Valk and Jeffrey Gormly's collaborative manifesto *Book of Recommendations: Choreography as an Aesthetics of Change* (2008). The group felt intertwined in space as they created fluid patterns of movement crisscrossing the street. In following their curiosity, they were inadvertently manifesting a choreographic score to the outside observer. Whilst the performative possibilities of this research practice are not investigated within the context of this PhD, there is undeniable potential for further enquiry into dynamic ways of furthering public engagement in this form of trans-sensorial environmental practice.

On re-entering the studio space, comparisons and comments were offered regarding what each participant had made. Whilst some clay models were more recognisable as representations of discarded litter items than others, the objective of the task was to refresh and explore sensory curiosity rather than refine a perfect replica. The task also brought the group together as they were able to share their own trials and tribulations. Participants debated the difficulty of forming a recognisable likeness of a compositionally dynamic material. With clay's high moisture content, it was challenging to mould angular, complex metallic and cardboard shapes, such as discarded beer cans and cigarette packets. These clay sculptures, once placed together, created an immediate archive of materials that provided a physical provocation for people to talk about broader environmental concerns. This catalogue of clay objects could only be visually contextualised through the lens of each participant's digital camera in the second case study. Comparisons in this instance were challenging to make as each viewer's perspective was equally static; live practice enabled participants to pick up sculptures. They were able to walk around the table to gain alternative information about each other's interpretation of a shared experience.

Shifting from an indoor space to an outdoor locality challenged a sense of what a learning experience might be for a number of the participants, yet it was suggested that "once you are in it, when you start doing the task outdoors you realise you can go many ways simply by following your intuition" (Participant H, 3/7/2021). The outdoor exercise was designed to engage participants to consider the context of how we encounter materials and the possibility of attending to what might be considered ordinary or mundane. The conceptual framework of the workshop then shifted to highlight how unconsciously interconnected we were as a group of individuals sharing space. A playful comparison was drawn with the mycelium network and the fungi that emerge in unexpected places. This task built upon the guidebook illustration (see below) that invited participants to engage with how a series of simple sculpting movements with the hands can produce a replica of a common mushroom species.

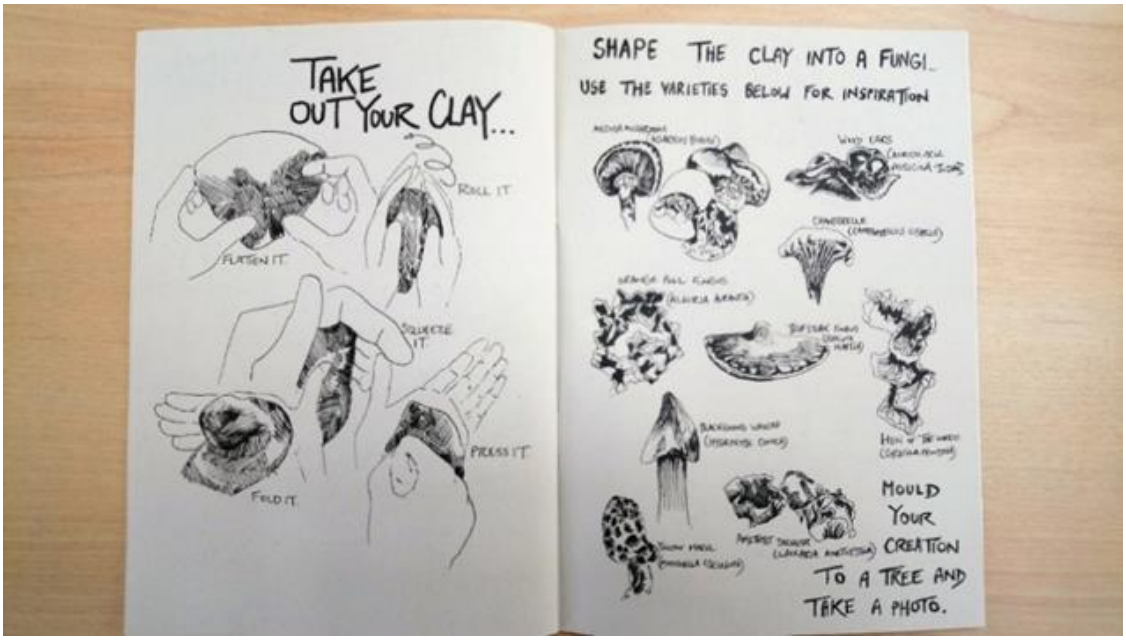
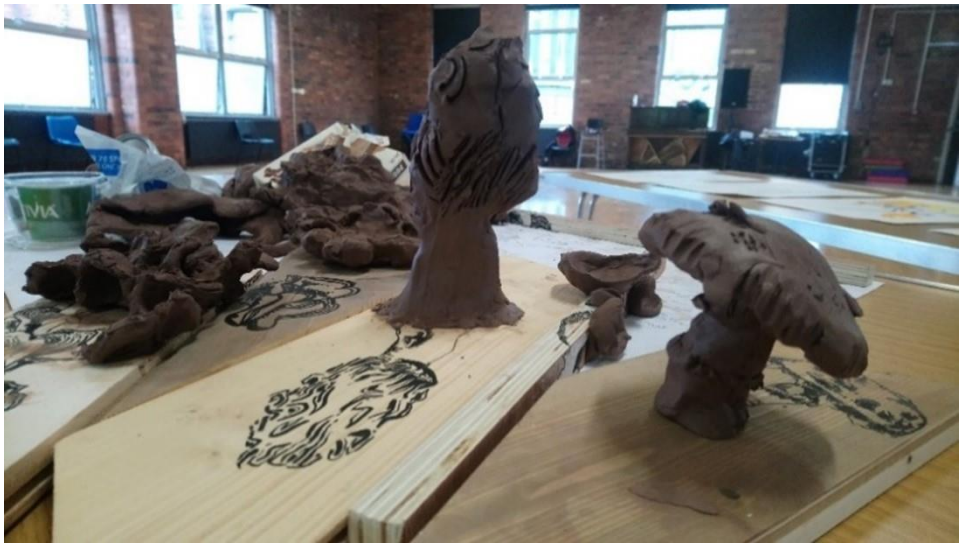


Figure 20: *Case study 3: Guidebook designs- clay moulding instructions, 2021.* Illustration © Skinner.

Participants subdivided their clay litter replica sculptures and shaped the pieces into a collection of fungi. I drew the group's attention to how a mycelium network might be imagined through touch, and how it may playfully bring new forms of knowledge. I supplied two-dimensional drawings on wooden slats to use as reference points for their sculpting to support their mushroom moulding. Participants were encouraged to use supplied pencils as tools, giving their models texture and to include details that they noticed within the composition of each woodblock drawing. On completion, the sculptures were positioned together on a table forming a comparative archive of experience and kinaesthetic thinking through touch.

Repurposed wooden slats with depictions of fungi were provided to aid participants in the creative process. They provided a flat surface to work on and species-specific details that the crafters could incorporate into their sculptures.



Figures 21 [left] & 22 [right]: *Case Study 3: Clay mushroom moulding, 2021*. Photo © Skinner.

As part of our group discussion regarding the materials brought in from the street, participant K highlighted the difficulty of thinking beyond the context we attribute to some materials: “What I found was that I was engaging with materials **as** objects – I need to somehow disengage with the value judgement…step back from those because for me they colour an experience” (Participant K, 3/07/2021). As another participant observed- “It is in finding a deeper appreciation of that thing you walk by all the time and in any given landscape, it is the potential for finding all these different moments, these observations…that can be applied to anywhere, anytime and in anything” (Participant H, 3/07/2021). Here, clay has been used to create a memory bank of physical experience and sensory learning for participants, bridging and abstracting creative thinking from the physical body.

Unfortunately, interpersonal touch was still prohibited during the third case study, but clay afforded a medium capable of responding to and with touch, offering the participant sensory information about their own physical form in contact with the material. By proposing something of a material equality, participants were provided with the opportunity to broaden the scope of their sensory learning, imbuing each material with the same perceptual curiosity. This invigoration of sensory channels challenged the participant to spend time attending to what is often overlooked or, like litter in the street, habitually passed by.

Participants reiterated their need to slow down and dedicate time to unpicking the perceived psychosomatic stress that impacts the physical body. Whilst reflecting on my pedagogic objectives, I noticed that many of my methods that sought to cultivate environmental thinking rely on being able to engage actively with the physical body- primarily through interpersonal touch. This particular workshop felt challenging to lead because we were sharing physical space, and yet we kept entirely separate from each other so as to follow government guidelines implemented to maintain health and safety. Subsequently, over the coming months and as restrictions changed, I sought out teaching opportunities that would permit me to incorporate facets of interpersonal touch whilst still adhering to government directives. Such an opportunity arose from a digital callout for creative practitioners interested in researching how humans think about Nature. The following branch of investigative practice documents my experience delivering a workshop on environmental sensitivity for *The Quadrangle,* situated in the Darent Valley, Kent.

Case Study 4: Environmental Sensitivity Workshop.
Supplementary teaching practice

Location: The Granary, The Quadrangle, Shoreham Road, Shoreham, Kent, TN14 7RP

Date: 27th November 2021, 2 hours

Number of participants: 20

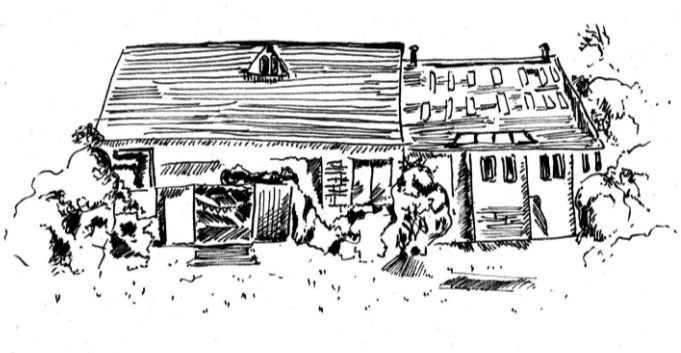


Figure 23: *Case Study 4: The Quadrangle, Kent, 2021*. Illustration © Skinner.

I delivered my workshop as part of *Nature Enquiry,* a weekend residency held at The Quadrangle[6], programmed by director Jessie Teggin. A selection of environmentally focused practitioners from different sectors were invited to experience a range of investigative environmental engagement practices drawn from the arts and somatic pedagogies. I brought along the second draft of my self-directed guidebook to give residency participants the opportunity to leaf through its pages to gain a sense of the broader context for the multifaceted nature of my research. My primary objective for this teaching opportunity was to re-establish my own sense of competency in facilitating physical contact within shared space.

The session began with a discussion on how different systems in the body co-exist in relation to one another. The conversation touched upon Timothy Morton's (2021) notion of humans inherently *being ecological* due to our organic and eco-dependent physiology. I invited the sixteen participants to pay attention to the three-dimensional architecture of their ribcage as they inhaled and exhaled whilst situated within a warm spacious room. While participants closed their eyes to focus on internal sensations, rather than the appearance of the body, I spoke of the feet's physiological structure, the design of each medial arch and their capacity to respond to subtle shifts of weight. The group was

[6] The Quadrangle (originally a farmstead, built in 1870) was established as an educational trust in 2006 to provide a unique and inclusive space for visitors to reconnect with nature. The ethos of the trust specifically aims to engage with communities, charities and organisations that might not have regular access to green space. As well as supporting outreach programmes the Quadrangle has been the epicentre of an ongoing dialogue between conservation and creative practice. For over five years and across two days, a range of workshop leaders have shared their expertise by facilitating sessions that explore the complexity of our human relationship to the world around us within the frame of *Nature Enquiry.*

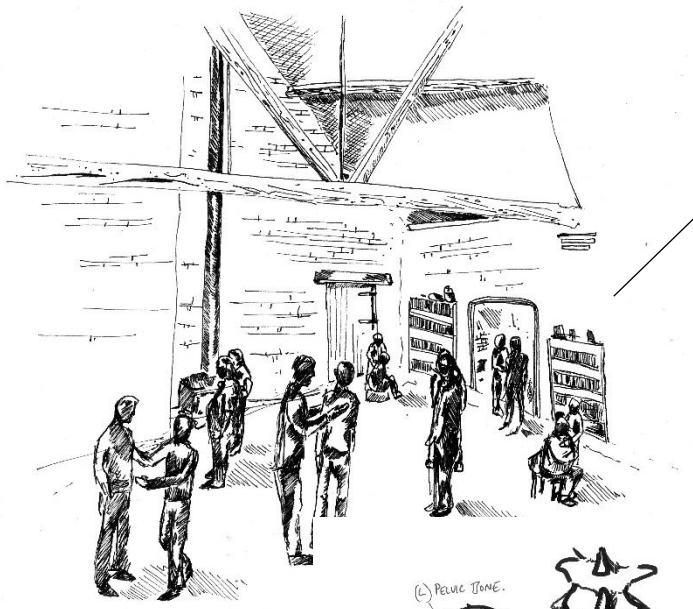
instructed to respond, to lean forward and backwards, finding that tipping point that takes the skull out of alignment with the pelvis. They focused on a point of possibility, or the weightlessness experienced before gravity requires us to find our own balance.

Collectively we explored a cycle of these tipping points. This led to participants walking around the room in different directions – forwards, backwards, side to side etc. Walking patterns were disrupted as participants actively surprised themselves by changing directions quickly, experimenting with letting a shift of weight lead them in new directions and following a sense of curiosity about movement. This method of exploring the desires and directionality of the feet aligns with the direct experience of Miranda Tufnell's teaching practice. As I watched participants move around the room, I noticed people's perceptual systems had to work hard to re-orientate themselves to negotiate their proximity to others. In some instances, they had to deal with a lingering wariness of passing too close to someone. I witnessed a variation in pace and a playful physical dialogue that manifested from the moment-to-moment negotiations that were required within a shared space. I invited participants to find a way to slow their pace as I drew attention to their elevated heart rates and the warmth of their skin as the physical exertion had increased the flow of blood around the body. In this instance, the first point of reference became the *felt* interior warmth emanating from participants' corporeal boundary and generated through the movements of each body.

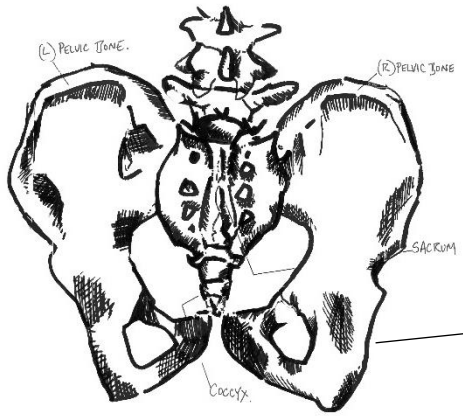
A particularly complex and emotive point of reflection emerged when participants were invited to contemplate how they felt in response to the environment we were all experiencing due to the pandemic in contrast to the immediacy of their interior perception. Participants made connections with societal unrest witnessed as Covid-19 spread, voicing concerns and acknowledging that: "[I feel] …there is a lot of outrage, a sense of responsibility that has a particular taste, [the pandemic] is the big label of our collective existence, I feel as if I am living under a brand that encapsulates my existence" (Participant

Q, 26/11/2021). Whilst difficult to express, these insights appeared to ease the collective tension of the group as they recognised, that they had all experienced similar frustrations.

Figures 24*: Case Study 4: Capturing and sharing embodied practice through investigative drawing.* Illustrations © Skinner.



Recording practice: Due to restrictions on photography, I was unable to capture any of these partner exercise. However, the sketch below demonstrates the positioning and intimacy of the practitioners working together.



Soft hands: Before engaging in partner work, participants explored the potency of self-touch. This illustration was used in the workshop to the capacity of our hand respond sensitively, offe information rather than imprinting intention.

Approaching the pelvis: This simplified sketch helped to orientate people to the locality of their tailbone in relation to their lower back. They were able to find it on themselves before finding it on another body.

Getting back to touch- a collective somatic vocabulary

As the facilitator, I demonstrated the lightest touch I could offer a partner before inviting others to do the same, thereby supporting different partnerships working together in the space. Participants were encouraged to lay a hand on the ribcage or lower back of their partner, this sense of contact was intended as an anchor for those being touched. It allowed them to feel connected but ultimately in control of their own momentum and movement around the room. Partners shared a vibrant opportunity to pay attention to a reciprocated sense of dialogue through this particular physical point of contact. After a sustained period of shared movement exploration in which participants switched positions, a hand was gently placed on a partner's sternum. I verbally encourage the lightest touch possible to afford an understanding of sensory negotiation, rather than relying on the momentum of the ribcage reaching forward. There was an opportunity to add another layer of complexity by intermittently closing their eyes to see if softening their visual field heightened the sensation afforded through touch. The final point of contact required one participant to offer a sense of three-dimensionality to the other. This was achieved by placing one hand on their partners' sternum and the other between the shoulder blades. With their eyes closed participants were asked to breathe into the space they imagined between these two points of contact. I then drew attention to the shape of the lungs and their capacity to expand and contract in all directions.

Overall, I sensed some hesitancy regarding physical contact with fellow participants, but this is not unusual when instigating touch with individuals unused to its practice as a tool for learning about spatial dimensions. The workshop ended with a palpable sense of calm. Participants were encouraged to spend some time walking outdoors before the next session in the programme. Similarly, to the direct contact experienced in the first case study, the affordance of space and time to do very little supported a sense of connectivity between members of the group. Facilitating these workshops has enabled me to observe a near-palpable sense of vibrancy in the atmosphere when this form of physical practice is nourished. People feel able to drop out of their habitual modes of navigating space (and other people), to cultivate something deeper that ripples below the surface of their sensory being.

The Quadrangle teaching experience, though supplementary and primarily autoethnographic in nature, cultivated sensory parameters and permitted me to practice offering different ways of approaching investigative and embodied knowledge through touch. As artist researcher, instigating direct contact between participants filled the exploratory gaps that I felt remained from the third case study. This supplementary teaching practice focused solely on the potential for somatic information to be shared rather than relying on materials such as clay to help participants find a way into the transformative nature of the practice. Since delivering this workshop with The Quadrangle, director Jessie Teggin has commissioned an illustrated sensory guidebook dedicated to six trees found at *The Quadrangle* site. The objective of the guidebook is to help people find ways to interact with the trees and to learn about their role in supporting the biodiversity of the Darent Valley in Kent. Having a draft copy of my primary guidebook on show during the workshop allowed me to frame the multifaceted nature of the research practice. Subsequently, this has furthered a creative dialogue between environment, art and the materiality of the physical body that moves beyond the frame of this PhD research.

Case study conclusions

Weaving pedagogical threads

This practice research has included both in-person and online case studies that adapted to the impact and legacy of the Covid pandemic. The objective of this concluding section is to highlight how these threads of research interlace. Each case study has explored a series of artistic engagements that cross-pollinate the sensory system of the physical body with creative and somatic practices. In doing so, the methodology has sought to welcome the complexity of materials in union with found objects and to support participants in their exploration of how the physical body cultivates an awareness of environmental materiality. The objective of cultivating a spectrum of creative practice techniques has endeavoured to evidence how the physical body is a vital nexus for gathering and collating alternative ways of approaching environmental knowledge. I have drawn insights from my own experience as the primary facilitator and the commentary, curated artefacts and follow-up communications gathered across four very different case studies.

Location, location, location

Each workshop took place in a different physical location and therefore each iteration of the teaching practice sought to investigate the impact of locality on different sites of research. The sensory information afforded by each physical domain drew attention to the variability of site-specific engagements. Plumwood (2002) argues that “our sense of space and time is reduced, and life lacks immediacy, becomes flat, impersonal and placeless” when we don’t recognise deeper connections to non-human entities (p. 231). The research sought to surface these ties to particular sites by branching away from habitual or neutral perspectives of space and place.

Overall, the participants of the first case study were afforded the most physical freedom within the context of the outdoor exercises. They walked from the research studio to the Meanwood Valley Farm Conservation Site and visited a rubbish-choked section of the Meanwood Beck. Collating how participants perceived these environments in the context of the first case study highlighted how divergent perspectives can be. Instead of developing provocations that took participants further afield, the second and third case studies focused

on the immediacy of materials found in specific locations closer to home. The involvement of charcoal, clay, wood, litter and paper altered depending on the availability of materials within the context of each case study. In each iteration of the practice, participants were encouraged to notice the manmade materials encountered and discarded in their day-to-day lives. Notably, the exploration of specific materials framed these perceptions as opportunities to engage with aspects of *transcorporeality* (Alaimo, 2010). In attending to the composition of these materials, participants have been invited to reflect upon a sense of connectivity felt by coming into physical contact with the surfaces of found objects.

The first case study (2019) led participants to a stream choked by litter and was conceptualised as a site for reflective engagement. Comparatively, the second case study (2020) actively required participants to go litter-picking prior to attending the online workshop. The narrative of the third case study (2021) sought to explore the complexity of how perspectives can shift and modulate within a shared experience of litter-picking in the street, and the moulding of clay replicas. The variability of what participants touched impacted the material relationships they explored, which therefore channelled their creative practice in a particular direction. In testing the tensegrity of found objects and finding ways to blend their physical properties together, the practice sought to illuminate the permeability of these discarded items and our overall agency to impact the material composition of the environment. Participants in the third iteration of the practice went on to create miniature habitats out of these found objects, small worlds brought into existence, experienced directly and sustained through a cyclical engagement with a making practice.

The discussion here directly echoed reflections that emerged during an informal follow-up conversation with a participant from the first case study (2019). These dialogues drew from memories, surfaced by connections made between day-to-day experiences and the activities we embarked upon together. The way I approached topics of conversation shifted in response to perspectives shared by each participant as reflections meandered between thoughts, feelings and concerns for the future of the planet. Participant J (4/4/2019) suggested that within our innate perceptual faculties, we need to imagine a cyclical relationality drawn from the environment:

Think of cycles of regeneration, renewal, recycling, stuff ends… that's how the world works. So, it's not really a question of will this all finish, because yes it will…it is more how you make sure it's not the end of everything. Nature is nature, I mean this anxiety is our human way of grasping what's really big and ungraspable, but all the rest of the universe is just getting on with it- and will continue to get on with it.

Significantly, in the second case study, participants discussed what we humans need to physically do (or not do) to affect regenerative natural cycles in the environment. Three of the participants noted that ecological systems may need to collapse for something new to evolve, emphasizing the potential power of new systems that might emerge out of our species' demise. In the third case study workshop participants reasoned that this may be of little comfort now, in the twenty-first century, but that ultimately, within the frame of this practice, it suggests how people might address a sense of how humans feel beyond a singular idea of self. The research here addresses Plumwood's (2002) understanding of humanity's current self-enclosure whilst also addressing the degree to which we maintain a sense of hyperseparation (Morton, 2021) by drawing attention to the ecological matter surrounding the physical body.

Participants in the first, third and fourth iterations of the practice were permitted to share a research space but during all the post-lockdown workshops participants remained mindful of maintaining social-distancing, and facemasks were still very much encouraged. It was challenging for me as the facilitator to sense when to shift intellectual gears in these instances of *distanced learning*. The practice switched between aspects of self-touch as the methodology did not ultimately develop into skin-to-skin contact with another sentient being. Comparatively, within the frame of the online workshop, people's shared perceptive worlds shrank to the size of their computer screens. In this instance, virtual participants were given the opportunity to move away from the screen within their own homes to ensure that they were maintaining a sense of the three-dimensional space surrounding them. An awareness of tensegrity between participants, material and the architecture of their personal homes and offices manifested across the screen as participants distanced themselves from their computers.

For my part, it felt necessary to find a balance between keeping people engaged by offering a running commentary regarding what other participants were doing and where they were moving. I was aware of shouting into the microphone to compensate for the vacuum of virtual space. The narrow lens of the computer camera also meant that at times it was difficult to see what participants were physically doing if their bodies got in the way of the lens. I felt myself leaning closer towards the computer screen to compensate for the obstruction to my vision.

One of the primary challenges encountered in this research emerged through the need to support the sensorial eagerness of those with experience in the creative arts, whilst simultaneously taking the metaphorical (and literal) hand of the novice (or hesitant individual), to guide them in their sense-making insights. Whilst I recognise that it is never possible to meet everyone's expectations, the methodology sought to encourage participants to embrace the uncertainty and ambiguity of creative practice in all its forms, even those that challenged the perceptive system.

Witnessing the amalgamations and merging of material identities in the third iteration of the workshop recalled those initial variegated interpretations of what environments could mean in the first case study as participants coiled clay pots. Participant V recalled the feeling of climbing an olive tree as a child and the comfort found in being close to their mother, connecting these feelings to a sense of safety and containment (participant V, 4/4/2019). The first case study permitted participants to dictate the pace of each creative exercise, with time allotted to meander through different iterations of the same task whilst conversing about the connection between early experiences of physical contact and environmental perception. The participants were encouraged to follow a sense of curiosity in exploring their physical surroundings and to make sure they were comfortable in a shared facilitation space. They achieved this by walking, touching, listening, singing and lying on the ground. Within this preliminary iteration of the practice, each outdoor site visited was an opportunity for them to merge information gathered by their sensory receptors, whilst also highlighting the potency afforded by physical touch. For those less familiar with drawing awareness from haptic sensation, this was an opportunity to zone in on an alternative learning experience.

I witnessed and shared in their exploratory pathway as they synthesised and distilled the *felt* experience of each test site, as well as my own presence as the facilitator of their sensory world on their creative journey. The research has consistently sought to provoke small creative interventions in time by illuminating the possibility of identifying a temporal window of opportunity to anchor the physical body. This has been approached in a spectrum of ways, from acknowledging a moment held between inhalation and exhalation of the breath to allotting time to walk a circular route around our neighbourhood noticing changes in flora and fauna. These have been conceived as opportunities for mindful noticing combined with provocations for direct interventions in the form of litter-picking or the cultivation of microhabitats for insects.

Considering the design of an environmentally focused educational practice must endeavour to meet participants wherever they are on their sensory journey, for some, a breathing exercise that requires stillness and contemplation in a public space was challenging. Therefore, the opportunity to merge an incremental practice of awareness with more pragmatic endeavours helps participants expand their own sensorial parameters within the directives of inclusive interdisciplinary exercises. These opportunities to instigate micro-level ecological positives through physical movement cultivate spatial awareness through the body's dual capacity to *feel* and be *felt.* The participant's reflections suggest that the more time spent investigating the material complexity of the environment, achieved through litter picking and noticing sensorial information, the higher the value participants attribute to the ecology that surrounds, and ultimately, sustains them.

Meaningful material encounters

The use of clay repeatedly provided a particularly rich medium for nurturing thought-provoking responses from participants in each iteration of the research. It drew together different materials in a spectrum of creative exercises. The recipients of workshop packs in the second case study reiterated that each clay-based engagement highlighted how physically disassociated they felt as they grappled with the exertion required to make the clay malleable. The term *disembodied* was used repeatedly in reference to the felt sense of

near-constant mental engagement with computer screens, conceptualised as digital interfaces with the rest of the world. Anthropologist Tim Ingold (2008) highlights that the engager, by following their curiosity with materials, draws attention to a transformative zone between matter and an understanding of the relationality, of coming *into* form. Participants used clay as a vehicle to exist as part of a wider dialogue, instigating action and subsequently reacting to the nature of the material in or of their hands. Ingold (2007) uses a spider spinning its web as a metaphor to illuminate how transformative experience itself comes from being embedded within a process. The materiality of the spider's web provides an example of an embodied journey, formed *from* its body and relationship to the environment of its making. Each clay-making task has been composed of a series of creative provocations cultivated by workshop participants in dialogue with the environment they perceive for themselves. Its malleability and responsiveness enable this experience to be repeated, emphasizing clay's multifaceted recyclability and evidencing why it has evolved into such a vital material engagement for the research.

As a facilitator, I have striven towards an ambitious assumption that a perceptive legacy can be cultivated within a relatively short workshop window of practice. While the methodology continued to adapt to the pandemic the research sought to maximise any opportunity to engage with the fluidity and complexity of perception and its amalgamating channels of sensory information. The objective of this practice is to cultivate and provoke recognition that these channels exist in and draw from a damaged world. The practice encourages creative engagements with the detritus of twenty-first century consumerism. In doing so, the investigative practice combines the materiality of participant's creativity with environmental thinking, exploring how the two intersect with each other. Posting parcels containing art materials and the guidebook prior to the workshop permitted a period of self-directed investigative practice for each participant of the second (2020) and third (2021) case studies. The parcels invited participants to become familiar with the processes and practices of the creative and somatic provocations so that they could be more at ease with what they would later encounter within the schedule of the workshop.

In reflecting upon the subjective nature of this practice, I revisited my own interpretation of exercises and immersive creative languages documented across the breadth of this chapter. The objective of these creative pedagogies has been to help participants question the hierarchy of how they cultivate knowledge. Participants have provided a rich archive of material to analyse in a variety of different forms across making and movement practices. The experience of investigating how divergent awareness can be within this arena of sensory world-making demonstrates how rich the narratives we tell ourselves could be. For myself, I channelled my own environmental experiences into the design of the illustrated guidebook discussed in the next chapter. My attention to detail within the drawing process and the curation of accompanying exploratory art materials drew reference from those geographical sites revisited within each iteration of the pedagogical practice.

In conclusion, this chapter has documented four case studies across a five-year period of research. It has detailed methods pertinent to the primary objective of encouraging participants to think about how they interact with the environment around them through the use of the physical body as a tool for learning. Case study evidence suggests that clay became a vital material for interconnecting methodologies and a particularly adaptable and multifaceted tool within each iteration of the practice. A trans-disciplinary analysis of each case study sought to capture how participants responded to tasks that took place in different locations and how the occurrence of the pandemic impacted participants' capacity to engage with the ethos of the investigative study. This chapter also details my autoethnographic experience as a facilitator in different research contexts, charting how online and 'live' engagements required an instinctive adaptability born from my own psychosomatic experience of multifaceted creative practice. In terms of developing the research further, the final case study touches lightly upon the potential for furthering a somatic methodology that fosters interpersonal touch as the primary component for future pedagogies.

In the following chapter, the thesis documents the development of an illustrated self-directed guidebook. In conjunction with each case study, the guidebook sought to

communicate the ethos and directives of the practice prior to participants attending each workshop engagement. Firstly, the research references literature that contextualises how illustration can be considered an alternative mode of communication, before evidencing how perceptual possibilities were bridged within the frame of a multifaceted and specifically hand-drawn creative practice. The research also illuminates the importance of touch for the artist and the human sensory organism as it re-entered our collective societal consciousness. Linked to case study documentation the chapter maps out how the guidebook sought to circumnavigate the pandemic's curtailment of skin contact by diversifying along alternative self-touch and self-directed investigative avenues.

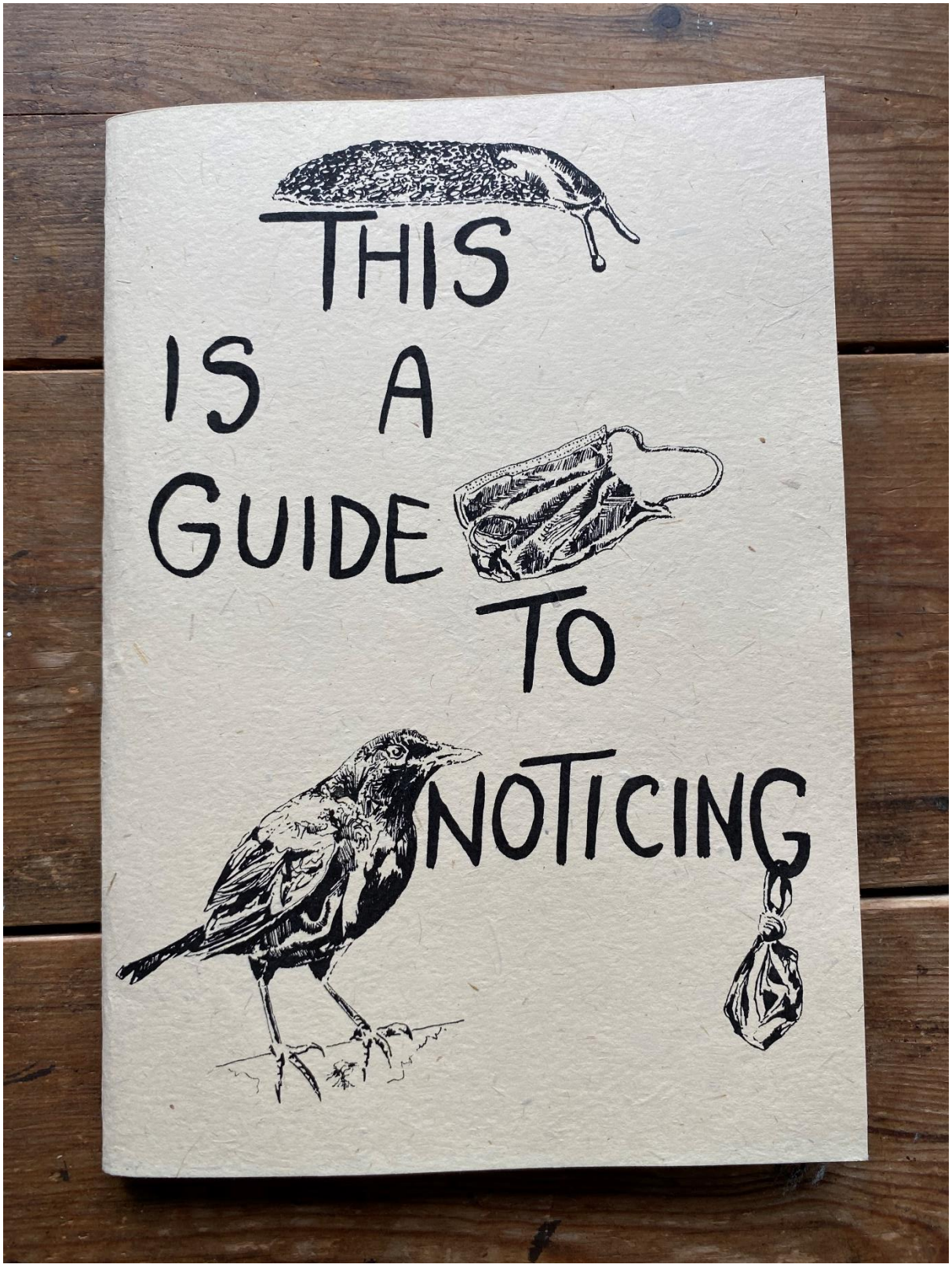


Figure 25: '*This is a Guide to Noticing' – final design for the guidebook's front cover, 2023*. Illustration © Skinner.

Chapter 6

The development of a self-directed guidebook: *This is a Guide to Noticing*

This chapter circles back to intersect with the development of the second, third and fourth case studies. *This is a Guide to Noticing* combines creative and somatic exercises in a hybridised text-based illustrative format that builds upon different techniques for nurturing sensory perception. This guidebook parallels a range of physical spaces in which to practice and encourages participants to take their time engaging with each task. Embedded within the guidebook's narrative are provocations to reflect upon habitual behaviour and suggestions of how to perceive matter (including the materiality of the physical body) differently.

The chapter identifies ways of contextualising knowledge through illustration and drawing exercises prior to delving into the development of the guide's creative provocations. The research aligns with educators who use investigative drawing to cultivate environmental thinking (Matilsky, 1992) and those who establish a shared artistic language with their participants (Ingold, 2010, Anderson, 2017, Whitehead, 2022). It identifies experimental perspectives within creative thinking that highlight and expand upon the capacity of drawing to make the sensory world visible.

The research documents a series of specific locations surrounding Sugarwell Hill Park through photographs, sketches and physical explorations of the materials uncovered at each site to further demonstrate the possibilities of an illustrated creative process. In contextualising this archive of material, the narrative reveals how my own investigative practice merged with workshop exercises that facilitated the possibilities of learning through the physical body. The experience of developing each iteration of the guidebook charts aspects of the design method that grew from my own subjective experience. Finally, the analysis concludes with an overview of the primary objectives of the final guidebook, as well as a reflection on how the knowledge has been enriched by permitting time to follow illustrative curiosity within this branch of the creative research methodology.

Perceptive investigative drawing

As an artist researcher, I found that investigative drawing expanded conceptual possibilities. I did not aim to inspire specific patterns to encapsulate a finished form but did so by framing the continuous nature of shaping *into* form, as the primary objective of its practice. Architect Juhani Pallasmaa (2009) states that: "A drawing does not reproduce the tree as it manifests itself in the objective reality; the drawing records the way the tree is seen or experienced" (p. 92). My impression is that the subject matter of any drawing continues to shift and respond to its own rhythm and material agency as it comes into form. This research suggests that subjectively, nothing that is brought into being through the art of illustration remains as a static conceptual entity. The perspective of each sensory system engaging with it is unique and therefore sees what it has been educated to see.

On each page of the guidebook, exercises depict the possibilities of threading together different approaches to engaging with this form of knowledge by using a variety of apparatus and tools. The objective of the guidebook has been to focus on creative liminal zones as a method for framing complex environmental relationships whilst foregrounding the agency of each participant. This research suggests that noticing the immediacy (and potency) of these sensory details encourages reflection upon broader habitats that further an integrated understanding of the planet's biome. With this in mind, the drawings intentionally merge macro and micro scales of perception, propagating a detailed awareness of the modulating environment each sensing body is immersed within.

In 2022 movement artist Simon Whitehead[7] published an illustrated record of his research into the intimacy and sensorial potency of skin as the body's boundary. Conceived prior to the outbreak of Covid-19, *Stitching soft matter* initially involved sewing soft gloves around a participant's hands with red thread, engaging in an exchange of effect and sensory

[7] In Chapter Three, Simon Whitehead's practice has been discussed in relation to its capacity to cross-pollinate somatic and environmental thinking within different creative domains.

reciprocity. The pandemic's restrictions led to a digitalised rendition of the creative practice in which participants were asked to send a photo via email of one hand holding another hand. This publication documents Simon Whitehead's drawings of each haptic posture that he replicated with wooden mannequin hands. Its narrative charts a monumental shift in physical possibilities and includes a series of insights and reflections on the importance of physical contact. Within the back cover of the book there are self-directed provocations printed on acetate paper which invite the reader to engage with interpersonal and site-specific touch: "Go for a walk with someone - remain in silence – Notice what touches you and where" (Whitehead, 2022- *one of four loose paper provocations*). The book contains numerous black ink illustrations of hands (both gloved and ungloved) in a variety of positions; they stretch across each page accompanied by diary entries relating to reflective feedback on the process. Whitehead's design communicates the multifaceted nature of touch by layering illustrations and photos of different pairs of hands touching themselves encased in loose gloves. The images illuminate how to experience intimacy and distance simultaneously. The physical body is conceived as an ecology of itself, a world worth investigating through the replication of haptic awareness.

The Smithsonian Institution in New York houses environmentally focused illustrative literature that guides readers in creative and ecologically sensitive provocations. Barbara Matilsky's book *Fragile ecologies* (1992) is an example of such a volume. The publication is divided between illustrations that depict drawings of ecological issues, adjacent to a creative exercise and a series of facts that inform the reader about the state of the planet. The design juxtaposes positive and negative environmental impacts and challenges the reader to make simple changes in their day-to-day routine, such as suggesting ways of conserving water in the home. The artist appears to evoke a sense of cyclical thinking between creative practices and everyday experiences that expound positive interventions. The book also reflects upon the loss of native species by asking readers to create a *Monument to Nature* (1992, p. 7); this creative provocation requires the practitioner to consider what materials best represent (or juxtapose) their feelings regarding a decline in biodiversity.

Practice researcher and artist Gemma Anderson often collaborates with scientists. She gives researchers insight into what alternative knowledge can be discovered by engaging with a cross-disciplinary haptic practice. Anderson uses exercises to focus the use of imagination to conceptualise alternative ways of interrogating visual stimuli. By evoking different ways of cultivating attention, Anderson invites participants to seek out patterns within their perceptive field. She facilitates collaborative drawing tasks that circumnavigate the verbal complexity of trying to identify a common language between scientists working in different areas of research. As a teaching methodology, it does not rely on verbal, textual or numerical data, but utilises the collective articulation of the haptic sense as a communicative tool.

Anthropologist Tim Ingold is known for his experimental outdoor teaching style. He emphasizes that knowledge "is grown along the myriad paths we take as we make our way through the world in the course of everyday activities, rather than assembled from information obtained from numerous fixed locations" (Ingold, 2010, p. 121). Ingold talks of the transition of information between surfaces; it is the awareness of this perceptual friction that manifests between the physical body and external matter that is being enhanced in this guidebook. In his writing, Ingold differentiates between the terms *wayfarer* and *passenger* in regards to how sentient beings inhabit the world (2010, p.127). By comparing the everyday practice of walking to draughtsmanship he contextualises how the *wayfarer,* as an interactive traveller, is in constant negotiation with the surfaces they meet. Comparatively, the *passenger* moves through the world without awareness of the mechanisms that afford the senses. Draughtmanship within this design process has evolved by correlating my own encounters with sites of ecological or material interest in the landscape with the reflections of workshop participants I have worked with. Interlacing these perspectives has opened sensory channels and illuminated ways of noticing awareness by exploring different approaches to physical engagement within each subsequent iteration of the guidebook.

In parallel with Tim Ingold's anthropological perspective regarding how to imagine the particularities of physical terrain, Anderson likens drawing to walking, stating that, "lines are

pathways, not just for the feet or the hand or the eye, but for the mind, pathways from one idea to another" (Anderson, 2017 p. 123). As an artist I recognise that drawing has nurtured my own creative learning pathway, an embodied response through which perspectives have shifted within the landscape of my mind. In Tim Ingold's paper *Bringing Things to Life: Creative Entanglements in a World of Materials* (2008), he reflects that it is within this zone of shifting perceptual engagement that matter and concepts blur together, flowing and leaking in a constant exchange of affect.

Architecture teacher Carolina Rojas insists that the practice of repeatedly tracing an image enables the assimilation of successive forms to be imprinted into the drawer's psyche: "If someone traces and repeats this procedure several times, they will then be able to trace the image by memory without the need for mechanistic aids, which leads to the skill of automatic drawing" (Rojas, 2015 p.12). This proved a transferable method for my own investigative drawing through the duplication of each guidebook penned in preparation for the second case study, and the subsequent re-design of each iteration of the guidebook prior to it being digitally printed. Repeatedly drawing from memory stimulated incremental changes in how the designs manifested on the paper, yet maintained a clear thematic thread within the context of each illustrative narrative.

In their analysis of different approaches to drawing, Rojas (2015) demarks the tacit fields of possibility within which illustration is created "with the explicit intent to communicate" (p. 2). Likewise, through the analysis of how children learn about conceptually challenging ideas such as *time*, Sophie Rudolph and Susan Wright suggest that drawing holds the capacity to surpass language as a mode of learning; "…in comparison to visual metaphor, written and spoken language can be somewhat limiting […] with regard to their ability to describe abstract concepts" (2015, p. 488). Therefore, the research has investigated how illustration circumnavigates the need for explicit instructions regarding how precisely to communicate the personalised nature of the experiencing environment. By skirting a propensity to rely on language to communicate, the guidebook combines surreal and instructive imagery,

endeavouring to frame a series of perceptive challenges that simultaneously inform, question, and cultivate a sensorial identity for the reader.

Woven stories: The origins of *This is a Guide to Noticing*

At the end of the first case study, it became apparent that a method for cataloguing exercises and tasks would enable the research to be effectively recorded for subsequent iterations of the workshop. Therefore, a series of visual aids and rough sketches established the foundation for an illustrated form of self-directed creative notation. During this research period, the guidebook was reshaped and redesigned to include a range of creative provocations and environmental noticing exercises that explored relationships between materials and the materiality of the body. My daily practice of sketching and making incremental adjustments to each composition has shaped a myriad of illustrations that communicate complex and thought-provoking exercises. Each provocation elicits a rich and multifaceted learning experience that provides a repository of knowledge that participants can revisit over time.

The first case study in April 2019 evoked a spectrum of rich and multifaceted responses from participants that included charcoal drawings, verbal reflections, and clay sculpture. The intention for the second case study was to record, map and analyse the terrain adjacent to the site participants had investigated. With the onset of the pandemic, I ended up exploring these pockets of green space by myself. The outcome was a series of drawings which captured the objects and litter I came across in the landscape (figure 26, p. 116). I revisited these sites to track how features in the landscape shifted and changed from day-to-day. As I moved, I noted what information I habitually filtered out while walking i.e., litter, damaged branches, bags of dog poo etc. Over a three-month period, this mapping practice became centered around eight sites of interest, localities in which I would spend time gathering as much sensory information as possible. These experiences delineated sense-making, sensing of self and the perception of what surrounds the body. The objective of the exploratory process was to curate a space in which people could reflect upon the multifaceted information that sensations afforded (particularly touch) on a day-to-day basis.

Unfortunately, government guidelines regarding physical contact made it challenging to pursue these tactile methodologies, yet the deprivation of touch also highlighted how vital it is and how detrimental its absence can be to mental and physical health (Durkin, Jackson, Usher, 2021).

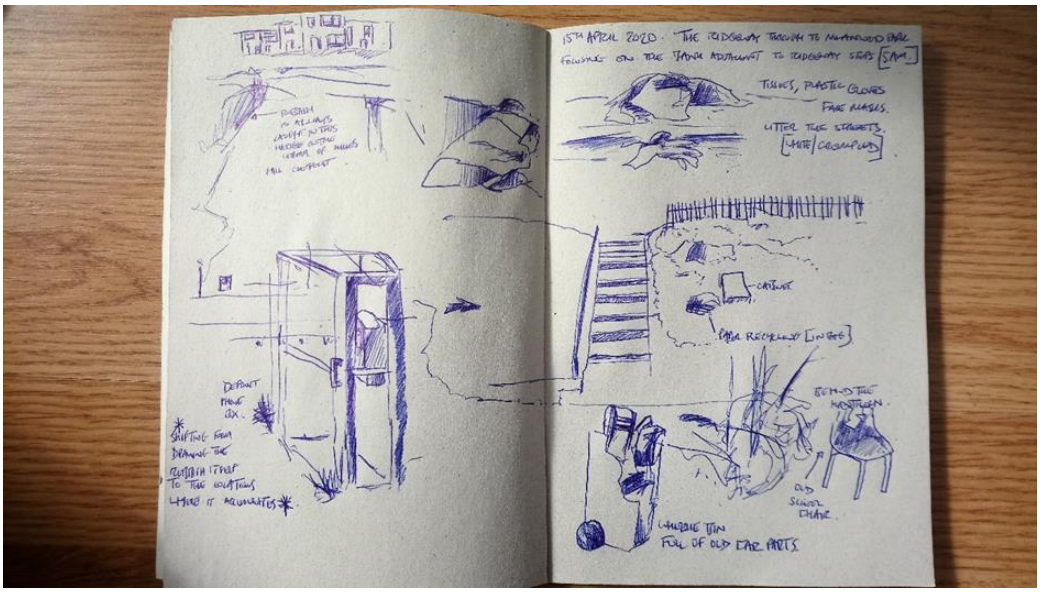


Figure 26: *Sketchbook notation, mapping fly-tipping sites around Sugarwell Hill Park, Leeds, 2019.* Illustrations © Skinner.

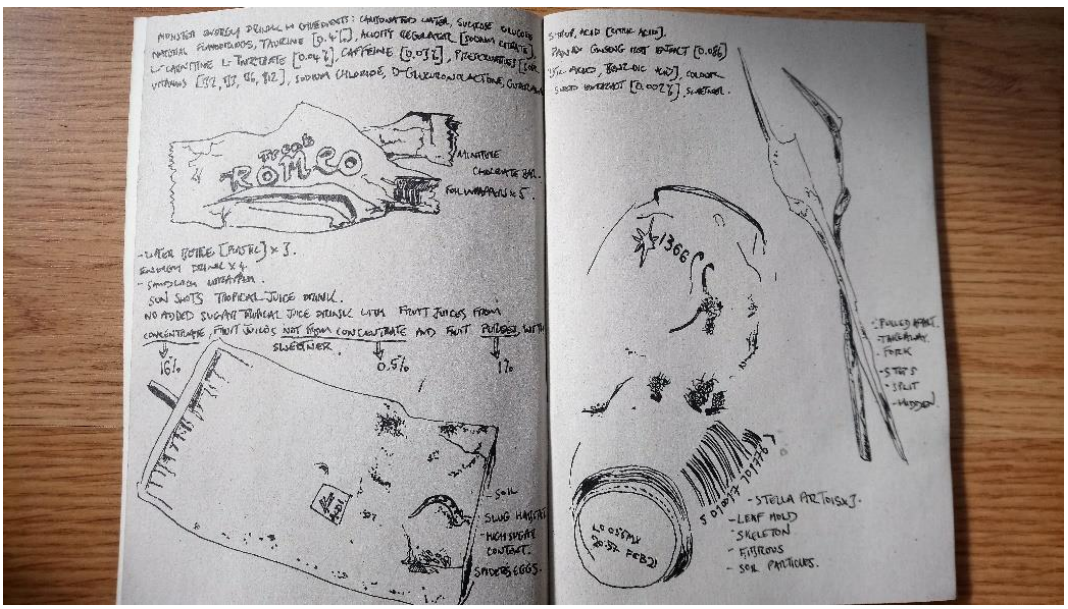
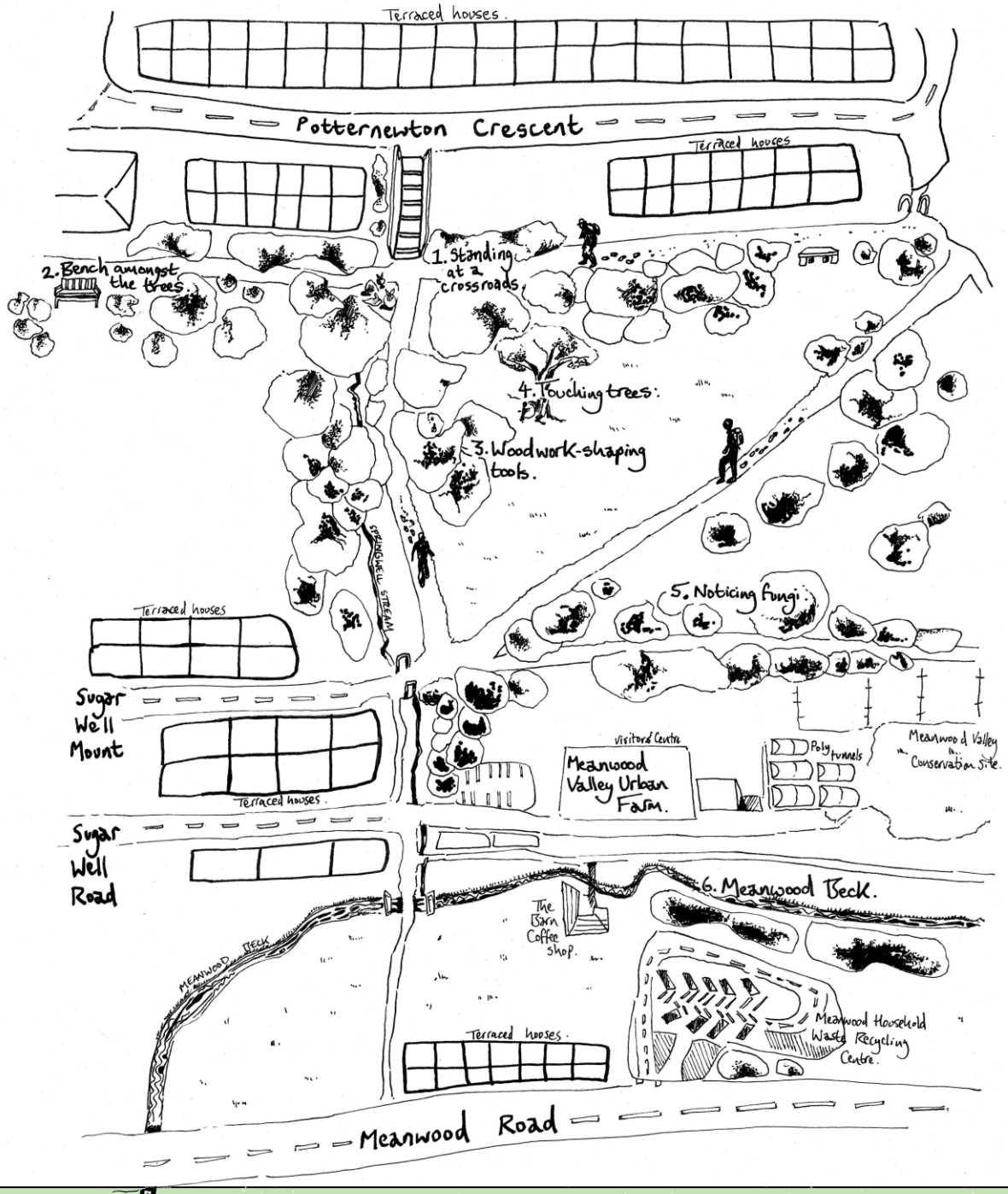


Figure 27: *Practice research, mapping test-sites around Sugarwell Hill Park, Leeds, 2019*. Illustrations © Skinner.



The walking route between each location always seems to elicit a felt response that is overwhelmingly sad… I repeatedly witnessed the disregard/ disinterest for environment. Surely, if we did all appreciate how truly integrated humans are with environment, we'd do our upmost not to damage it? (*Notebook extract*, Skinner, 2019)

These sites of interest formed a circular route that passed through Sugarwell Hill Park, a Leeds City Council wood that yields a green corridor into the heart of the city centre of Leeds. The map (above) depicts the route that also intersected Meanwood Valley Farm which was visited by participants in the first case study. By altering how I articulated my physical body at each site i.e., lying on the ground, keeping my eyes closed for extended periods of time, walking backwards in a circle etc., I noticed how time spent cultivating awareness fostered a visceral feeling that generated a cyclical intention to seek out new information about my surroundings. This exploratory practice coincided with my participation in the *Thinking Through Things: Object encounters in the medical humanities*[8] ECR training programmed by the Wellcome Trust, London. As an agreed condition of participation, researchers were required to contribute a written text or creative output to be published on *The Polyphony*, a blog curated by a collective of scholars based in the medical humanities. I penned a reflection on the work of artist Audrey Amiss[9] whose sketchbooks and accompanying documentation of packaging and litter struck a chord with my own practice of investigating what people discarded in these localities.

Connecting sites: Bridging perceptual landscapes

I asked two local conservation volunteers[10] to accompany me on a walk to experiment with and test the feasibility of different sensory exercises at each site. This section of the thesis discusses a selection of these sites, highlighting reflections from the two volunteers. It evidences how these initial experiences evolved (in conjunction with participant feedback) into an illustrated environmental learning process. As duos, we spent time at each site, viewed as a passing curiosity in the landscape by walkers and onlookers. One of the volunteers noted that this was because "it is unusual to witness people taking time to

[8] I became aware of the ECR training day when its advertisement caught my attention on the email network Artynet. I attended the event in London on the 12th of February 2020 with a view to engage with researchers working in interdisciplinary fields. However, I was the only candidate with an arts background working in practice research and therefore approached each provocation very differently to others in attendance.
[9] Audrey Amiss was an artist whose work resides in the Wellcome Library catalogue. Amiss attended the Royal Academy School of Art in London and was diagnosed with paranoid schizophrenia at the age of eighteen. Her catalogues of food packaging, junk mail and detailed notes documenting her daily experiences, have been archived by the Wellcome Library (Carter, 2018) https://wellcomecollection.org/works/rdqj9wsy
[10] The volunteers came from a local working group known as the *Sugarwell Hill Gang*, recruited during a conservation activity day that I took part in on the 27th of September 2020.

reflect or seemingly do very little in these shared green spaces" (Volunteer 1, 14/8/2019). We agreed that a moment of eye-contact or a smile in the direction of those walking past signalled that we should not be viewed with concern.

Location 1: Standing at a crossroads

- **I asked the volunteers:**

- *What items can you see around you?*

- In what ways are they connected and disconnected from their surroundings?

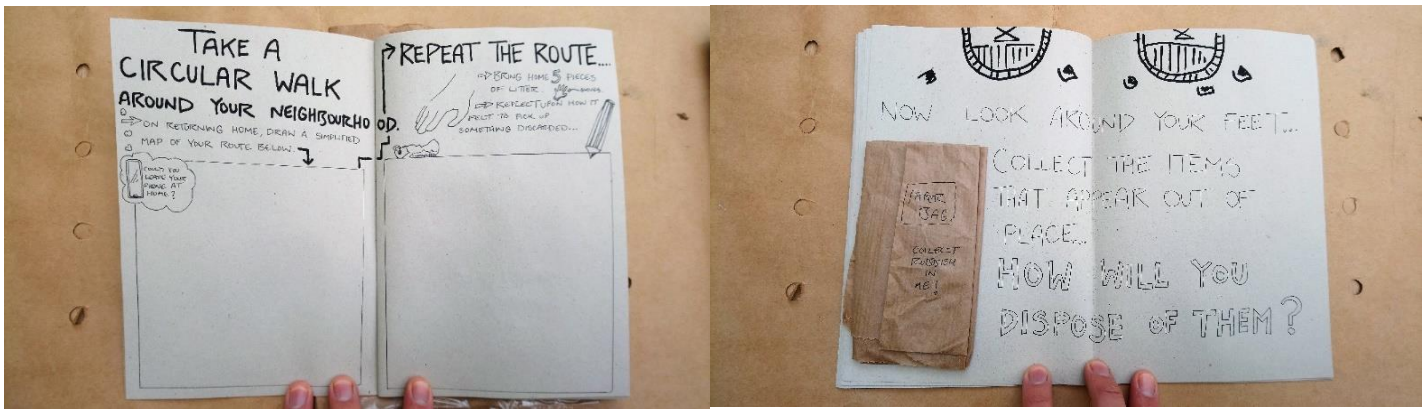
-What (if anything) have you thrown away today? Make a list….

(Skinner, 2019)

I met each volunteer at a crossroads between two footpaths popular with dog walkers and those heading on foot towards the city centre of Leeds. The location is also a popular fly-tipping site where new items appear each day in an accumulation of household waste and builders' rubble. My initial verbal invitation to each volunteer was to itemise and analyse the composition of the surrounding rubbish to spark a discussion regarding what is habitually thrown away in our day-to-day lives. During the pandemic, these fly-tipping sites grew exponentially as the council shut their recycling centres and rubbish bins were sealed with *Environmental Crime* tape. According to volunteer 1, the way I had articulated these initial questions (see box above) was too accusatory: It was suggested that "it felt like you were victimising the rubbish… the material could have been blown by the wind- it's not the fault of the litter wherever it ends up" (Volunteer 1, 14/8/2019). Whilst my intention was never to instigate a feeling of guilt from those engaging with the practice (or the physical material we picked up and analysed), I recognised a need to connect what participants noticed around them in the vicinity and their own day-to-day relationship to waste. In response to this fly-tipping site, the first iteration of the guidebook included a paper bag to collect different materials that participants found around them.

Figures 28: *Photographic evidence of fly-tipping sites around Sugarwell Hill Park and the closure of litter bins, Leeds, 2019*. Photo © Skinner.

Figures 29 [left] & 30 [right]: *This is a Guide to Noticing- a first draft of a provocation to take a walk and pick up litter, 2020.* Illustrations © Skinner.



The guidebook's provocation is to collect litter in the vicinity; analyse the physical composition of each item; think about its origins, and ultimately imagine where it might end up in the world. Depicting a gloved hand reaching for and making contact with items of litter (Figure 31) provides a direct demonstration of how to interact with various types of waste. The same hand is then shown to be grasping a pen to list items that the participant themselves feel responsible for throwing away. The goal is to highlight the physical body's capacity to do both- to reflect upon the part they play in accumulating litter and to implement a positive intervention by picking it up and disposing of it responsibly.

Figures 31 [left] & 32 [right]: *This is a Guide to Noticing- a second draft of the litter-picking task with additional information regarding where the rubbish itself might end up, 2020.* Illustrations © Skinner.

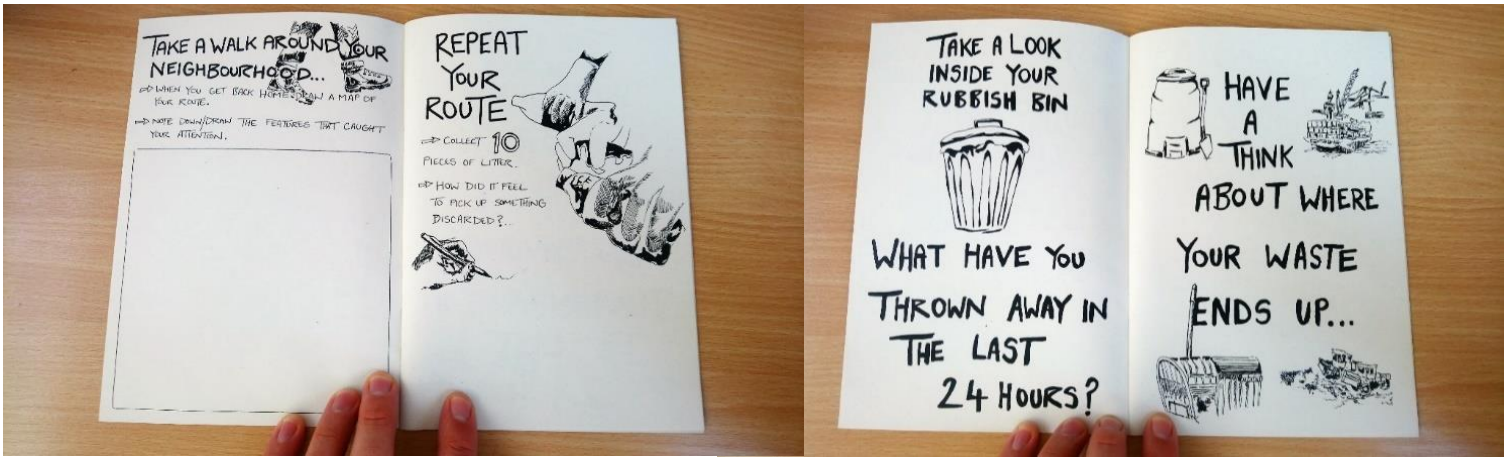


Figure 33: *Test-site location two- a bench amongst the trees. Sugarwell Hill Park, 2019*. Photo © Skinner.

Location 2: A bench amongst trees

The objective of this second site was to find a way of encouraging each volunteer to find a quiet location to pay attention to a sense of interior space within the body. Prior to the engagement, I scripted a short provocation that I read aloud to each volunteer, pausing between each line to give the listener an opportunity to let the words sink in:

Example: Test Script (14th August 2019).

-Find a place to sit in the vicinity and think back to the route you have walked today.

- Imagine your eyes are sponges soaking in everything around you; take your time to look around…

- What appears to be still and what is moving both within your immediate surroundings and also in the distance…

-Is there a strong wind? Are the clouds moving in a particular direction?

-Where can you feel the air against your skin?

- Can you imagine sending your exhalation out to send the clouds scudding across the sky?

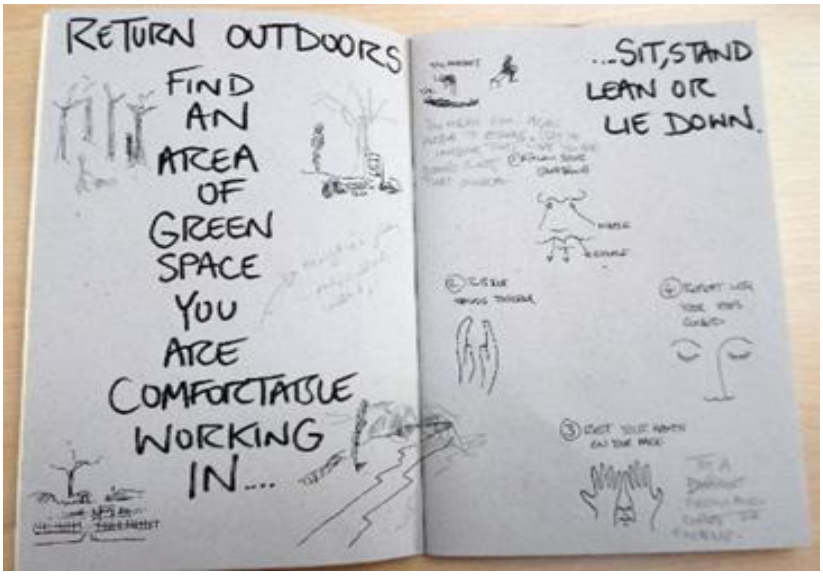
-Take a series of deep inhalations and exhalations feeling the back of your ribcage in contact with the bench behind you; if you are seated on the ground place your hands gently on your ribcage to help you feel a little resistance.

-Let your eye find a building or prominent tree within your visual field- send your breath out towards it and imagine that same air looping around your chosen object and coming back towards you.

-Through the 'lasso' of your rhythmic exhalation and inhalation, focus on the detail and proximity of your attention; are you drawing the object to you or are you being drawn to it? How does your perception of space shift as you breathe? (Skinner, 2019).

The volunteers were asked to have their eyes closed within the narrative of the exercise which promoted a sense of perceptual uncertainty at this location. In translating this task to the guidebook, the challenge came in curating an illustrative language comprehensive enough to be understood as a provocation the reader could grasp before closing their eyes and settling into the practice.

Figures 34 [left] & 35 [right]: *This is a Guide to Noticing- first and second draft exploring how to make participants feel comfortable in their surroundings, 2020.* Illustrations © Skinner.



"Your instruction to inhale, touch hands and touch my face demonstrated the possibility of following a sequence and I tried to repeat it for half an hour. I found that it opened up a sound world that I had not paid attention to before […] Repeating the action made me really aware of touch and helped me to land in a new place" (Volunteer 2, 14/8/2019). This feedback emphasised how this exercise could be perceived as a cyclical practice, with each cycle being an opportunity to delve deeper into different aspects of sensory perception. Closing the eyes appeared to allow the participant to pay more attention to what they heard around them, encouraging a sense of three-dimensionality.

The first guidebook draft suggested participants find a space suitable in the context of their surroundings, mindful that not everybody would have access to outdoor space. The text split the page down the middle, foregrounding the lettering and lessening the impact of peripheral sketches that depicted examples of practice locations.

The second guidebook draft reimagined the position of the participant's body within the spatial detail of their environment. Here, four circles depict a blend of habitats ranging from a garden step to an area of scrubland inclusive of fly-tipping waste. Encircling an invitation to 'stand, lean, sit or lie down…' the design endeavours to communicate a sense that the reader has options of how-to physically articulate the body in space therefore foregrounding a feeling of inclusivity. The circles suggest bubbles through which to enter different states of awareness whilst remaining situated in the everyday world. The intersection of these bubbles fosters a sense that these investigative zones are connected and therefore, whilst an ideal locality might be imagined, the practice can in fact take place anywhere.

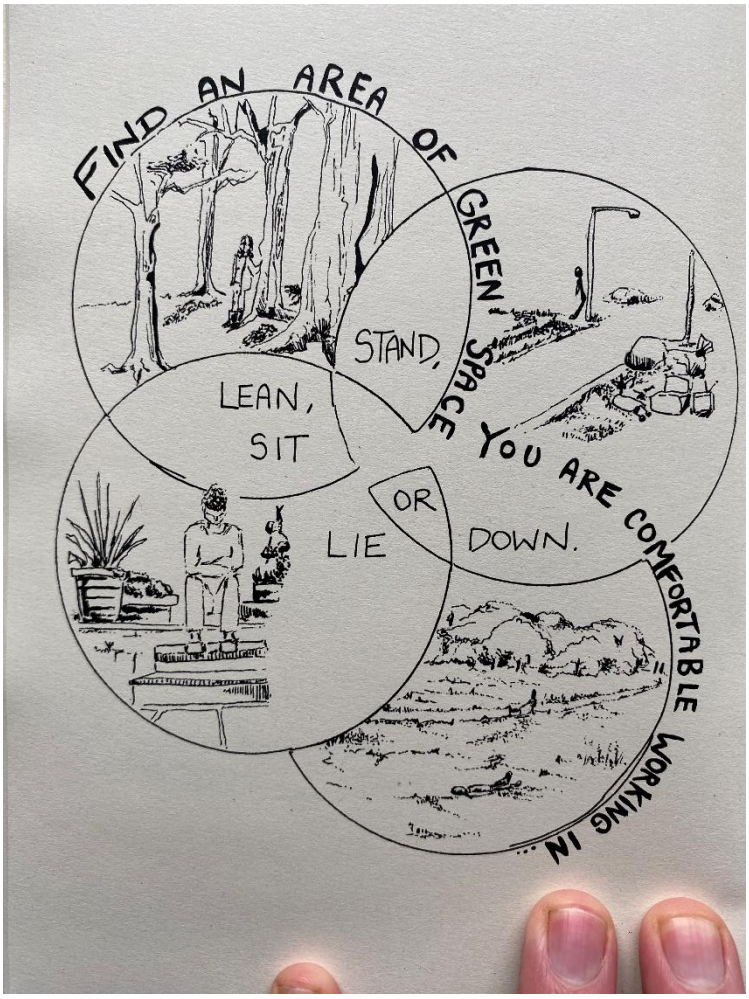
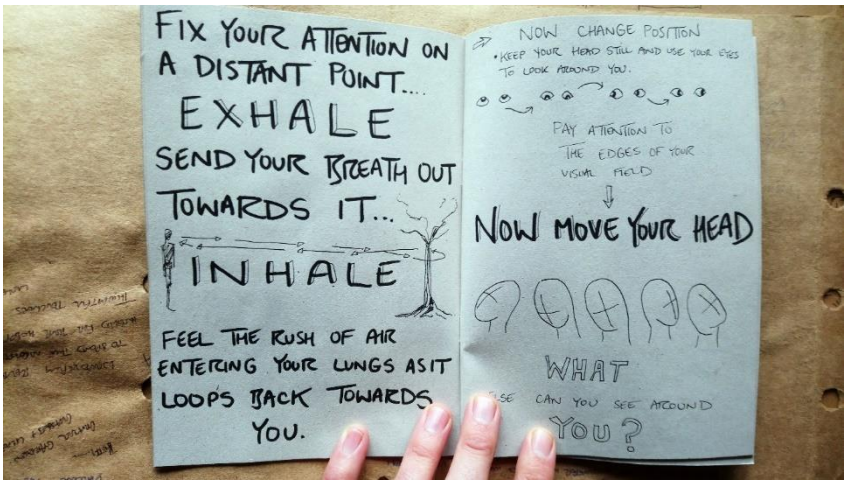
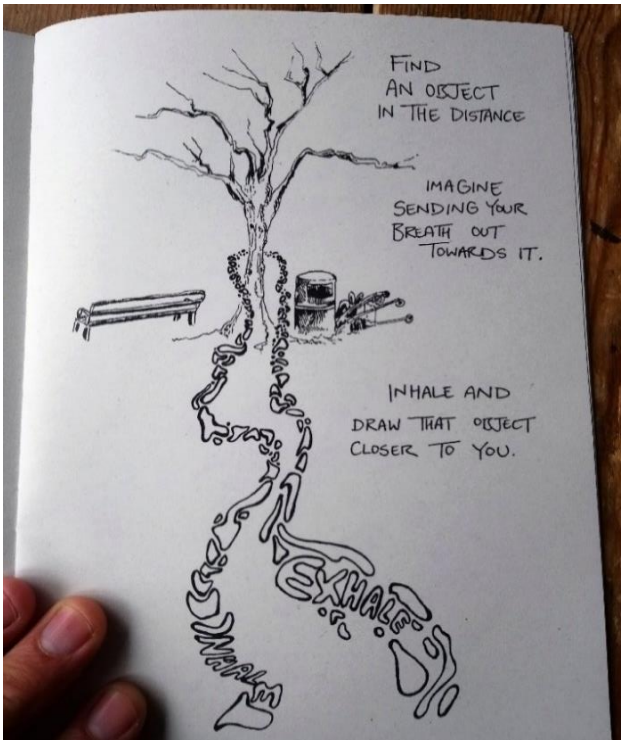


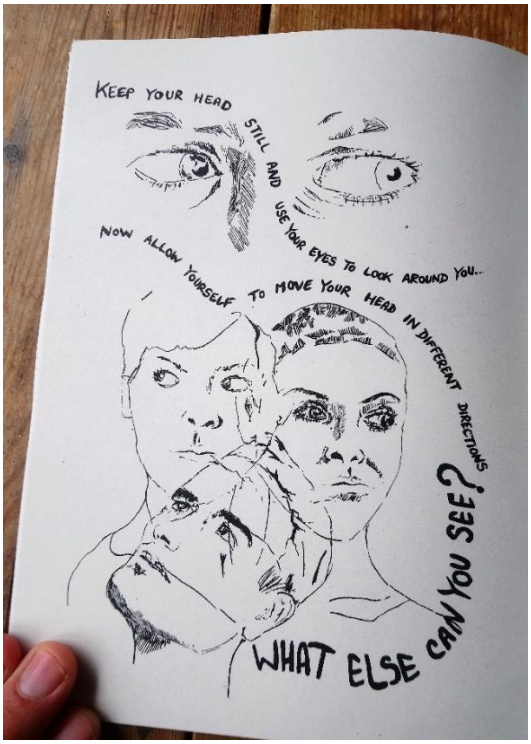
Figure 36: *This is a Guide to Noticing- the first draft of a breathing exercise, 2019*. Illustrations © Skinner.

The second and third guidebook draft included the addition of a sensory task that sought to connect the inhalation and exhalation of the breath with what was visible in the eyeline of the volunteers standing amongst the trees. The objective was to imagine a particular feature in the distance being drawn closer by the participant.



My intention was to avoid overcomplicating the illustrative composition by keeping the eye and head movements separate from one another. However, the irregularity of the design meant that clarification was sought within each iteration of the practice such as detailing the exact position of the head. Whilst a set of movements affords a detailed visual field, the provocation was to follow a sense of visual curiosity. By overlapping a select series of portraits (figure 37) in the third draft, the illustration aims to draw attention to a concise yet varied engagement with three-dimensional space around the body. The portraiture has been designed to feel fluid, visually taking in as much as possible through the directionality of the eyes. The composition demonstrates how to lift the chin to afford an alternative vista or turn the head to look over the shoulder to see what might spark a new sense of spatial awareness. If the participant has a limited range of movement, there is no requirement to cause themselves discomfort by turning their head a particular way.





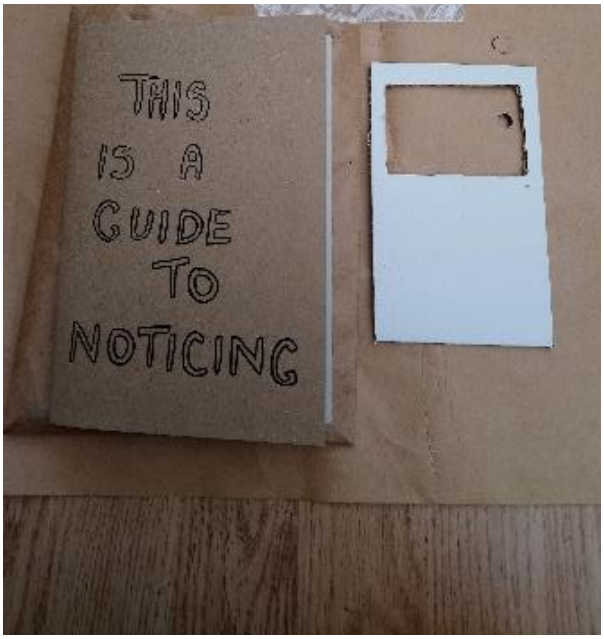
Figures 37: *This is a Guide to Noticing- the second draft of a breathing exercise [left] and the third draft of an exercise designed to help participants explore the potential of their visual field [right], 2019-2020.* Illustrations © Skinner.

Location 3: Woodswork- shaping tools

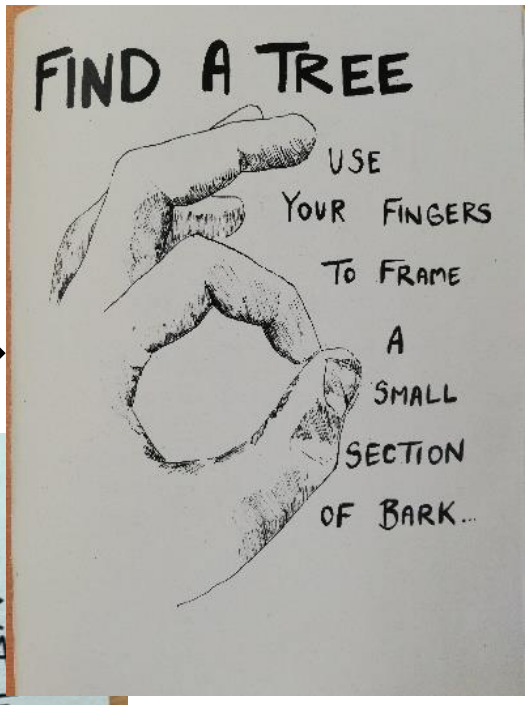
My intention was to include a tool within the design of the guidebook to help participants zone in on the properties of a specific material or found object. This tool needed to be easily constructed out of recycled materials and sturdy enough to be included in packs posted out to participants. Two- and three-dimensional prototypes were trialled with the volunteers: a cube-shaped frame was deemed too intricate to put together as it lacked tensegrity and was easily compressed. The objective of the tool was to help participants in framing, sketching, and describing the specificity of objects they uncovered.

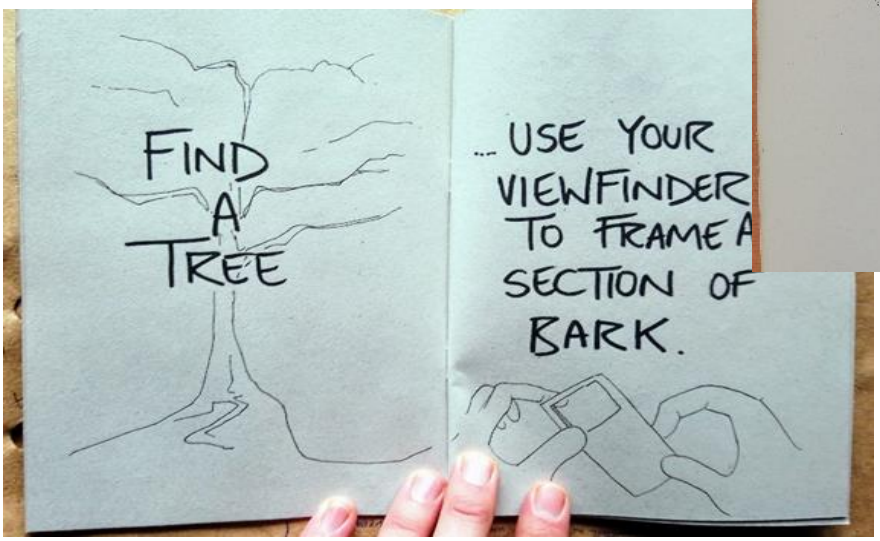
Figures 38: *Trialling different tools designed to help participants and volunteers frame objects and materials found on the ground, 2019*. Photo © Skinner.

Figure 39: *Designing guidebook viewfinders, 2019*. Illustrations © Skinner.



Guidebook illustrations were adapted to reflect this switch from promoting the use of a cardboard frame to curving the fingers of the hand into a circle around a point of interest.





The photos (Figure 38, p. 125) capture a series of investigative moments in which the volunteer is zoning in on the specificity of a particular material. The exercise sought to instigate conversation about the physicality of natural and synthetic materials. Ultimately, a simple rectangle of cardboard was found to be most practical for this activity. It was included in the first guidebook pack posted out to participants (Figure 39). However, in further edits, the frame was deemed superfluous by participants in the second case study as they felt their hands could frame areas of interest just as easily. Here, the research gained from incorporating haptic shaping into the methodology, as it effectively interconnected with subsequent exercises that focused on touch in location four.

Location 4: Touching trees

The objective of the script (below) was to contextualise how to approach contact with the surfaces of a tree. I have included my field notes (in green) underneath each section of the script to demonstrate the narrative of an ongoing critical reflective practice within the division of each haptic proposition of the exercise.

Figure 40: *Experimenting with different ways of approaching physical contact with trees, 2019.* Photo © Skinner.

A key consideration of the research has been to inspire participants to experience direct contact with materials in their surroundings and to give them an ongoing incentive to do so. The language around encouraging these meeting points has felt particularly challenging to articulate as a facilitator:

<u>Test Script (10th August 2019)</u>

-Trace a pathway with your hand from the point at which the roots emerge from the ground up the trunk of the tree as high as you can reach. Circle the oak and repeat this action comparing the level of moisture, noting which side was more/less lichen on it.

[It felt important that participants sustained contact to appreciate the variety of textures inherent in the bark of each tree. The opportunity to repeatedly engage and disengage with the surface draws attention to our capacity to zone in and out of a focused state of awareness].

-Lightly rest a hand on a branch, allow your fingers to encircle it paying attention to what your hand is reading of its surface. Close your eyes and see if there are any details that spring to mind without the use of your visual field…

[The emphasis here is to play with the potentiality of variability and scale through touch- the hand can lie flat on the trunk of a tree, or the fingers can encircle the circumference of a branch. By including information regarding the dexterity and placement of the fingers prior to asking participants to close their eyes, the guidance gives them an opportunity to find a comfortable resting place before (potentially) feeling vulnerable by closing their eyes in a public place].

-If you are unaccompanied rest your free hand on the back of the one tracing the tree, sense how this doubled sense of touch informs you of each hand's dimensions and sensory pathways. –Alternatively, with your free hand, explore one of the textured sides of the viewfinder comparing the ridges of the bark to the smoothness of the geometric shape.

[Here the script offers a variety of narratives to follow regarding the touch of one's own skin in comparison to that of the bark, and the capacity for the sensory system to appreciate both at the same time. This simultaneous touch and touching presents a chance to experience the two-way flow of sensory information within the parameters of a very particular exercise.

-Grip the branch again and apply a light downward pressure before releasing it, allow it to spring back; follow the reverberations of the branch as it bounces until you feel it has come to rest. [Lastly, we introduce the capacity to affect change that in return enriches the sensory experience of the body. The reverberation of the branch and its dissipation provides an opportunity to question when and where the movement originates from- does the tree ever stop moving?...]

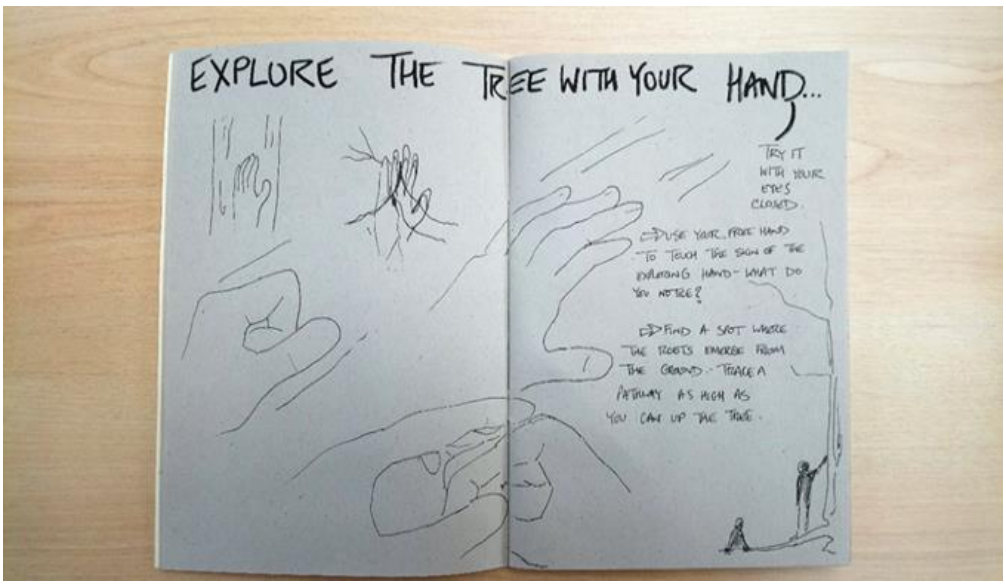
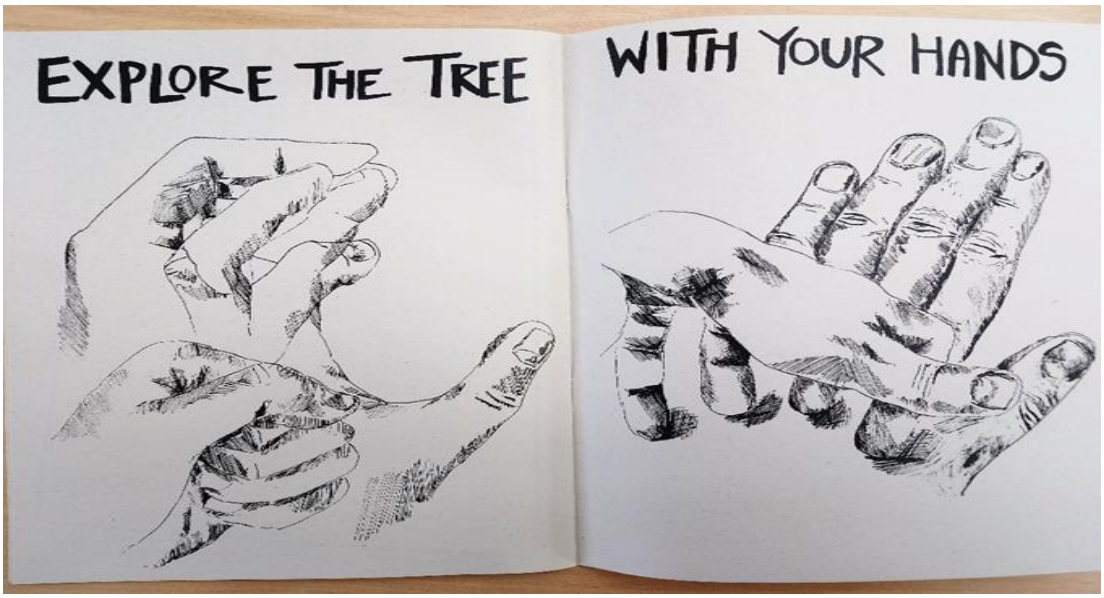


Figure 41: *This is a Guide to Noticing- first draft[right] and second draft [below] of illustrations designed to demonstrate how to touch the bark of a tree, 2019.* Illustration © Skinner.



Having experimented with haptic sensitivity before engaging in the third case study, participant G offered feedback by asserting:

> This score felt like a ritual… actually, a lot of the exercises have a ritual quality to it, you find the tree, you touch it, you talk to it....there was something about it almost spell like, a pagan ritual perhaps....I don't know if you have looked into rituals? Rituals can be interesting in relation to shifting perceptions. There is something in the experience **that makes doing something more than the doing in itself**, it takes on symbolism, often it becomes more meaningful, intimate and personal...ultimately it can really offer a sense of connectivity. And in terms of shifting behaviours - as behaviour is linked to our habits and patterning, rituals can offer re-patterning.

This reflection from participant G (10/7/2021) highlights how the repetition of these touching exercises shepherds a sense of intimacy, a resonance between the material of the tree and the physical body. The articulation of the hands and their proximity to the surface of the bark being investigated aimed to emphasize how the unfamiliar can become haptically familiar over an extended period of practice. The *ritualist* quality evokes a connection both *meaningful* and *intimate* for the participant, qualities that impact the agency afforded to materials external to that of the physical body. Volunteer 2 (14/8/2019) reflected that time spent in close contact with the tree afforded an alternative sense within different sites we were investigating:

> I had a weird sensation when we walked back up the path, I felt a sense of something ominous… those thin trees…it felt like I was being watched ..they were all standing there and I don't think I would have had that same reaction had I not touched you and touched the tree and had a sense that they are one of the same. It's almost like an empathy but it's not, it's a connection and I've walked up that path before and not noticed those trees before, I had a sense that I am in this land, in their space.
>
> (Volunteer 2, 14/8/2019)

In this instance, I had offered my own physical hand as a surface to explore in contrast to that of the bark. After completing the task, the volunteers were asked to remain with their eyes closed and to recount what they experienced within the frame of the exercise:

> Touching the hand and the tree was very interesting because the difference was so stark to begin with but then I had this knot of wood and then I found your knuckle and your bone and the feeling became very similar….but up until that point it wasn't. When I let go and felt my own hand touching the tree I had a really odd sensation because it went from being soft on your hand to really hard on the back of my hand. I felt the bones of my hand working to grip the tree and then the longer the hand lay there, the sense became softer and the tree became harder and more of a thing.
>
> (Volunteer 1, 14/08/2019)

Here the volunteer experienced the warmth and malleability of another's skin in contrast to the particularities of the tree's bark. This accentuated why it was essential to include elements of touch within each iteration of the practice. Cycles of relational feeling demonstrate how perceptual layers intersect with one another, affording the participant the capacity to follow their own curiosity within the frame of the exercise. This reflection emphasizes how a sense of interpersonal touch shifted the volunteer's perception of the tree, permitting bark and bone to become interchangeable. In this instance, by noticing material similarities, sensorial boundaries fostered new forms of perceptive knowledge.

The continuation of the Covid-19 pandemic furthered the cultivation of ways to investigate the potency of self-touch as interpersonal touch became even more limited. As government guidelines advised the populace to keep a two-metre distance between people, the narrative of this exercise on physical contact focused on the dexterity and sensitivity of the participant's fingertips in contact with different parts of their own hand. For example, the thumbs of both hands were used to map the circumference of the other digits as they curved inwards towards the palm (see Figure 42).

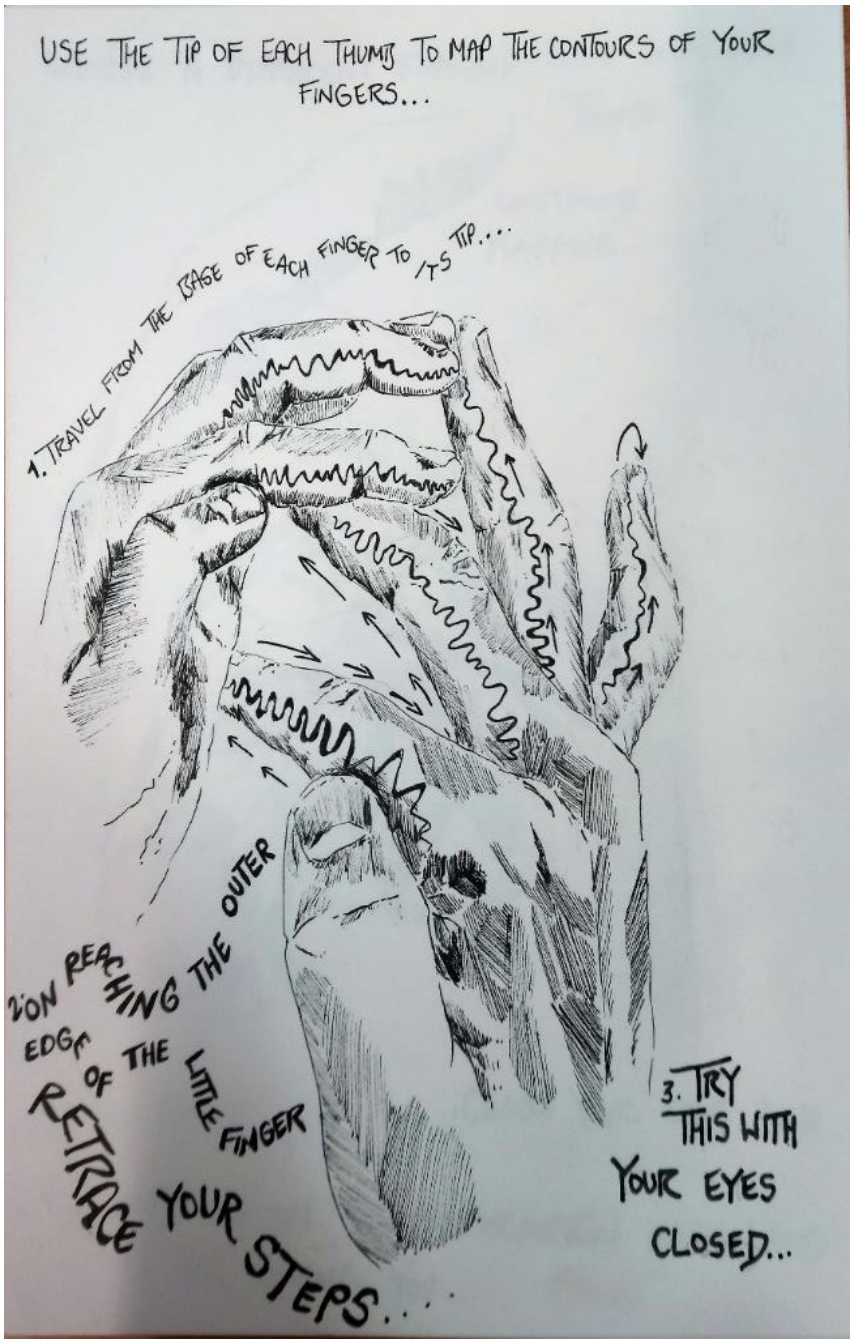
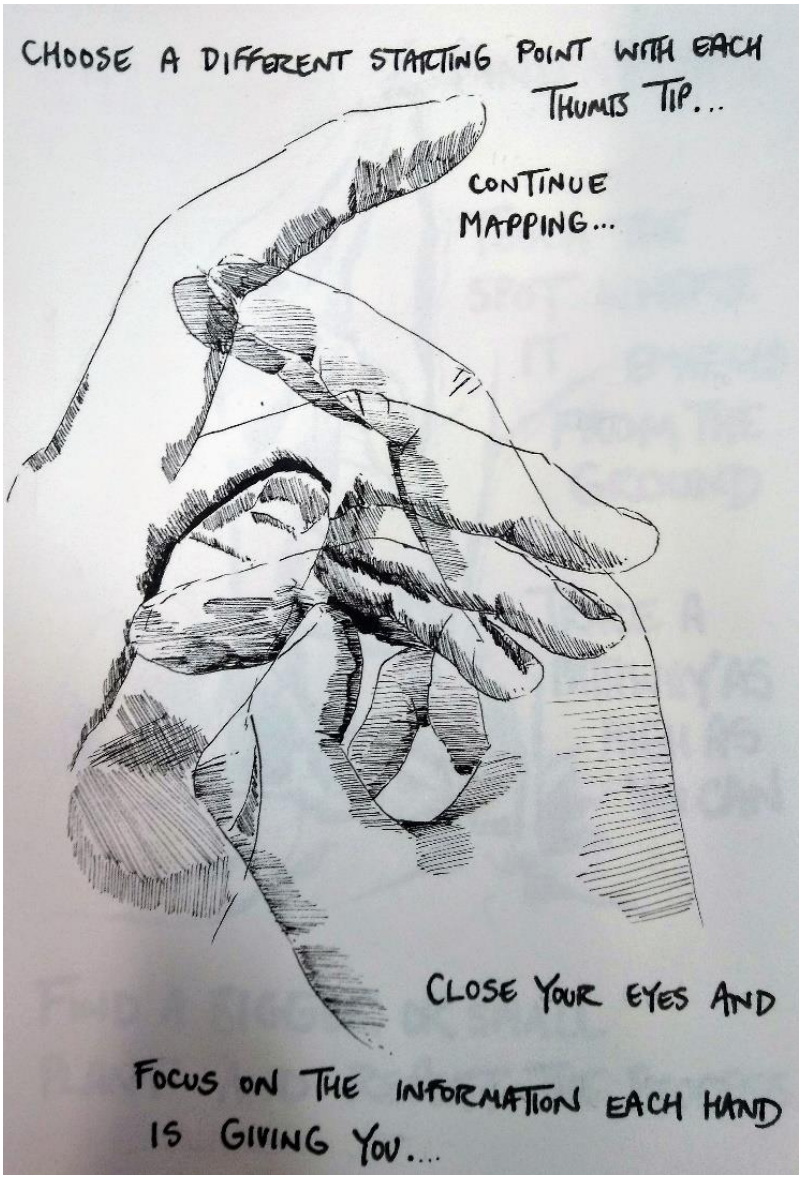
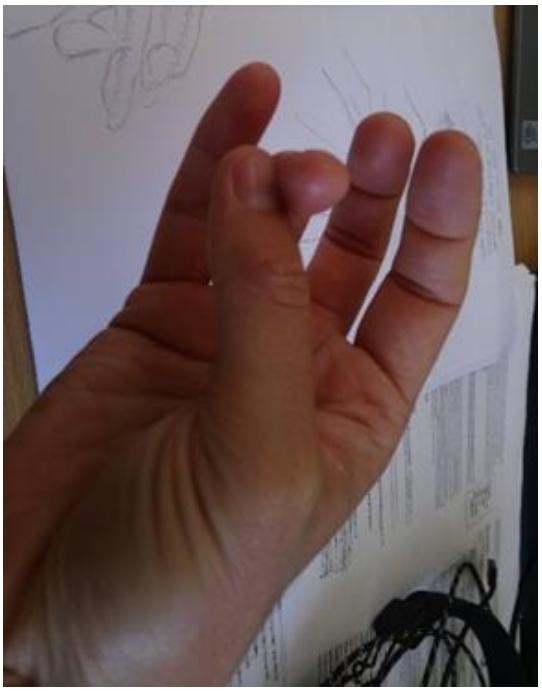


Figure 42: This is a Guide to Noticing- using my own anatomy to help illustrate different ways of exploring the contours of the fingers, 2020. Photo and Illustration © Skinner.

The depiction of haptic movement within the illustration of this exercise proved useful to participants. By maintaining a textured, sketch-like quality to the anatomical shape of the hands, the illustration appears to be etched into the paper instead of consisting of a solid block of shade. Its linearity enables each hand to be layered on top of each other without seeming to overcomplicate the composition.





Figures 43: *This is a Guide to Noticing- illustrating how to use the thumb to map the contours of the other fingers, 2020.* Photo and illustration © Skinner.

The first guidebook sketches used to communicate this haptic exercise depicted a series of hands touching parts of a tree. Feedback from participants suggested that the sporadic nature of their placement across the page meant that it was challenging to work out the sequence the exercise sought to communicate. For the purposes of the second case study, each participant's guidebook was drawn by hand which led to a degree of variation between each point of contact depicted. The designs used my own anatomy to model each action, one hand would form the necessary pose whilst the other would draw. The second and third iterations of the guidebook were digitally printed. In these instances, I dedicated time to texturing the surface of the skin and exploring ways of communicating depth through tone and shading within the original compositions prior to printing. The illustrations sought to draw the eye to the converging dimensions of each line by crosshatching and overlapping the edges of each pose to make it appear as though the hands touched.

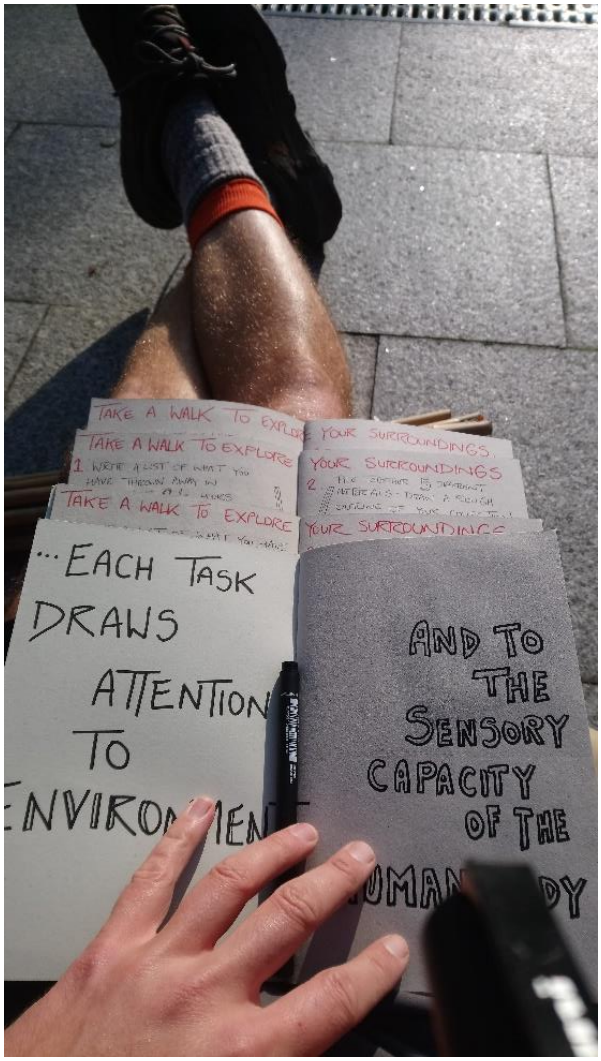


Figure 44: *This is a Guide to Noticing- illustrating multiple copies of the guidebook in preparation for the second case study workshop, 2020*. Photo © Skinner.

Location 5: Noticing fungi

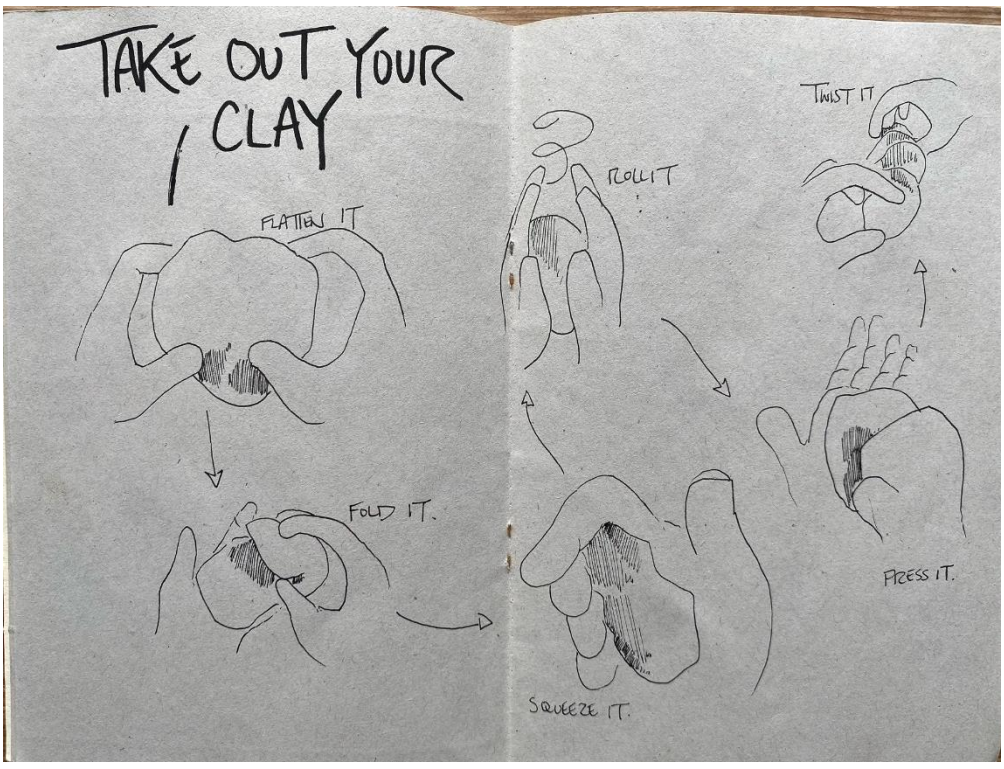
This section of the chapter branches out to reflect upon a selection of relationships between specific materials and the physical body that emerged during the initial exploration of Sugarwell Hill Park. Both volunteers observed different types of fungi growing in a variety of places as we walked. Volunteer 1 (14/8/2019) noted that they seemed to emerge from the bark of trees like *landmarks*, making invisible networks visible to those walking past. The term *landmark*s felt particularly poignant and proved helpful in the development of an illustrated task that invited participants to mould fungi out of clay and to leave it somewhere they could revisit. The provocation to revisit where the fungi had been placed, aimed to gather further information about how the materiality of a piece of clay shifts and changes over time. The following insight was offered by a prospective participant who had been unable to take part in the third case study due to Covid-19: "The guidebook clay task made me slow down and spend time with the details of a place, a plant, the clay itself… I felt as if I had a relationship with it. I appreciated the life around me" (Participant I, 10/7/2021). The clay enabled the participant to find a sense of grounding, a relationality that required them to spend more time attending to the details of the environment.

In the same case study (and due to logistical postal issues) a parcel containing the guidebook and materials had taken longer than expected to be delivered. The clay had solidified as a result. Instead of simply abandoning the task, the participant showed creative initiative by soaking the clay slabs in water until the material became malleable again; noting that, "I enjoyed noticing the transformation and attempting (repeatedly) to revert it back into a malleable state" (Participant I, 10/7/2021). Haptic interactions with the clay elicited different tactile experiences, such as sluicing it through water and appreciating the feeling of their hands encased in a weighty viscosity. Participant G seemed particularly pleased to have an opportunity to get their hands dirty:

> Our hands got beautifully mucky…[shame, I don't have a picture of it, I couldn't operate the camera with my hands in that state]. We let our hands dry in the breeze ...again, beautiful to witness the change of the material ...from wet to dry to crinkly.
>
> (Participant G, 10/7/2021)

This commentary reflects how participants identified and invested in the shades of haptic dexterity, the nuance of experience as the moisture evaporated on their skin. The particularly porous quality of clay sparked conversation regarding our human ability to sense both inside and outside of the body, particularly through the sensitivity of the hands to the gentlest breeze. The hardened clay and the moist bark of the tree were both compared to the vibrancy and warmth of direct skin contact. Participant G (10/7/2021) mixed soil, found locally, into the clay, creating a hybrid material that felt gritty to touch. The same participant suggested that I research and label the origins of all the materials in the pack to emphasize the diasporic nature of the contents. This reiterated a particular fascination with the idea of connecting materials and therefore binding different places together. This interconnection rather poetically mirrors the network of the mycelia that this whole exercise sought to emulate, linking back to the locality of the fungi and their conceptualisation as *landmarks* as we traversed Sugarwell Hill Park.

Figure 45: *This is a Guide to Noticing- a first draft of an illustration used to help participants prepare their clay, 2019.* Illustration © Skinner.



A double-page warm-up for the hands (composed in response to participant feedback in the clay-coiling exercise of the first case study) was included in the guidebook. The goal was to increase haptic dexterity whilst also generating the material's malleability and to introduce a series of basic moulding techniques for those unfamiliar to the practice. The initial illustration (figure 45) shows a simple outline of each hand movement whilst the redesign (figure 47) overlays the compositions, emphasizing the nimbleness of the fingers in motion.

Mushroom moulding sketches: These sketches demonstrate how the design process of the guidebook stripped back the composition of each fungus to a minimalist outline. The first (hand-drawn) iteration of the guidebook contained very little detail about each fungi species (Figure 46).

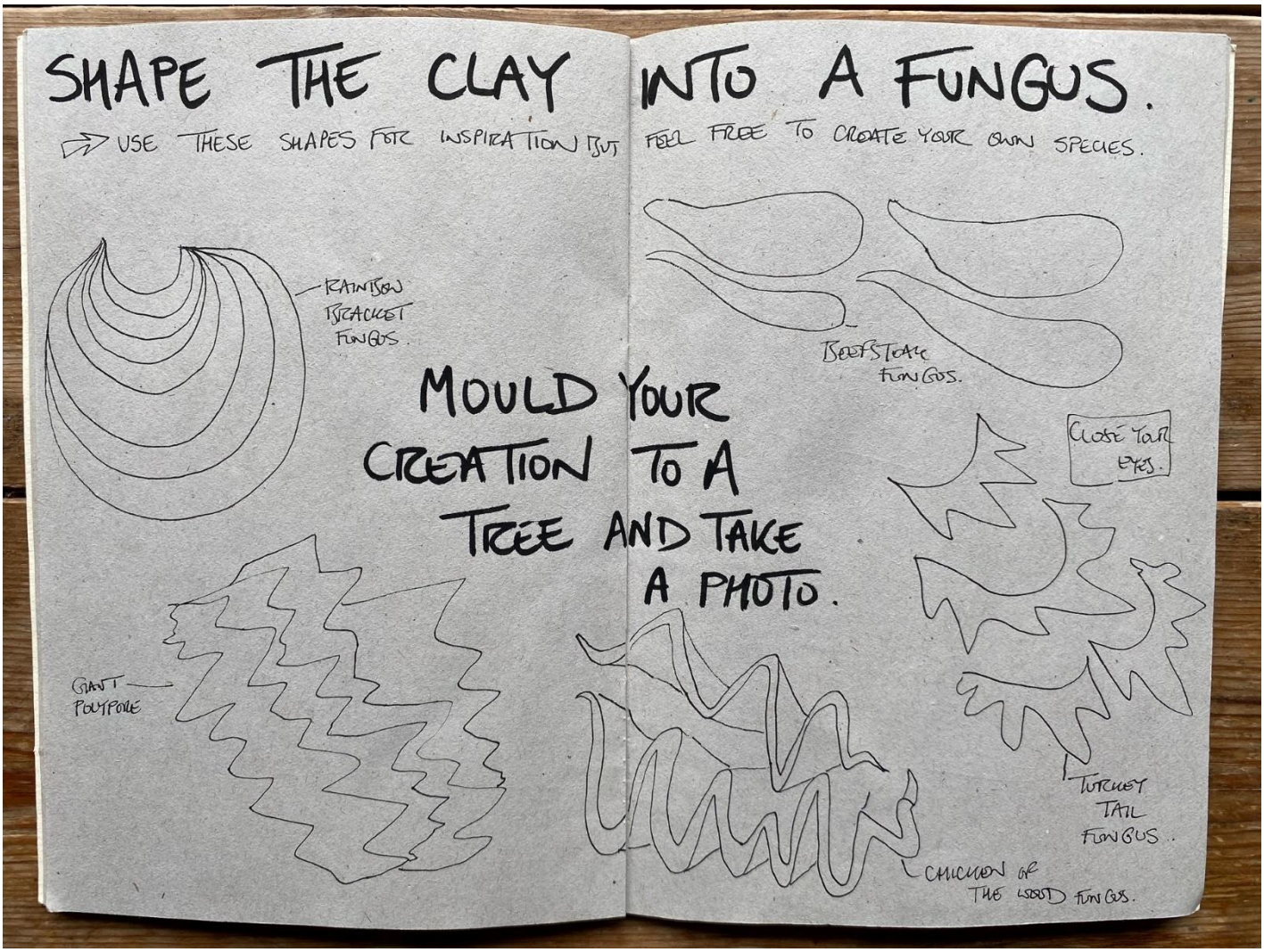


Figure 46: *This is a Guide to Noticing- a first draft of an illustration showing five different fungi shapes, 2019.* Illustration © Skinner.

Darkening the gradient of the shadow within the folds of the clay by cross-hatching and shading, gave the impression of depth and texture. A detailed illustrative study of eight fungi found in the U.K provided inspiration for the participants to reference or create their own hybrid variation of the fungi. The responsiveness of the material and its capacity to be reshaped multiple times meant that participants were provided with a medium that transformed as the participants invested time and energy into the exercise.

Figure 47: *This is a Guide to Noticing- a redesign of the clay moulding fungi exercise illustration, 2020.* Illustration © Skinner.

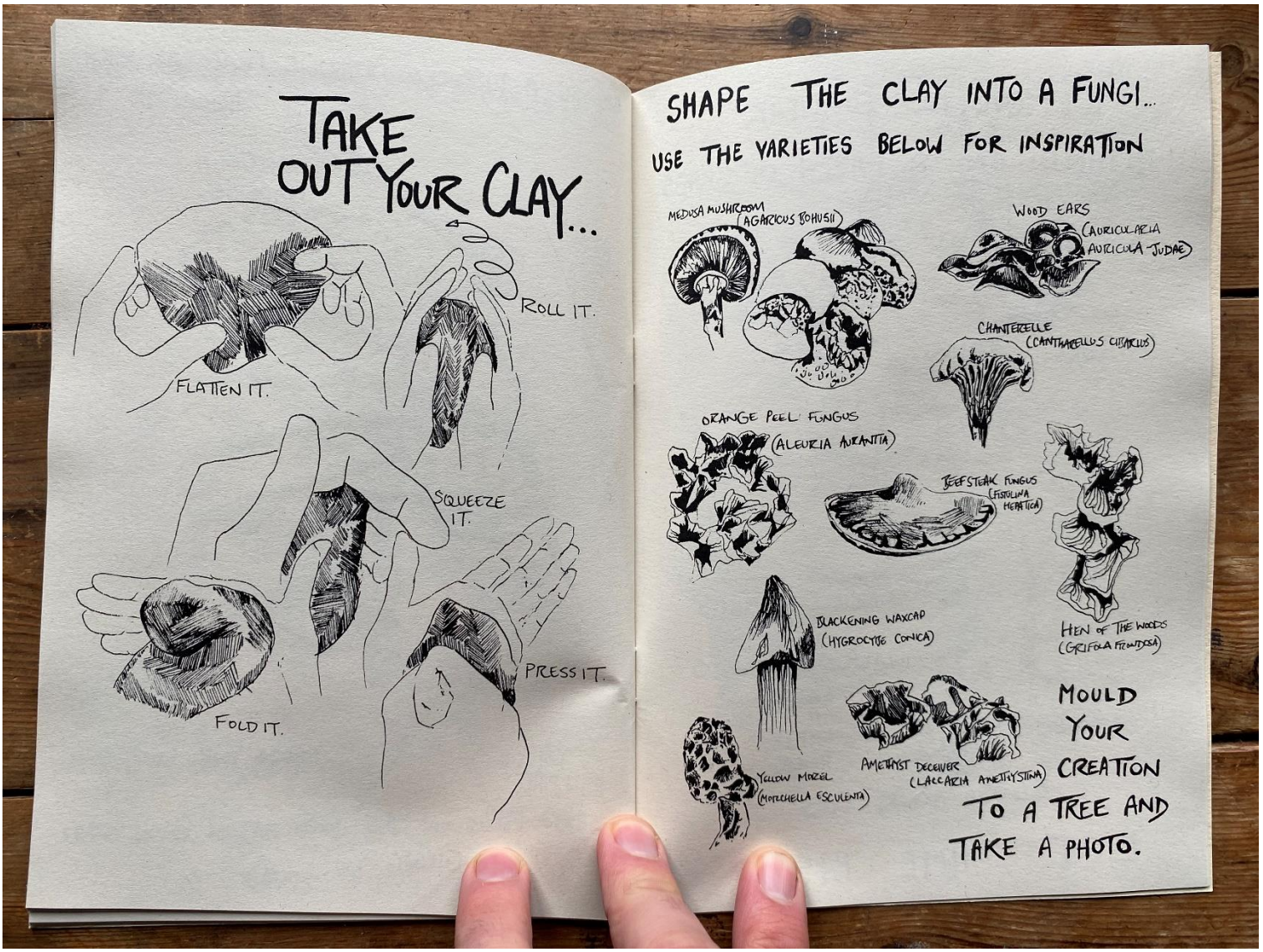


Figure 48: *Photographs taken by participants of their clay moulding creative practice, 2019*. Photos © Skinner.

On revisiting their clay sculpture participant observations included how tiny lichens nestled within stones, attached themselves to the absorbent material of the clay and how insect tracks could be traced across the clay's surface.

Figures 49: *Participant V's sculpted fungi, 2020.* Photo © Skinner.

Figure 50: *Participant's sculpted fungi, 2020.* Photo © Skinner.

Four of the participants from the second case study (online) split their clay into segments and moulded multiple fungi in different localities. The photographic evidence was sent to me on the 7th of December 2020 in response to a request for feedback and insights gathered from further engagement with the self-directed practice. The images demonstrate how these clay fragments were shaped and placed in different locations. Participants from the third case study [and that had been unable to attend the 'live' workshop] continued to spot fungi in the days following their experimentation with the guidebook: "Making the mushroom shape was lovely after we had spotted the big mushroom the day before, …[it was] one of our landmarks for the other mapping score, so it felt that score was continuing. It then made us talk about mushrooms, and we spotted some more…so it opened up our perception to the mushroom life around us" (Participant I, 10/7/2021).

Location 6. Meanwood Beck

The final investigative location on the Sugarwell Hill Park map ran adjacent to the Meanwood Beck waterway. Participants of the first case study (1/4/2019) had previously visited this site as a spot to contemplate and explore the waste materials visible in the strata of the soil. The rubbish in the waterway was noted by the volunteers: “it took me ages to see the plastics but when you see one bit then you see them all, my brain just wants to see the natural things. I feel conditioned to not see the plastics – it is everywhere... I don’t want to focus on the stuff we’ve put there” (Volunteer 2, 14/08/2019). The objective of returning to this site was to see how the two volunteers would respond to being asked to submerge their feet in the water close to the rubbish embedded in the bank. Volunteer 1 declined the offer, but volunteer 2 was willing to step in they asserted that: “People might be resistant to taking their shoes off, but the shock of the cold is very powerful. Sitting on the bank means your brain can go elsewhere and with your feet at an angle...the current moving across your ankles – heightens the sensation. When I put my shoes back on my feet were cold, but I could actually feel them inside the shoes” (Volunteer 2, 14/08/2019).

Figure 51: *Volunteer 1 reflecting upon the rubbish on the banks of the Meanwood Beck, 2019.* Photo © Skinner.

Here, the research demonstrates how vibrantly the physical body invigorates sensory information for those engaged in the practice. Volunteer 2 gained a sense of their feet’s sensitivity and the habitual way they are bound within a material that separates them from the surface of the ground. After the experience of cold water, volunteer 2 was asked to stand barefoot on the bank and close their eyes to imagine the geographical source of the spring feeding the waterway they stood beside. The intention was to cast the mind’s eye off

upstream, to imagine the length and directionality of a distant point that manifested in the audible and tingling sensation of water around their feet.

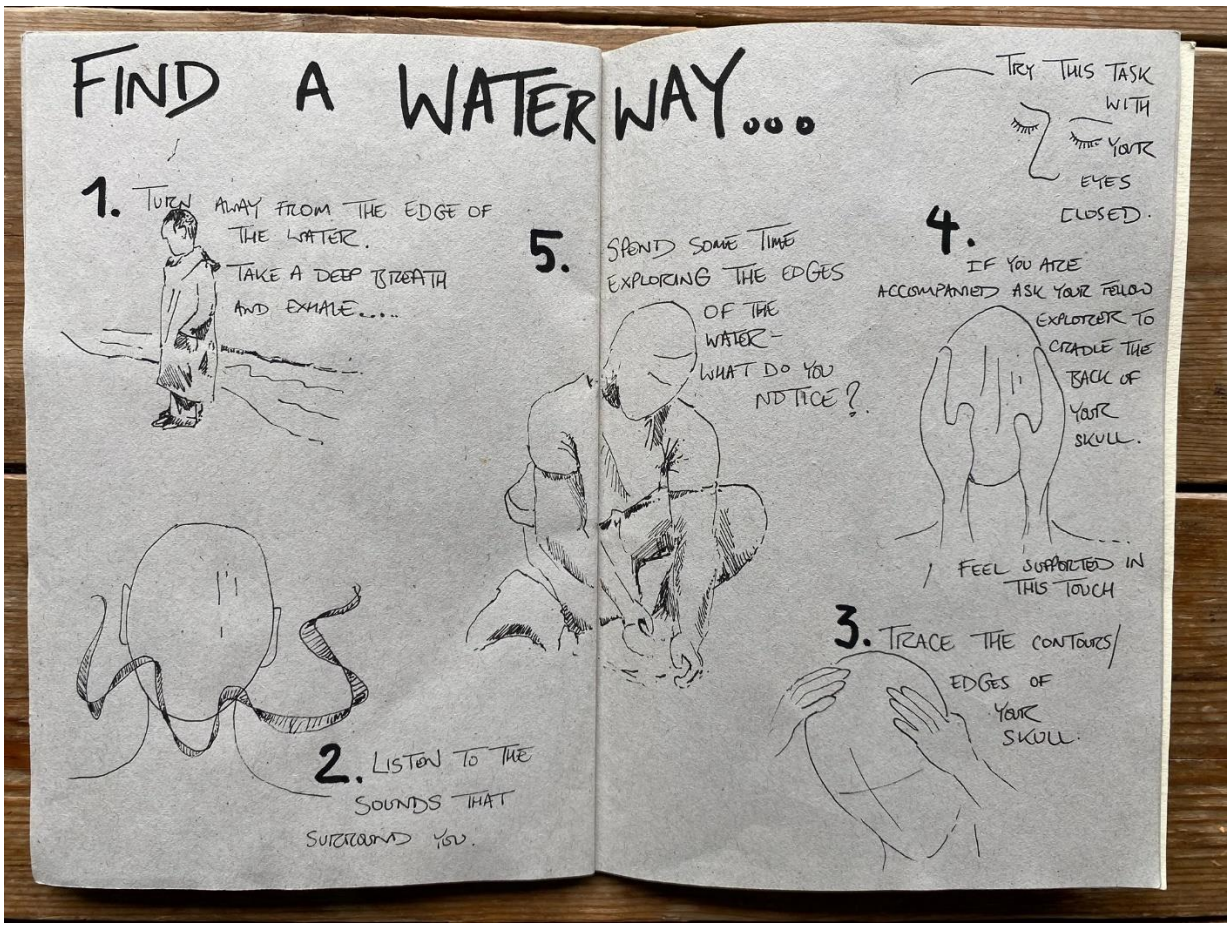


Figure 52: *This is a Guide to Noticing- the first draft of an exercise designed to help participants cultivate sensory knowledge in relation to water, 2019*. Illustration © Skinner.

Volunteer 2 was physically drawn downstream by the pull of the current. Their response in maintaining their balance afforded a varied and complex experience of interconnected and multisensory stimulation. My presence as facilitator meant that they felt safe enough to be playful with the momentum of the water, noticing the sensation of being pulled off balance as they closed their eyes in such a precarious situation. They found that they could "reach for something without grabbing it, I could reach for something gently… reaching for it across a seemingly great distance" (Volunteer 2, 14/08/2019). In transferring this exercise to the guidebook, the illustration focused on five specific tasks for participants to complete prior to putting their feet in the water (Figure 52).

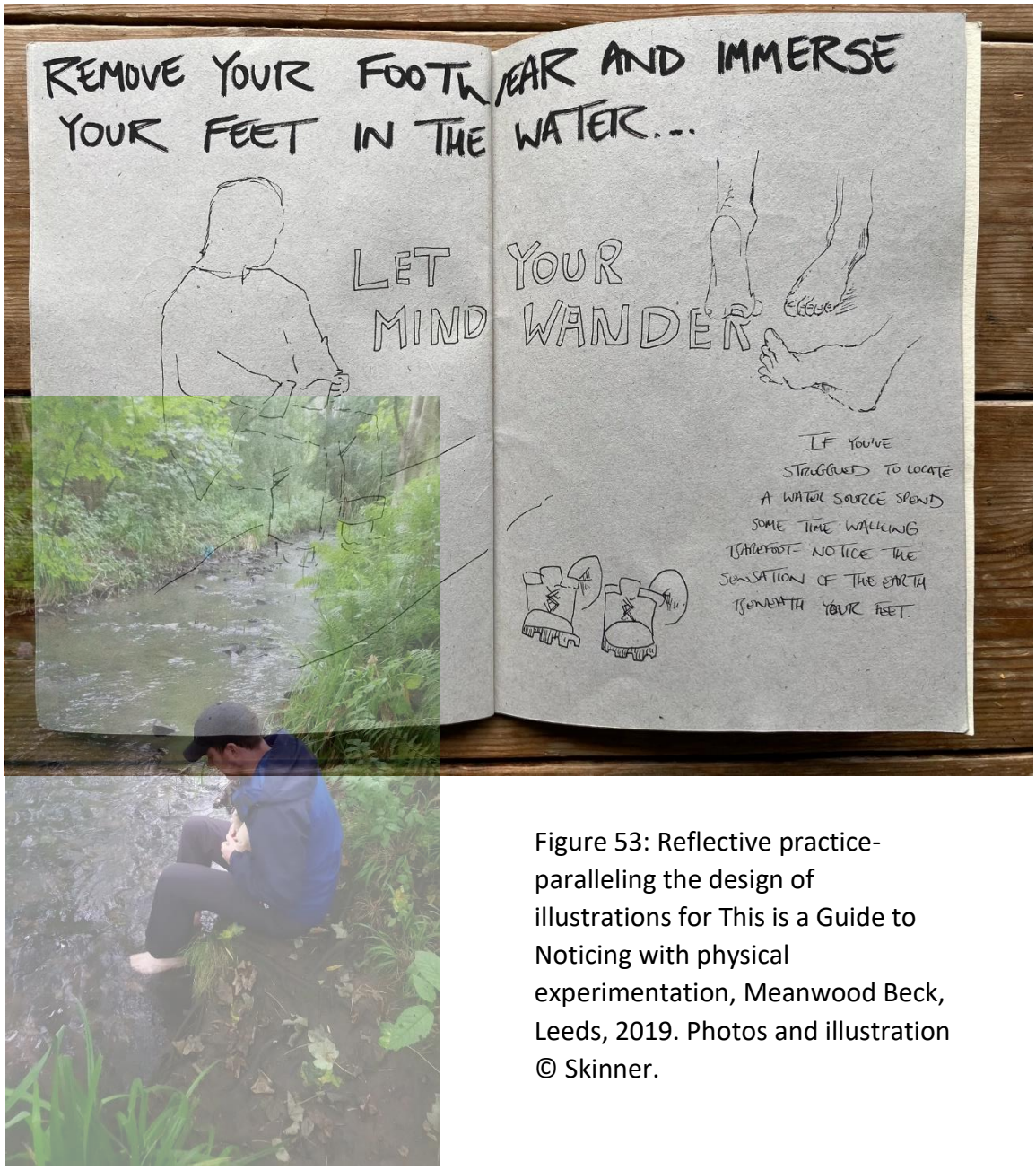


Figure 53: Reflective practice- paralleling the design of illustrations for This is a Guide to Noticing with physical experimentation, Meanwood Beck, Leeds, 2019. Photos and illustration © Skinner.

Case study workshop participants consistently highlighted that access to a waterway might not be possible for all those engaging with the guidebook. However, this concern is acknowledged and reflected in the placement of the provocation. It is introduced at the end of the guidebook so that it can be skipped completely if necessary. During the facilitation of the second case study (online), participants joined the session from Canada which, at the time, was covered in thick snow, yet they welcomed the opportunity to engage with the practice in the warmer months.

In response to further reflections and observations from the second case study which took place online (27/11/2020), participant D emailed an account of their experience engaging with this exercise adjacent to the River Wear in Durham on the 30th of November 2020. Their post-workshop reflection felt both poetic and pragmatic, a reference to the complexity of everydayness. Their recollection of using a disposable coffee cup, of noticing the number of cigarette butts on the floor and the contamination of a river by their very presence within it. This excerpt of their writing brings different facets of noticing the environment together; it is an eloquent demonstration of how rich paying attention to the art of awareness can be:

> After experiencing the nature by mindful breathing and looking and contemplating, I set out to collect the things that were out of place. A piece of gum in the shape of a perfect sphere, someone must have played with it in her hands after spitting it out; the coffee cup that I bought on the way here, which has been empty for quite a while but I still hadn't found the bin for it. Two cigarette stubs let fall by languid smokers. In the end, the peace was disrupted only by my presence. After folding them three times I managed to put my meandering thoughts in the paper bag. But it was not large enough for my body.
>
> I am contaminating the water by the flakes of dead skin on my feet. But for how long has it been clean, since cleanness has been invented only recently? I am no longer certain that imagination is absolutely insubstantial like some poets are convinced of. The water molecules and moss on the pebbles, the distinct form of chill from which I am suffering now and remembering, will they probably pass into the fabric of this particular piece of experience which will be incomplete without them and will remain ineffable to anyone who hasn't experience it (and of course it is impossible to repeat the exact experience)? I believe so. But experience has been gradually eliminated from experience itself. Everything has to be mediated, imperatively representable. The same river has a different caress to each individual, we used to believe, but representation has contradicted and maintains there is only one. By replacing experience by its replication, one should at least have the decency to give

> it another name. And probably now is the time that a different term were created for the limbo that experience has found itself increasingly in.
>
> A dinosaur, who had a name, or its equivalent, by which his enemies knew him by, drank at the spot that I am sitting at, looking at the same sceneries that I am looking now. He put his feet in the water, like I am now, when the day was too hot.
>
> (Participant D, 26/11/2020)

This reflection shows how the mind connects past and potential future experiences with the immediacy of the felt physical body in the present. Affording time to engage with this form of sensorial imagination positions a unique awareness of feeling, of noticing the body as one that is immersed in a vibrant and responsive landscape. Participant D contrasts the aeons that have passed since dinosaurs walked the Earth with the time it takes for dead skin cells to flake off their feet, grounding the physical body in its surroundings and evoking the legacy of what no longer exists in the immediate present. Drawing reference to skin cells in this way resonates with Miranda Tufnell and Chris Crickmay's chapter, S*kin- a place of meeting* in *A Widening Field Journeys in Body and Imagination.* Tufnell and Crickmay (2004) conceive the cellular makeup of the skin as "a window, letting in, letting through, the touch of the world" (p. 122). Accordingly, participant D's flaking skin accentuates the physical yet porous boundary of the body, inherently capable of impacting the composition of the water, whilst simultaneously absorbing the feeling of cold water surrounding their feet.

The objects encountered in participant D's perceptive sphere in this position range from the materiality of their own feet to synthetic cigarette stubs and a ball of chewing gum. The reflective narrative contextualises a willingness to dedicate time to engage with each material's characteristics to consider how they fit into a broader sense of modulating habitat. Analysing this detailed feedback of a participant's material and temporal relationships inspired a guidebook illustration that sought to merge scales of time and materiality together. By imagining a range of variable timescales, the objective was to immerse the participant in their perceptive capacity to notice how time passes. To provide a comparative lens, synthetic materials were embedded within the composition to reference the longevity with which some manmade fibres take to disintegrate. These provocations were communicated through a series of images taken from my own lived-experience of

intersecting environmental narratives. These provide a cascade of creative thinking that harnesses past and present instances to depict an interconnected sense of being.

Central to the composition is the body of a bumblebee that I found on the pavement outside my house. Since an early age, I have had an affinity to bees and in the physical experience of holding its little body, a childhood memory surfaced regarding my mother (who was a beekeeper at the time) telling me not to panic when one lands on me. The resonance of this memory encouraged me to spend time drawing this particular specimen as a way of nurturing this recalled sense of interspecies kinship. Additionally, my meandering thoughts about its lifespan cultivated further reflections on how different species might perceive time. In the process of drawing, I looked up from my sketchpad to see a red kite circling overhead and chose to include it within the design as it appeared to be hovering in time and space. Other illustrative details in the design include the rings of a tree, a supernova, red blood cells and a variety of single-celled organisms.

The design invites you to let your visual field drift across the composition, noticing how one element blends into those around it, morphing into new shapes and synergies. As a collective image, the composition depicts the extensive and variable timescales in the universe, particularly those nurtured within the Earth's biome. It seeks to foster a felt capacity to acknowledge the holistic nature of these temporal relationships. The illustration visually evokes time-dependent experience, responding artistically to Val Plumwood's provocation to spend time in one place; allowing "time for the experience of seasonal change, and time to make contact with […] non-human voices" (2002, p. 235). The illustration cultivates a moment of pause within the active, task-based narrative of the guidebook, an opportunity to let the mind drift and appreciate the sensory, site-specific nuance of the visual field.

Figure 54: *This is a Guide to Noticing- an exert from the final design that invites the onlooker to imagine time differently…, 2022*. Illustration © Skinner.

Guidebook conclusion

Reflections on an entangled illustrative research methodology

This illustrative methodology has investigated a spectrum of sensory apparatus whilst adhering to the parameters of the Covid pandemic. With this in mind, the narrative of the guidebook's drawings has consistently embedded elements of touch into each exercise, as an invitation to always be haptically *active* and engaged in the investigative process. In its final iteration, the guidebook has sought to balance these energetic encounters with periods of stillness and contemplation. It aims to illuminate how perceptive knowledge can be achieved through both. The illustrations have always endeavoured to provoke sensory learning and curiosity, rather than reference a definitive way to engage with different aspects of sensory awareness.

The case studies have evidenced that there will always be a relational variance for each perceptive individual, therefore, the narrative of the guidebook avoids ascribing a particular context for the practice to be conducted. As a participant pointed out, we are ultimately living in very diverse perceptual worlds pertaining to different values: "We are stuck inside a temporal and perceptual vortex. Shifts in thinking happen across a generation- sometimes it takes years to change the smallest thing" (Participant J, 2/4/2021). To address this temporal issue, the guidebook encourages participants to return repeatedly to the practice, recognising a currency in cyclical micro-moments of interconnectivity within a planetary biome, in which any awareness alteration (however small) can make a perceptual difference.

Within the context of each case study, participants were invited to offer reflections regarding their own experience of the guidebook. Some participants who had signed up for the workshop but had had to cancel due to Covid-19 infections, shared their thoughts via email. Whilst all the recipients appeared keen to engage with the practice, those with less experience in arts-based and somatic methodologies repeatedly reiterated that they would

have benefitted from more information regarding how much time to dedicate to the imaginative and body-based nature of the work. To help this process, participant G suggested grouping or categorising the exercises into sensory themes and drafting a rough timetable on which to schedule the practice. They suggested that "a month would be a more useful time frame for this guidebook. The activities are all related, but it's almost as if you want to sit with it for a while…the practice can be very tiring, people need to have the space to return to things" (Participant G, 10/7/2021). Participant G also proposed that there is further potential to attract others to the practice by encouraging participants to pass the guidebook on to someone they feel would benefit from it. Therefore, within the context of this practice, *time* was imagined to be a necessary resource to provoke each participant (and potentially others in the future) to investigate what "grounds the body in a sense of space and place" (Volunteer 2, 14/8/2019). During the pandemic, as people worked from home, an incentive to step outside was welcomed by participants voicing their desire to spend time away from their computers to tackle the sedentary nature of working online. In such instances, the guidebook interjected a sense of temporal drift, integrating the experience of an environment with the schedule of a working day.

Many of the illustrations were drawn from life, emerging from my own free time spent in active contemplation, sketching each of the locations detailed in the Sugarwell Hill Park map. Repeated drawing visits to the location promoted site-specific sensorial knowledge. It allowed me to engage and identify with flora and fauna as well as with discarded objects. Playing with texture, tone, scale and form in each sketch gave rise to some unexpected compositions, nurturing a sense of evolution in the design process. Granting time in this form of investigative drawing (Rojas, 2015), has enriched creative and conceptual space in which my mind has felt free to wander, permitting the hand to meander across the page. This has manifested in drawings that merge together, blending figurative imagery and intertwining the felt resonance of my own physical body's creative experience into the narrative of the guidebook. The first guidebook draft intended to provide a reference point for each participant's experience by providing a handmade offering that communicated a series of open, yet intricate, sensory experiences for the reader. My experience drafting fifteen guidebooks for this second case study (in a short period of time), impacted how

much attention could be given to refining the details depicted in each illustration. The decision to re-design and digitally print the second iteration of the guidebook afforded space for a reflective period in which I could consider different ways the reader might respond to the illustrations. This capacity to invest in my own investigative drawing process made the experience more playful and ultimately revealed richer, nuanced manifestations of each provocation of the guidebook.

One particularly creative drawing period paralleled the attendance of a bi-weekly online workshop facilitated by environmental architect Veljko Armano Linta. The *We Learn We Grow* (2021) course afforded me an opportunity to invest in my own sense of spatial and environmental awareness. Engagement with Linta's methodology shifted my focus by reorientating the investigation to examine the deficiencies of urban architecture. The online group's international participation cultivated culturally specific dialogue regarding ways of perceiving space, questioning the boundaries that immerse, confine and stimulate the human body in the design process. As a participant, my experience of each task sought to articulate and depict the complexity of a built environment. The workshop focused on the structures built to cocoon bodies, rather than explicitly interrogating the body as a physical tool for cultivating knowledge. I gained exposure to methodologies that sought to mindfully build structures in harmony with the ecology they were embedded within. I ultimately experienced comparable pedagogies that framed the intersection of materials, environment and the human body.

The subsequent development of creative exercises based around clay and charcoal, as complementary and comparative experimental materials, drew influence from these engagements alongside my own ongoing illustrative experience in the realms of felt knowledge and tactility. By reflecting upon the pedagogies of contemporary interdisciplinary artists such as Miranda Tufnell and Chris Crickmay (2004), Veljko Armano Linta (2021) and Gemma Anderson (2017), the research acknowledges the diversity of methods practitioners facilitate to provoke awareness through the body in conjunction with materials, merging creative and perceptual channels. From its origins as sketches of autoethnographic practice recording sites surrounding Sugarwell Hill Park to drafts of

creative exercises across three iterations of the guidebook, the editing process has promoted meaningful responses to feedback gathered across each subsequent case study of the practice. As a continuously evolving resource, the methodology has used illustration to generate a nexus of environmental thinking channelled through charcoal, clay, litter, and the human body as an investigative tool.

Drawing has been instrumental as a mode of notation within the broader context of this research practice. As a visual learner, I have found it an essential methodological resource for mapping and evaluating each workshop iteration, untangling concepts and ideas which I found challenging to communicate through language alone. Within my own embodied experience as an illustrator over the course of this PhD programme, I have continued to investigate how artistic mediums could be used to communicate variable perceptions of the environment and refresh perspectives on pedagogical challenges and narratives. Prior to embarking on my PhD journey, I found that figurative drawing (when practised in relation to brief periods of physical movement) helped me understand my own physiology and anatomical structure. The symbiotic awareness of feeling through the edges of my body whilst drawing helped to flesh out my own embodied illustrative methodology, furthering the transdisciplinary nature of the creative language powering this research forward. Although challenging to articulate and explicitly document, somatic knowledge is the foundation for every concept, score and engagement explored within this multifaceted research narrative.

This chapter has mapped a series of interconnected investigative sites that inspire creative, somatic and environmentally-focused illustrated exercises. The research acknowledges the difficulty of cultivating subjective experience yet has proposed how illustration can bridge perceptual possibilities and blur learning opportunities together. The practice aligns with artists and anthropologists who recognise how learning manifests in conceptual patterns that surface through the merging of materials with the physical body (Anderson, 2017, Ingold, 2008). With this embodied pedagogy in mind, each illustration seeks to communicate a sense of sustained cyclical adaptation, both within the manifestation of the drawings and what it has sought to provoke from the reader as part of the broader

investigative practice. Finally, the guidebook's design desires to imagine beyond a figurative landscape, shaping multifaceted provocations by drawing attention to sensorial awareness and embracing an arts-based sense of playful experimentation. By forefronting drawing as an investigative, process-led methodology the narrative of this chapter has explored the divergence and emergence of interdisciplinary ways of evoking environmental thinking. The resulting guidebook has emerged from an extensive period of research in embodied illustration, a living breathing practice that has responded to each case study's evolving pedagogy.

> It is a journey, right?...We started by the road, with the noise and litter and then we ended up by the river, barefoot… but there are still traces of litter... I noticed things differently or maybe quicker and could look at things a bit more in-depth, so if I end the practice there with this feeling, in such a transient space, I'm leaving willing and open to my environment- maybe this is enough...
>
> (Volunteer 1, 14/8/ 2019)

What do you notice?...

Figure 55: *This is a Guide to Noticing- an exert from the final design that invites the reader to reflect upon the amalgamation of litter on a moth's wings. The objective of the illustration is to demonstrate how entangled environmental perceptions can be in the twenty-first century, 2022*. Illustration © Skinner.

Chapter 7

Conclusion

Transdisciplinary practices

In this final chapter, I return to the core research question and sub-questions to identify themes, commonalities and observations that have emerged over the course of this practice. By mapping interconnected somatic and artistic pathways, the concluding discussion summarises ways the investigative research journey cultivated environmental thinking and examines the breadth of perceptive challenges that have been addressed. Within this multifaceted terrain, the research implements a spectrum of interdisciplinary practices to foreground spatial, sensory, and material manifestations of transcorporeality (Alaimo, 2010) that enrich approaches to environmental education.

The chapter reflects upon my contribution to research and draws out particularly poignant approaches towards environmental awareness that coalesced through the cross-pollination of creative exercises with somatic provocations. Along with identifying these experiential landmarks, I discuss how the practice research contextualised a multifaceted approach to sensory perception and suggest further possibilities for pedagogical adaptation. This chapter unpacks the process of facilitating practice research and ruminates on how the teaching practice grew from moulding together empirical experiences drawn from a range of disciplinary domains. I conclude this final section of the thesis with a personal statement and some closing reflections.

Addressing the research question and sub-questions

The primary research question asked: In what ways can sensory perception be enhanced so that it can support environmental awareness? This project sought to investigate ways of creatively drawing together materials and the physicality of the body to cultivate sensorial awareness for participants. Through the development of the practice, the design of each case study mobilised facets of perception to enrich participant experience and encourage reflection on one's relationship with the environment. Each case study and interlinked illustrated iteration of the guidebook was curated with the aim to facilitate opportunities for participants to explore how their senses co-create awareness, responding to the stimulus of different materials and spatial localities. The research question was investigated through in-person teaching, online workshops and the combination of text and illustrated methods of communication. Participants were invited to sequentially recognise and investigate how they perceive the world around them through the conduit of creative and somatic methods. These investigative channels juxtaposed materials that drew attention to personal, local and global narratives of environmental thinking, identifying similarities and differences between intersecting materials.

Each approach within the methodology imaginatively contextualised a realm of reciprocal relationality inspired by Val Plumwood (2002) and Robin Wall Kimmerer's (2013) call for evoking daily environmental practices. Kimmerer writes about sustaining learning processes that manifest through the experience of engaging the physical body (2013, p. 94). She highlights the physical effort of tapping maple trees, collecting windfalls of apples, and seasonally dredging a freshwater pond in her garden to demonstrate a cyclical reciprocity that shifts between short- and long-term relationships between body and environment. Throughout the research process, I endeavoured to maintain my own day-to-day version of ecological mindfulness. I cultivated awareness by litter-picking, altering or reducing the materials I use as an artist and growing vegetables in the garden. These micro-interventions embedded ecological relationality into the activities of my own *lived*-experience. They synthesised an autobiographic journey that nourished my own environmental encounters

whilst simultaneously investing in the creative currency necessary to pursue the aims and objectives of this research. My own experience of litter-picking over the last five years has nurtured a felt responsibility for instigating positive change facilitated through cycles of physical engagement, instilling an environmentally impactful ethos into my day-to-day life. As I hauled rubbish out of hedgerows and built installations of discarded objects for the council to collect on the curbside, my own psychosomatic map became filled with spatial intricacies into the perceived environment of my neighbourhood. Repeatedly looking out for single-use plastics and other waste in my own surroundings has led to an increase in the frequency with which I actively go in search of these items and explore further afield.

The fulfilment of this ambitious research programme has resulted in the creation of multiple artistic pathways that immerse participants in the ecology of the everyday (whatever this might entail). It has simultaneously drawn attention to how the physical body responds to the immediacy of the space in which it is immersed. Within the cultivation of these moment-to-moment sensory interactions, Stacey Alaimo's (2010) transcorporeality has emerged as a poignant lens through which to highlight the interactive nature of all matter as well as the permeability of perceptual and corporeal boundaries. Contesting humanity's anthropocentric perspective in her critique of detrimental environmental practices, Alaimo (2022) uses the term transcorporeality to highlight the enmeshed nature of our ecological entanglement. The design of this research has considered how we might learn from the many ways each sensory organism - itself a complex biome of blurred perceptual identities – thinks through the physical body. In so doing, the research acknowledges the body's inherent capacity to engage with meaningful environmental stimuli that invigorates sensory details of subjective experiences.

This investigation has focused specifically on aligning somatic and creative learning capabilities developed from my own artistic perspective to help people notice the material complexity of their surroundings. Having examined a broad range of interdisciplinary literature and practice, I now recognise the ways engrained cultural values (and a capitalist propensity to satisfy subjective desire) are addressed within broader narratives of

environmental education. Trajectories that encourage communities to identify common idealisations present a rationale that seeks to connect the individual's self-interest and family values with broader environmental narratives (Hayhoe, 2019). Comparatively, the infographs, photographic databases and digital resources of organisations like Climate Action (2022) and Climate Outreach (2023) present qualitative and quantitative information that communicates the alarming implications of our actions. Within these data-centric parameters, the discussion in chapter two explores the limitations of focusing on communicating the precariousness of our shared environmental challenges through numerical, visual and text-based techniques. The research illuminates how these communicative modes have the propensity to focus on humanity's mitigation of environmental impacts rather than address the trajectory of contemporary societal values and how they have shaped human nature. An understanding of environmental relationality in these fields relies upon a cognitive ability to recognise a shared currency in the preservation of ecologies we rely upon for our survival.

My research has investigated how to include the whole of the human sensorium in this learning process, inclusive of the perceptual multiplicity needed to anchor the sensory organism in the particularities of its own damaged world. Blending awareness of temporal, embodied and material attunement through the experience of the everyday has encouraged participants to contextualise what, in Val Plumwood's words, "imprisons us in maladaptive ideologies of self-containment" (2002, p. 238). Research suggests that institutional and intergovernmental calls for generating collective behavioural change will ultimately fall short without first attending to the unconscious sensibilities that shape and ground how we connect to intersecting perceptual spheres of environmental knowledge. The degree of psychosomatic resonance necessary for this to occur has been explicated in a range of research fields that recognise how sensory perception ingrains patterns in the mind. Dan Siegel's (2010) invitation to investigate a sense of presence and Stacy Alaimo's (2010) framing of simultaneously local and global experiences are two examples of how humans can modulate between sensorial habitats whilst also acknowledging the messy transformation ecology the physical body is immersed within. Engaging with the

sensorium's porosity in this way destabilises habitual perceptions and draws attention to the immediacy of one's sensed surroundings.

The objective has been to source alternative perspectives by scaling up the individual's sensory capacity throughout each phase of this research journey. The common goal has been to reach beyond the perceptual boundaries of the body to recognise integrated personal, local and global parameters of environmental awareness. To achieve this, the overarching provocation for the research has focused on the psychosomatic experience of the individual by framing ways that they physiologically interact with *their* environment i.e., provoking physical contact with different surfaces, following walking pathways etc. Attending to sensorial information gathered through the body's physical articulation has underscored that even though humans drastically need to appraise a global *felt* sense of relationality, the issue does not ultimately lie in any singular way of resonating with one's surroundings. As ecological beings, humans cultivate a self-defined perspective that shifts as the body moves through space. My design process details this interactive capability through creative and somatic vocabularies that value each participant's unique approach to the inquiry's exercises. In this way, the research demonstrates alternative approaches towards developing environmental knowledge.

The pre-circulation of the guidebook introduced participants to a range of creative and somatic activities and exercises designed to help them engage with the environment around them. The inclusion of art materials enabled participants to experiment with different ways of recognising and recording thoughts, feelings and sensations. These invitations were presented in a purposefully curated manner designed to emphasize the detail of handmade craftsmanship. Using recycled packaging material and personalising each parcel sought to highlight the possibilities of an individual's sense of responsivity and responsibility. In doing so I actively contest Timothy Morton's (2021) scepticism of the individual's capacity to engage with the global parameters of environmental thinking. One person's litter-picking practice (or artistic practice) will not solely impact the climate crisis, but its implied spatial interactivity does demonstrate the possibility for proactive change brought to the fore by

engaging the physical body. Reflecting upon the interactivity of a sensed-self and the environment within this frame highlights the originality of this approach to contextualising accountability.

Ultimately, measuring impact by aligning a singular sensory organism with the cosmos delineates a spectrum of rhizomatic learning possibilities that can contribute to destabilising detrimental habitual behaviours and perceptions. This investigative practice has harnessed the subjectivity of the individual by inviting them to explore an alternative relationality approached through channels of creative and somatic practice. The individual's perspective is stimulated within manifestations of personalised environmental architectures built from sensory experience. Empathy for the participant's surroundings is cultivated through art-making, somatic awareness, and ecological reflection. The burden of sole responsibility is mitigated by the reciprocity felt through *active* engagement with the immediacy of the world in contact with the physical body.

(Re)framing materials and the materiality of the physical body

Through the facilitation of four case studies, the purpose of each artistic and somatic exercise has been to help the participants notice the complexity of the material world around them. Evoking a sense of *interoception* (Siegel, 2010), a sense of interior and exterior space, has opened participant experience to alternative perspectives of embodied environmental thinking that moves through and envelopes the physical human form. Refining felt knowledge through the skin as a porous material boundary has been key to establishing a sense of this felt *other*, co-created with matter encountered at the body's sensory periphery.

The nature of each encounter has sought to enrich subjective *otherness*, recognising that evoking broader environmental perspectives through the materiality of the physical body relies upon establishing sensory anchors that immerse the human in the world. The objective has not been to cultivate a rigid perception of boundaries with one's surroundings but to recognise the sensorial system's fluidity in forming and reforming what contextualises

physical individuality. Harnessing the potency of ephemeral knowledge through movement and imagination facilitated participants to sense beyond the boundary of their skin. Clay was particularly useful to sensitise a participant's skin. The moisture content in the material evaporated, leaving a residue, restricting dexterity and drawing attention to the body's material boundary through sustained contact with other matter. Various clay-based creative exercises were designed to nurture material conversations through the skin, imprinting and moulding compositions that established a three-dimensional archive of experiences for each participant.

Those participants less familiar with attending to physical sensation were noticeably more at ease when asked to focus their attention on a specific material (such as clay), rather than be solely reliant on their *felt* capacity to cultivate a sense of embodied presence in an unfamiliar space. In response to participant feedback, I created alternative ways to bridge sensorial gaps, affording comparative experiences for all those engaged in the practice. The illustrated guidebook evolved as a self-directed practice to facilitate the cross-pollination of sensorial experiences. It was designed to help participants feel comfortable with body-based methods for exploring their own environmental parameters.

The cultivation of haptic experience

When developing the guidebook narrations, I sought to imaginatively interpret the diversity of participants' surroundings, including spaces both within the vicinity of the home and depictions of explorations further afield. The illustrative design process drew influence from the case study experiences to test learning pathways that acknowledged the diversity of perception based on movement and physical touch. Participants were encouraged to engage in haptic exploration, taking time to instigate positive change in the immediacy of the space around them. Highlighting comparative surfaces worthy of investigation provoked lively and imaginative participant dialogues. For example, newfound perspectives manifested through the investigation of interpersonal touch in the Sugarwell Hill Park test site. An extended period of haptic exploration in which the contours of the tree's branches were contrasted with the architecture of my proffered hand blurred the perceived

boundaries between surfaces, prompting volunteer 2 (14/8/2019) to comment that their direct experience of multifaceted touch between the tree's bark and our interpersonal contact encouraged them to imagine other trees within the vicinity to be porous, sensitive, and layered with feeling.

Sustaining experience

Over the course of this research, the guidebook became a repository of somatic and creative exercises. Finding illustrative ways to embed the visceral feedback of experiential information as a cyclical resource for participants to revisit has illuminated further possibilities for layering approaches towards environmental awareness. Drawing attention to this dynamic understanding of the body's capabilities connected imaginative thinking to a network of physical provocations. It has become evident that provocations do not have to be particularly complex in configuration for participants to gain (and sustain) a subtly different sense of themselves. For example, shifting weight from one foot to another can feel monumental when the participant's eyes are closed. Finding ways to divert attention from the visual field effectively shifts focus towards the whole body's sensorium generating knowledge. Recognising the intersecting ways different sensory mechanisms relate to one another highlights embodied awareness as an interactive way of learning about the composition of the world.

Touch through physical movement

Provocations to haptically analyse objects and materials drew attention to the tensegrity of sensorial permeability by highlighting a two-way flow of sensory information that occurs within this zone. This research has evidenced how to creatively contextualise skin as the body's cellular boundary, attending to its stimulation through physical contact with different surfaces external to the body. We draw attention to our skin as a porous container capable of gathering information about what we meet at our periphery by unfolding our sensory boundary into our surroundings.

Somatic and environmental educators cited in the literature review each foster alternative narratives that manifest through an awareness of these spatial boundaries and how an understanding of environmental embodiment shifts perspectives (Haley, 2021, Macy, 1984). What has become evident through the research practice with participants is the necessity to employ an interdisciplinary and multifaceted approach to bridging sensorial engagement to intersect with environmental narratives. The physical investigation of micro and macro perceptions of localities situated the interior and exterior felt domain within a broader context for environmental knowledge.

The prohibition of physical contact between participants during the second case study (2020) prompted the research to exclusively explore alternative material-based modes of interaction. In the third case study (2021), I identified different ways of evoking contact with litter and found objects whilst adhering to social distancing guidelines. The pandemic caused the research to branch into an unexpected territory, shifting from interpersonal test sites to exploring different geographical localities. Upon reflecting on the places and spaces litter was identified, participant K (3/7/2021) observed that these habitual interactions between materials and the materiality of the body can occur at any moment, with the locality of the encounter ultimately being dependent on the capacity of the individual to *notice* something worthy of their attention. The perceptual outcome of investigating materials amongst the urban architecture in this study contrasted with those instances of encountering rubbish in greener localities and the exposed banks of the Meanwood Beck in the first case study (2019) [and when working with the two volunteers (2019)]. Rubbish strewn across the pavement directly outside the Yorkshire Dance Building aligned with the participant's perception of a gritty, urban environment whilst the array of plastics sandwiched between layers of mud on the banks of the beck evoked feelings of agitation and bewilderment. In these localities, participants came into contact with the *transcorporeality* and sensorial interconnectedness of their own ecology.

The engaged creative narratives within these territories nurtured a rich tapestry of proprioceptive learning that manifested through their cumulative participant experience of

cross-pollinating practices. These experimental test sites did not seek to mitigate the wasteful and polluted aspects of the environment, rather their material properties were blended into the practice. Blurring the boundaries between matters provoked complex material relationships that inspired meaningful reflections on the intersection of sensory and material borders. By bringing contrasting materials to the participants' fingertips within the frame of interdisciplinary exercises, they themselves embodied a sense of transdisciplinarity born through the relationality of psychosomatic resonance and sensorial awareness.

Drawing attention to the organic and synthetic materials, in comparative sites indicated an inherent compositional preconception in which some objects fit into a terrain whilst others do not. This research used the physical body as a tool to investigate how a hybridised perceptual frame can shift in different habitats. It drew upon knowledge from the whole sensorium to question how our learning cross-pollinates each perceptual sphere. With the incentive of encouraging a detailed perceptual understanding, both volunteers were invited to take off their shoes and physically enter the water of the Meanwood Beck. Volunteer 2 (2019) was immediately pulled downstream by the current, but they skilfully maintained their balance, whilst verbally articulating how the freezing water felt and subsequently feeling secure enough to pull rubbish out of the muddy bank. This capacity for multifaceted embodied attention demonstrated how to engage the *thinking body* to foster a deeper spatial awareness. By interweaving facets of sensory experience, the individual curates a dynamic multifaceted perspective capable of grappling with humanity's complex relationship with materials found in different sensory habitats.

The design of the guidebook evolved from my investigative rubbish-mapping practice. Illustrated provocations sought to plant the seeds for participants' site-specific reflection by encouraging the reader to walk around their neighbourhood to think about what caught their attention in the terrain they regularly moved through. By engaging with and grounding embodied experience, these regular micro-interventions highlighted the scalability and applicability of environmental stewardship made possible by invigorating the sensory

intelligence of the physical body. Participants were responsible for amplifying the sensorial scale of their investigative practice by responding to the reverberation of materials they touched and the resonances that grew from repeating or investing in the directives of the practice. The research found that dedicating time to exploring the spatial and material particularities of a terrain promoted a more expansive sense of environmental embeddedness.

The objective of this research has been to identify simple ways of drawing attention to this capacity, by acknowledging the multiplicity and sensorial richness of physical movement. This has been primarily investigated within the prism of art-making and somatic practice through which the ambition has been to foster environmental knowledge within interdisciplinary educational trajectories. By nurturing conceptual and physical spaces for experimentation, the research conjoins cycles of sensorial reciprocity within the frame of guided and self-directed provocations to attend to the multiplicity of kinetic awareness. The overarching invitation of each creative investigative practice has been for participants to recognise their own personal archive of lived experience that impacts how they process the environmental information curated through their sensory borders. By specifying how to attend to specific materials with the materiality of the physical body the research untethers the practice from a necessity to identify a specifically bucolic location or state of mind for this to occur. Crucially, the creative and somatic vocabularies invited participants to notice the environmental degradation of the physical spaces they experienced every day, rather than encouraging them to seek out idyllic sites to engage with. In this way, the research threaded moment-by-moment critical encounters that required participants to attend to the sensorial messiness and material complexity of humanity's habitat. The invitation was to undermine the hierarchies of our commodity culture and to question how we have come to presume the continued support of the biome that sustains us.

The environmentalism of illustration

Illustration has emerged as a vital component of a creative practice that simultaneously draws from, and bridges, ways of approaching perceptual possibilities. Across four iterations

of the guidebook (and in conjunction with my own autoethnographic drawing practice) I have integrated access to a spectrum of sensory experiences. The narrative of each guidebook provided a series of invitations that sought to validate and support each individual's capabilities for practicing environmental awareness. Illustrated with the explicit intention to help participants navigate pathways of alternative environmental knowledge, the guidebook details how to channel sensorial information in particularly effective ways. This was a cumulative and gradual process. It identified and refined ways of combining sketches, photographs, and anatomical studies to imaginatively curate and communicate different kinds of environmental relationships.

This design evolution has provided guidance on how to approach each task, balanced by the intended freedom for participants to follow a *felt* sense of what interests them as individuals. Each illustration combines a hybrid of visual and text-based information, integrating tone, form, text, and spatial cues for the participant. A myriad of interpretive avenues embedded within the graphics affords each participant their own spatial, material and sensory investigative trajectory. Overlaying illustrations proved a particularly successful technique for communicating a series of sequential physical movements that the participant should explore. The use of cross-hatching to heighten the three-dimensional quality in these graphics enhanced a sense of depth whilst blurring each compositional configuration and delineating a set approach to the exercise directives. The merging of different design aspects invited participants to acknowledge what worked best for their sensory receptors. It destabilised an assumption that there is one correct way to engage with (and respond to) the sensory parameters of the physical body.

Developing these drawing techniques in different arenas of the research practice inspired further methodological connections; periods of my own clay-based exploration drew my attention to the creases and sinews of my working hands. Material experimentation fostered embodied knowledge, resulting in particularly detailed compositions of haptic dexterity in the process of warming up the material prior to any sculpting task. Ultimately, the guidebook has evolved through a process-led inquiry combining artistic interpretation

with embodied experience to foreground a compound state of creativity. Sustaining a autoethnographic drawing practice has facilitated ways to capture reflective trajectories that have endeavoured to distil the possibilities of this multifaceted perceptive terrain. I recognise that my sensorial identity shifted within the *felt* illustrative experience, accentuating my artist researcher's capacity to draw upon "*reflexive self-accounting*" (Cole & Knowles, 2010 p. 123). The PhD's creative process has led to the emergence of a cyclical and symbiotic sense of identity, one that cultivates multiple connections and encourages knowledge-building processes to, not only co-exist but coalesce with broader narratives of environmental thinking within my own artistic practice.

Limitations

This research was an opportunity to investigate the interdisciplinarity of creative practice and as such its methodology branched in numerous exploratory directions. With an ethos of sensorial inclusivity, the case studies sought to examine the multifaceted nature of each individual's insights to highlight the variability of personal sensory experience. It was challenging to align and subsequently critique each iteration of the practice as participant encounters differed significantly. The research relied primarily on insights gathered from reflective one-to-one conversations with participants to collate their thoughts on the nature of the research.

These informal conversations threaded past occurrences with habitual ways of perceiving the world into dialogue about their experience of the novel alternative methods the practice proposed. Participants spoke of a broad spectrum of environmental perceptions: childhood memories of climbing trees and lying in meadows (participant V, 4/4/2019), their experience of homes being flooded (participant B, 4/4/2019), walking through an empty town during the pandemic (participant R, 27/11/2020). The memory and knowledge each participant brought to these conversations proved challenging to distil due to their sensorial specificity and the meandering nature of these informal dialogues. In hindsight, I also recognise that I subconsciously circumnavigated conversation topics that might highlight shortcomings in

the participant's own decision-making processes. The interview process sought to make connections, linking subjective experience to different ways of encountering the environment. These conversations could have been further curated to draw attention to micro and macro scales of human consequence and contextualise personal values and behaviours as incubated within a cocoon of self-enclosure and commodity culture.

The research workshops were limited to a timetable that did not extend beyond two hours and thirty minutes. Such a timeframe required a succinct and *light-touch* approach to each exercise participants were presented with. The structure of the workshops endeavoured to include sufficient exploratory time for following a sense of perceptual curiosity, but participants were rarely left without something to perceptively engage with or experience. Therefore, a high volume of sensory information was disseminated and processed within a short period of time. Arguably a more nuanced narrative of perceptual feedback could have been gathered had I extended the workshop timetable and not filled each inquiry with quite so many opportunities to expand one's sensory boundaries.

Each case study consisted of participants who had actively shown curiosity and enthusiasm for taking part in the research. From the local artists that I approached in the first case study (2019) to those that attended the residency hosted by *The Quadrangle* in the fourth case study (2021), each individual responded to a provocation for investigating alternative forms of environmental awareness. The sample size of each group varied due to a variety of factors; participants withdrew due to Covid-19 in the third case study (2021) and several pilot workshops, designed to accommodate family groups, had to be cancelled altogether as infections spread within Covid bubbles. The second and the third case studies were programmed specifically with Covid-19 related rules and regulations in mind; subsequently, the research mitigated instances of direct physical contact between participants, shifting the focus instead to investigating touch and materials rather than the materiality of other people's bodies. This ultimately prompted the methodology to evolve and adapt but the necessary avoidance of interpersonal touch curtailed one of the primary branches of the research practice. In one-to-one conversations and group discussions in the second, third,

and fourth case studies participants articulated how the loss of interpersonal touch and requirements to engage in social distancing had impacted them during this period. This awareness of absence prompted a provocative window of opportunity in which to foster other relationalities in alternative investigative zones. Litter-picking, clay-sculpting, and map-making evolved into these opportunities to appreciate and explore the capacity for other forms of touch to evoke the blending and shaping of materials and stimulate haptic sensation. The lack of physical contact in these case studies prompted discussion regarding alternative ways of fulfilling a felt sense of absence and highlighted how influential touch can be. The practice evolved in response to this curtailment to situate the sensory participant in close proximity to a range of accessible materials that emphasized, through their responsive properties, just how ingrained touch is to how we engage with every aspect of the sensory world we curate for ourselves.

As the facilitator, the comparative insights I gathered from working remotely versus in-person underlined the importance of sharing physical space within arts-based practices. Teaching through a computer screen in the second case study (2020) required the composition of alternative methods for communicating the experience of feeling through the physical body. My computer camera had to be placed at particular angles for participants to view how to approach exercises that involved engaging with touch in specific ways. This limited the movement vocabulary we could explore succinctly within the timeframe of the workshop. I felt required to hold a primarily forward-facing position to clearly communicate the directives of the practice. Participants used clay, charcoal, litter and found objects to explore sensory connections but they could not share resources or build bridges between the sculptures that emerged from their creative dialogue. Held within their own sensory and spatial bubbles, they could not resonate or respond to each other's physical language as their digital perspective flattened the many micro-adjustments indicative of any creative exploration that makes use of the physical body as a learning tool. Comparatively, in the context of the first (2019) and third (2021) case studies, participants, and I could sensorially absorb, engage, touch, and test the material qualities of each sculpture, drawing and, [in the first case study] sense of interpersonal touch.

The online teaching experience was a steep learning curve for me as a facilitator, having had limited experience with digital teaching prior to the onset of Covid-19. Before embarking on the second case study, my intention was to draw inspiration from Joanna Macy's approach to virtual facilitation practice. Macy holistically describes her work as a way of helping people process psychological and moral discomfort. Witnessing her capacity to facilitate online spaces for psychosomatic awareness gave me the conviction to test my own online capability for guiding participants in their exploratory processes. In analysing Macy's facilitation technique in recorded teaching practices (Macy and Bendell, 2019), I realised that she does not endeavour to fill poignant silences with dialogue or provide answers to those anxieties voiced by participants. The guiding principle of her words instead focuses on ensuring people feel heard and acknowledged. My own intention to provide sufficient verbal instruction for each creative task and to communicate enthusiasm for the more *unusual* interdisciplinary practices left little room for participants to spend time with their own thoughts and reflect back on the process in the digital space we shared.

Follow-up emails were sent to all the participants as an invitation to reflect upon the process of the workshop in the weeks that followed. Replies to these invitations were minimal and in hindsight, it would have been prudent to set up a series of meetings prior to their online participation to engage specific participants in the evaluation process. However, these were unexpected teaching circumstances in the context of a global pandemic in which I was processing my own psychosomatic experience of Covid-19. The self-assurance that has sustained me during every 'live' experience of teaching I have undertaken seemed to have evaporated. On reflection, I now recognise the value of embarking on a digital practice for its capacity to engage greater numbers of participants, instil an ethos of inclusivity, and enrich my own capacity for pedagogical hybridity.

The possibilities of future research

Beyond the frame of this PhD, there are creative and teaching opportunities I wish to pursue to build upon this research. One objective is to interlink a three-stage process in which creative practice and environmental awareness can be approached through intersecting

methodologies. The fourth case study touched upon the poignancy of engaging simultaneously with creative and somatic awareness as a collective. With these two objectives in mind, future participants could first be provided with the guidebook and materials for an extended time period to evoke a longitudinal engagement in the practice. Secondly, programming an online creative session with the same group of participants would afford an opportunity for those involved to raise methodological questions and share insights into their progress. Finally, a live in-person concluding workshop would build upon their digital experiences of sensory perception and material explorations to further guide participants through interpersonal collaborations and exploratory exercises. This extended frame of future methodological possibilities would include a reciprocal art-making dialogue based on sharing materials and adapting to other participants' creative techniques.

I have continued to develop the guidebook along its own evolutionary trajectory with the final copy submitted for examination containing twenty-five additional pages. As an artist, I feel there will always be room for improvements and adjustments to a design process that seeks to communicate different ways of encouraging environmental perception in daily life. The guide's narrative touches upon different approaches to visual stimulation, physical contact, and a range of somatic languages but there is further exploratory work to be done regarding the relevance of sonic fields of receptivity and taste. Potential for further developments could investigate the scalability of biomes from the digestive gut of the participant to highlight interpersonal, local, and global ways of sustaining a sense of nutritional health.

Prior to the completion of the fourth case study, *The Quadrangle* commissioned its own version of the guidebook to focus on the intersection of trees and environmental awareness. I have experimented with different ways of communicating somatic and arboreal information. This has included a pocket-sized, double-sided map and a series of small flashcards with questions and tasks on each side. Ultimately, the client chose to keep with a guidebook format, but the experience of experimenting with different ways of presenting the information has encouraged me to seek further opportunities for site-

specific commissions that channel the methodology of this research practice into the context and particularities of different artistic and educational habitats.

My concluding thoughts

In this final section of the thesis, I reflect upon the experience of pursuing this form of creative research within the frame of a PhD. Prior to embarking on this research, I often felt an overwhelming mixture of confusion and incomprehension when witnessing peoples' day-to-day disregard for their surroundings. After five years of embodied practice in this field of research, the psychosomatic resonance of these feelings does not manifest in the same way; I have practiced channelling frustrations into reflexive patterns of thinking that cultivate opportunities for positive, environmentally focused interventions. This interactive methodology facilitates a form of ecological awareness, embedding incremental shifts in environmental and material values within everyday life. Using movement to investigate my own surroundings highlighted how vital it is to consider how each physical body 'reads' the materiality of different locations. Moving through space facilitates a changing or modulating sense of environmental composition, cultivating encounters with objects and materials within my perceptive field. I became aware of my own variable response to encountering the remnants of a discarded takeaway on the street before me, or the colourful plastic cartons semi-hidden in the undergrowth. Each spotted item prompted a reflective process that considered how to draw attention to the frequency with which I am personally faced with day-to-day opportunities to notice the materially mixed-up composition of the world.

The objective of highlighting these recurring moments of material awareness was to acknowledge the filtration of perceptive decision-making being made by myself and every other sentient individual. The research illuminated the resonance and multiplicity of these moment-by-moment encounters and investigated how to embed them in the body's archive of experience, cultivating an embodied material world full of these experiential landmarks. Creatively and somatically honing the sensory tools that gather together this environmental knowledge sets a perceptual foundation for enriching and diversifying day-to-day thinking patterns. These perceptual nets have helped to foster a hybrid form of thinking within my

own life that manifests through a practice of physical articulation and engagement with spatial curiosity. Tracking my own psychosomatic resonance within this process through a felt sense of sensorial extension and contraction in negotiation with the world has chipped away at the boundary between my own sense of embodied physical interior and the ecological exterior, replacing segregated spaces with a modulating, porous network of intersecting terrains.

This research journey to identify interdisciplinary ways to merge modulating perceptual landscapes for participants has detailed the immediacy and potency of sensory experience and the capacity for it to counteract an abstract perspective of the world. I am exceptionally grateful to all the case study participants for their willingness to engage with the perceptive worlds of their own making, and for interrogating the link between personal everyday decision-making practices and the global implications of our fractured spirals of ecological relationality in the twenty-first century. After the completion of each discrete workshop, I encountered recurring challenges in terms of securing feasible ways to evaluate what might be recognized as a longitudinal impact of the session and indeed, any future interlinked self-directed practice. In chapter six (p. 144) there are examples of resonant, even poetic responses shared by participants as they continued to investigate exploratory narratives by revisiting tasks detailed in their copy of *This is a Guide to Noticing*. My intention was to stimulate such evocative experiential engagement that participants would feel the urge to get back in touch to share their experiences. However, in the context of each cycle of research, follow-up email communication often went unanswered (particularly during those periods of research on either side of the Covid-19 pandemic) and therefore significant insights were drawn from the immediacy of people's commentary as they engaged with the methodology of the research. The social isolation of the pandemic meant that digital engagement dominated how we all interacted with each other contributing to a higher response rate to invitations for feedback as participants were primarily connected through online communications.

As the facilitator of each case study workshop, I intuitively felt that my primary objective was to encourage participants to absorb merging channels of environmental sensitivity. The embodiment of transcorporeality (Alaimo, 2010) through the materiality of the physical body has provided a multifaceted lens through which to appreciate just how entangled humans are in the world. A reflective overview of the research demonstrates just how vibrant and imaginative people can be in their response to alternative environmental narratives. The key to nurturing this vibrancy has been identified by shaping the creative and somatic experience to the capacity of the individual, rather than assuming proficiency in each sensory realm. Subtle perceptive shifts might at first appear inconsequential but, like taking a step with one's eyes closed, the internal calibration of felt knowledge can leave a lasting legacy. Therefore, it is imperative to not underestimate the impact of the smallest intervention. The individual embodies an undeniable power for change by drawing attention to the physical body as a tool for learning about the complexity of the material world.

Whilst deep convictions will always persist in the minds of people intent on satisfying perceived subjective needs, the exploratory nature of this research has investigated how to illuminate these engrained relationships without explicitly implicating that the materials themselves are the root of the problem. Practising unconventional ways of cultivating awareness and physical presence in daily life incrementally encircles the practitioner in a responsive and animated exchange of living matter. At its core, this research has been an invitation to explore sensory building blocks and to cultivate a richer, immersive understanding of the world we move through. It is these instances of daily, habitual awareness that are particularly important to address as they ultimately determine the values by which we each live.

In future iterations of my artistic practice, I intend to cultivate environmental stewardship by devising creative approaches to nurturing perceptual shifts in day-to-day life. This research has illuminated a spectrum of ways the arts can question subjective mindsets that incubates divisive forms of twenty-first century thinking. Somatic and creative approaches to environmental education offer a dynamic and inventive way of interlacing global, local,

and personal perspectives, whilst illuminating the complexity of their relationships and their impact on one another. By invigorating dormant psychosomatic capabilities, the research tackles the origins of our detrimental apathetic attitudes towards sustaining the biome. Therefore, an advocation for environmental learning through the Arts (in all its forms) has never been more essential than it is now.

Chapter summary

This final chapter returns to the research questions to illuminate how the case studies and illustrated guidebook have investigated sensory perception and approaches to environmental thinking. Physical touch, engagement with diverse materials, and an inclusive approach to the location of the research were highlighted as necessary components for each iteration of transdisciplinary practice. By revealing how these directives can be combined within a transcorporeal lens, the chapter reflects upon further ways of blending art-making, social responsibility, and ecological reflection into a learning process. The writing discusses different facets of my own immersive pedagogical learning experience in tandem with autoethnographic illustration and demonstrates how these intertwined processes have contributed to the research. In reflecting upon how the practice continues to develop outside the PhD frame, closing thoughts regarding the position of artist researcher illuminates how the practice evokes a multifaceted mindset capable of inspiring impactful perceptual change.

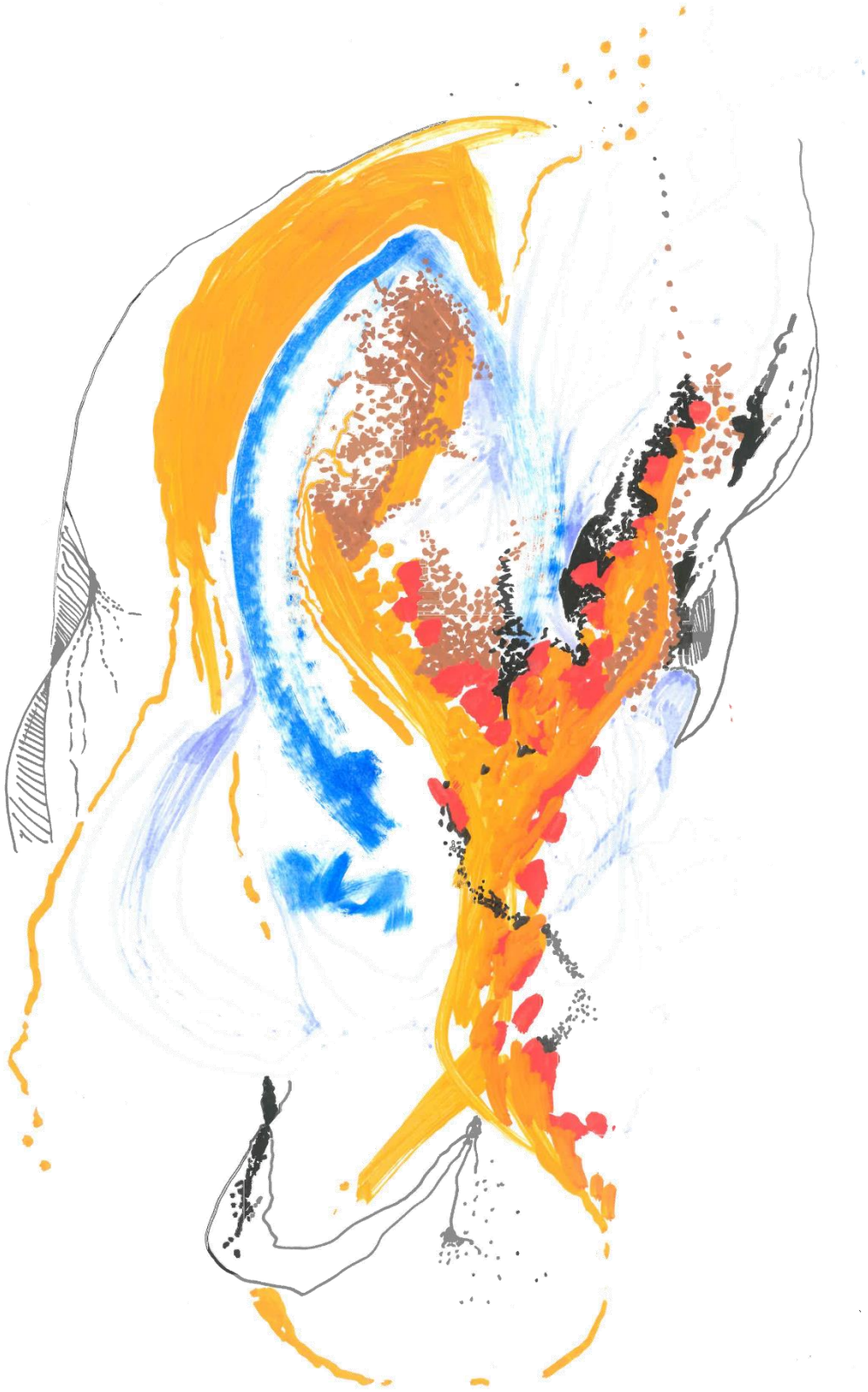


Illustration 5: *Transcorporeal thinking. A work-in-progress…, 2023* © Skinner.

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Appendix A

Participant consent form (2019)

UNIVERSITY OF LEEDS

Please complete this form after you have read the Information Sheet and/or listened to an explanation about the research.

Title of Study: Environmental Perception.

University of Leeds ethical review committee reference:

Thank you for considering taking part in this research. The person organizing the research must explain the project to you before you agree to take part.

If you have any questions arising from the Information Sheet or explanation already given to you, please ask the researcher before you decide whether to join in. You will be given a copy of this Consent Form to keep and refer to at any time.

- ***I understand that if I decide at any other time during the research that I no longer wish to participate in this project, I can notify the researchers involved and be withdrawn from it immediately.***
- ***I consent to the processing of my personal information for the purposes explained to me. I understand that such information will be handled in accordance with the terms of the Data Protection Act 1998.***
- ***I have been given a copy of the risk assessment to study and agree to the research activities involved.***
- ***I agree to any [accredited] visual artwork created during this process being catalogued for the duration of the research period [1/5/2019-1/4/2020]. Once the research is completed, I reserve the right to request the return of my artwork from Benjamin Skinner.***

Participant's Statement: I_____

agree that the research project named above has been explained to me to my satisfaction and I agree to take part in the study. I have read both the notes written above and the Information Sheet about the project, and understand what the research study involves.

Signature / Date

Investigator's Statement: I _____

confirm that I have carefully explained the nature, demands and any foreseeable risks (where applicable) of the proposed research to the volunteer.

Signature / Date

Leeds University. School of Performance and Cultural Industries. Leeds University Research Ethics Committee Ref:

Appendix B

Thinking Through Things. **Wellcome Collection- ECR Training Day.**

Creative writing response (2020).

Response-Benjamin Skinner.

My PhD research investigates the importance of touch, be it with another sentient organism or any of the countless materials that surround us in everyday life. I am interested in how our perceptive field can underpin a more considered relationship to environmental stewardship by interrogating the value of physical contact and mapping the information it affords our sensory system. My methodology recognises the physical body as a *living* archive of sensation cultivated over a lifetime of being in proximity to countless other surfaces. From our time in the womb we are constantly exploring the matter that meets our edges, pushing outwards in order to test the perceived boundary at our cellular periphery. As children we are curious, tactile creatures yet in adulthood we seemingly become withdrawn, hyper-vigilant to physical contact with others. This deterioration of *felt* sense constricts our ability to make sense of the multifaceted world we experience and affects our interpersonal understanding of one another. In our current climate of isolation and anxiety we have been challenged even further to maintain a specified distance to what *could* be hazardous- both in terms of other people and potentially contaminated surfaces.

Suddenly every haptic occurrence is a risk.

In response, Leeds City Council's waste management policy has been to cover every refuse bin with 'Environmental Crime' tape in an effort to stop people disposing of their litter in the very receptacles designed for such a purpose. People have therefore, and maybe unsurprisingly, resorted to dropping their rubbish wherever they please. This accumulation of trash has made me curious about peoples' habits during times of uncertainty. It feels that environmental care and consideration are easily dismissed in favour of one's own self-care. Why act responsibly when there is a perceived danger to the sensed-self? Whilst out running I found myself examining rubbish lying in the road and the contents of what motorists jettisoned by night in their fly-tipping exploits. This new found focus on what people had deemed unimportant reminded me of the composition and descriptive commentary of Audrey Amiss' notebooks and triggered a creative practice response.

Over the course of a week and in homage to Amiss I catalogued the items I picked up (with rubber gloves), and then, in contrast to Amiss' methodology, recycled as much of the waste as possible. I documented how and in what ways items caught my attention; what their

surfaces felt like to touch and the nutritional value both hidden and prominently displayed on food packaging. I created my own annotated and digital archive of experience and used it as a conduit to reflect upon the habitual ways in which we (dis)engage with materials/ objects in everyday life.

More than anything else I collated scratch cards, cigarette packets and energy drink cans, but I also hauled ironing boards, washing machine parts and a cabinet from the hedgerows. These larger artefacts became landmarks, places to gather items together, creating temporary roadside sculptures. On returning home, these transient test-sites helped me to construct maps that charted my running route, clarifying memories of the terrain through liminal compositions of the unwanted. They occupied a transitional space neither fulfilling their original purpose nor being made use of through a recycling process.

Audrey Amiss used packaging as a window into the world of human containment, creating a vibrant archive of manufactured products. Such care and attention was evidently given to cataloguing and contextualising, yet in reflecting on her work I found myself considering alternative messages held within the physical notebooks themselves. For me the notebooks spoke of movement, my mind was immediately cast to the London she experienced, a cityscape mapped through purchases and packaging. I wanted to traverse the artist's city; investigating a transitional and multifaceted dialogue between locality, body and product. Within my own practice, litter-picking sharpened an awareness of locality; the physical activity itself drew the immediacy of my environment closer to me, prompting me to perceive space differently.

In Amiss' critique of the everyday she built a catalogue that illuminates our problematic attitude to waste and its accumulation in every aspect of our lives. If Art is about challenging habitual perceptions – what value can there be in sealing her work within an archive? I find it curious that archivists are taking the upmost care and attention to preserve the plastics and other materials that make up the artist's notebooks, their decomposition slowed in order to stretch out an artistic lifespan. I can understand the desire to preserve the artist's legacy but should it be fixed in place? Here is an artist that magnifies our relationship to the 'stuff' of the Anthropocene, an age in which plastics are visible within the Earth's strata. The quantity and visibility of our non-biodegradable legacy stands testament to the responsibility we all share through our consumptive habits.

This time of diminished physical contact has the power to magnify the importance of touch and the potential to cultivate a proactive response to environmental degradation by

challenging the ways we, as multi-sensory organism, interact with the materiality of the world.

Digital Archive: Discarded waste picked up from sites around North Leeds.

Appendix C

Photographic evidence of the materials and guidebook posted out to my examiners (2023).