Gendered forces at work: tentacular encounters from the nursery

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Abstract

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Engaging with a feminist relational onto-epistemology, my research seeks to produce generative re-imaginings of how a gendered workforce comes to matter in a North London Montessori nursery. Debates, policies and practices around gender in the early years workforce continue to be firmly rooted in binary male/female framings (DfE, 2017), in which the recruitment of men in some ways has problematically taken centre stage through "recuperative masculinity" interventions (Lingard & Douglas, 1999). While these issues are not separate from Montessori early childhood contexts, the gender-neutral framing of Montessori works to let gender completely fall off the agenda. By employing feminist theorisations that foreground materiality, affect, discourse, place and temporalities, this study unsettles such presumed neutrality, and demonstrates ways a "gendered workforce" can be understood differently.

The research emerged as situated evocations (Strathern, 1991) in a Montessori nursery in North London. Committed to Haraway's (1988) situated knowledges and embodied perspectives, entangled authorship and "subjectivities" are emphasised as always already more-than-human. This is specifically made explicit in this thesis by how postcolonial and Dalit "subjectivities" intra-act to generate new theoretical connections, tensions and

contradictions. Theoretical heterogeneity is thus welcomed by putting feminist "new" materialisms in conversation with anticolonial, decolonial and Dalit feminisms. These theoretical explorations have shaped the directions and orientations of this research.

By paying attention to everyday "objects" in the nursery such as tea, cameras and snot, Haraway's (2016) SF practice is mobilised to make visible the complex intra-actions of manifold forces that are at once composed of gendered and more-than-gendered (i.e. racialised, "classed" and "casted") relations, stories and worlds that would otherwise be lost through methodological individualism and human exceptionalism. The more-than-human orientation in this research allows for a reconceptualisation of a "gendered workforce" as *gendered forces* that *work* on, across and through bodies (human and not), spaces, places, and scales of time. The reconceptualisation grants the possibility to attune to the multiple, in/determinate and contradictory materialisations of gendered and more-than-gendered forces that cut through onto-epistemic boundaries. Each encounter is constituted and reconstituted by masculinist forces that privilege narrow gender formations that determine what counts as "human" (Wynter 2003), and at once composed of minor gestures (Manning, 2016) that present generative potentialities for the innumerable possibilities for becoming-gendered Otherwise (Huuki & Renold, 2015) amid the recuperative masculinity drives of neoliberal capitalism. An approach that foregrounds a more-than-human and relational conception of gender makes a hopeful, generative and expansive contribution to the field.

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Declaration of Authorship

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

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Chapter 1. Orienting, situating, re-orienting

'Orientations are how the world acquires a certain shape through contact between bodies that are not in a relation of exteriority' (Ahmed, 2010, p.234)

1.1 Mapping the connections

The chapter provides a mapping of the thesis to enable the reader to navigate through the work that this thesis does, as well as setting the warrant for researching gender in Montessori early childhood education and care (ECEC) workforce. To orient this study, I will begin this chapter by establishing my personal connections to the topic, and further identifying the deliberations that led to researching gender in the Montessori ECEC workforce. After delineating the matters of concern that guide this study, the theoretical approach mobilised in this research is explored. In line with a feminist politics of situated knowledges and partial perspectives (Haraway, 1988), I situate myself as embodied, embedded and immanent in the research processes, and further make explicit how this has shaped the directions this research has taken. Subsequently, the matterings of this study to ongoing conversations about gender in the Montessori ECEC workforce is highlighted (and revisited more thoroughly in the concluding chapter). Finally, this chapter provides a concise summary of the overall thesis structure which provides a clear sense of the non-normative approach that has been taken in this investigation.

1.2 Orientations in some directions more than others

This research emerged from grappling with some of the tensions linked to working with young children in Montessori childhood spaces, where my presence as someone *assumed* to be "male" simultaneously occupied the subject position of the 'wanted' and 'unwanted other' (Tennhoff et al., 2015). I was deemed the 'wanted other', when the subject position coincided with dominant narratives around 'recuperative masculinity' politics and rationale (Lingard & Douglas, 1999; Lingard, 2003; Warin et al., 2020a), where special competencies are attributed to cis-heterosexual men - competencies that are claimed to be urgently needed to recuperate

early childhood education and care (ECEC). In contrast, the subject position of the 'unwanted other' relies on insinuations of presumed risk and danger (Skelton, 1991; Murray, 1996; King, 1998; Sumison, 2000; Pruit, 2015). It is this serious dis/connection that shaped the orientations in this research, which as Ahmed (2006, p.58) explains, are not originary but take shape through 'repetitions that lead bodies in some directions more than others.'

The biological model of gender that I was deeply familiar with at the time as a former student of the biological sciences simply failed to account for the complex gendered realities and formations in the classroom. It was my enrolment into a top-up programme at a Montessori training college, Montessori Centre International (MCI) London, that brought me in proximity to feminist theorisations and orientations. My explorations for a module on supporting gender diversity led me to Glenda MacNaughton's (2000) work on re-thinking gender in early childhood, and her use of feminist poststructuralisms powerfully transformed the way I viewed and understood gender. A feminist poststructuralist reading allowed grappling with the discursive gender formations in the classroom, and enabled an attunement to the multiple, shifting, and contradictory ways gender emerged (Butler, 1990). It further made visible how children and adults actively negotiated, contested, resisted as well as conformed to hegemonic formations of gender, which gave a sense of hope in enacting change in everyday classroom experiences (Davies, 1989; Renold, 2000; Browne, 2004; Blaise, 2005; Osgood, 2012). In response, I founded the online platform *The Male Montessorian* as a way to destabilise entrenched binaries that continue to inform gender diversification efforts in the ECEC workforce, which has become a community for lively and sometimes difficult dialogues around gender. It is worth noting that the name was chosen in jest, to kind of poke fun at the very notion of *The* Male Montessorian, but simultaneously to interrogate and explore the multiple stories that constitute gender in Montessori ECEC, particularly in relation to the workforce.

Engaging with feminist scholarship around gender in the ECEC workforce helped me stay with the discomfort I was experiencing with male recruitment and retention campaigns. Whilst I appreciated the efforts to welcome more men into the sector (Brownhill et al., 2016; Warin, 2018; Warin et al., 2020a,b), I was at the same time troubled by the increasingly disproportionate emphasis on the recruitment of men, by the binaries it unwittingly sustained,

and by the recuperative masculinity politics that so often dominated public discourse. Recuperative masculinity politics relies on framing women (female practitioners and single mothers) and non-heteronormative families as contributing to fabricated notions of 'boys in crisis' through the so-called "feminisation" of education (Martino & Kehler, 2006; Burn & Pratt-Adams, 2015). Further, the gains made from feminist and anti-racist interventions have been faulted for putting "white working-class boys" at a disadvantage (House of Commons, 2021; UK Government 2021). By recruiting more men into ECEC as "positive male role models" and "father-figures" it is therefore argued that the "boys in crisis" can be resolved (DfE, 2017), a perspective that has been consistently disputed in previous research (Carrington et al., 2005; Cushman, 2005; Perlesz, 2005; Cameron, 2006; Martino, 2014b; Brownhill, 2014, 2015; Burn & Pratt-Adams, 2015; Warin, 2018; Robb, 2019; Bragg et al., 2022). This coincides and overlaps with the general upsurge in manosphere[1] groups that capitalise on the idea of male victimhood (Ging, 2019; Stahl et al., 2023), offering a faint sense of the wider relations these debates and discussions around male recruitment are located and oriented in. Feminist scholarship exploring gender in the ECEC workforce refutes such claims of crisis produced by the so-called "feminisation" of education, and brings well-needed attention to thinking of pedagogies and practices beyond gender binaries (Osgood, 2012; McGregor, 2018; Xu et al. 2020).

While these issues are not separate from Montessori ECEC contexts, the gender-neutral framing of Montessori, i.e. the insistence that Montessori materials are 'gender neutral and that her educational principles transcend cultural factors' (Gustafsson, 2018, p.1454), works to let gender fall off the agenda. As I have identified elsewhere (Mohandas, 2023a), this is further reflected in the dearth of Montessori scholarship that critically engages with gender. When gender *is* mentioned, it is dismissed as not contributing 'significantly to any of the differences reported' (Lillard and Else-Quest 2006, p.1893) without explicating how gender was conceptualised or why it matters.

[1] Manosphere is an umbrella term that refers to a number of interconnected anti-feminist and misogynistic online communities that have become the dominant arena for the communication of "men's rights activism"

1.3 Matters of concern to this research

The study therefore seeks to unsettle Montessori's gender-neutral framing, by considering how feminist theorisations might enable attuning to the emergences of gender in the Montessori ECEC workforce. Fundamental to this gender-neutral framing is a conception of nonhuman matter as inert, atomistic and individualised (Mohandas, 2023a), a view that has its roots in western humanist tradition that considers the "human" as the agentic being uniquely capable of manipulating and transforming the nonhuman world. A feminist "new" materialist approach considers the vibrancy of matter (Bennett, 2010a,b) to hold potential for unsettling the inertness of matter in efforts to reconceptualise gender. Feminist scholars have increasingly taken up a "new" materialist ontology to research gendered childhoods for nearly a decade (Renold & Mellor, 2013; Blaise, 2013; Osgood, 2014; Osgood & Scarlet, 2015; Lyttleton-Smith, 2017; Huuki & Renold, 2015; Osgood & Robinson, 2019). Inspired by and in consonance with these feminist inheritances, this research began by employing a feminist "new" materialist approach to investigate and account for the materialisation of a gendered workforce in Montessori classrooms[2]. It is however important to note that feminist "new" materialisms do not emerge as a clear break from feminist poststructuralisms, rather they emerge dis/continuously (Juelskjær and Schwennesen, 2012; Davies, 2016; Osgood & Robinson, 2019) by expanding the focus beyond the discursive, towards a relational conception that underscores the insolubility of matter and discourse (Haraway, 1988; Barad, 1996). In line with this shift in conceptualisation, the investigations in this research will be guided, informed, and expanded through the following matters of concern:

- *How is a gendered workforce materialised in Montessori early childhood settings?*
- *What might a feminist relational engagement do to complicate understandings of a gendered workforce in Montessori early childhood?*

[2] As will be briefed in section 1.5 and explored in greater detail in Chapter 3, over the course of the doctoral journey, confronted by various tensions and dilemmas, the theoretical approach mobilised in this research became more capacious to hold space for the productive possibilities for working with theories-in-tension.

- *In what ways can knowledge gained from such an engagement shift and transform gender relations in the Montessori early childhood workforce?*

1.4 More-than-human orientations of the study

The research emerged at a Montessori nursery in London that involved embedding myself in the nursery for three months, with ongoing connections maintained throughout the research process. The feminist "new" materialist orientation of this study radically reconceives how research is understood and how it is enacted (St. Pierre et al., 2016; Osgood & Robinson, 2019). Moreover, the unsettling of inanimacies of all forms entails that aspects which traditional humanist research would have considered mere backdrop such as the research site, location, space, buildings, fences, furniture, and time, are re-animated as performative constituents in producing the phenomena being studied (Bennett, 2010a,b). Moreover, recording devices such as cameras and fieldnotes that are otherwise understood as utilitarian devices, used to represent "the world", are re-imagined as actively reconfiguring worlds, even as they become reconfigured in the process (Änggård, 2015; Nordstrom, 2015). This does not mean that nonhumans or humans inherently possess agencies, rather agencies are understood as relationally produced through what Barad (2003) refers to as 'intra-action', a concept that underscores the ontological inseparability of entities. While humanism conceives the "human" as an insular and water-tight category, a feminist "new" materialist approach underscores its porosity and views "human" as always already more-than-human (Plumwood, 1999; Tuana, 2008). Categorical purity is therefore viewed as an illusion, as the moment one attempts to touch such inherited categories they begin to fall apart (Haraway, 2008). This more-than-human orientation therefore profoundly transforms the way a Montessori gendered workforce is realised, where gender is seen as a matter of ongoing human, nonhuman and other-than-human intra-actions (Barad, 1996; Tuana, 1996). As a means to account for this shift, in this study a "gendered workforce" has been reconceptualised as *gendered forces* that *work* on, across, and through bodies, places, spaces and times. They are seen as atmospheric forces (Ahmed, 2014b; Stewart, 2011; Anderson, 2009) that are produced through the entangled agencies of place, Montessori materials, recording devices, children, practitioners, temporalities, space, nursery policies, government requirements, philosophies, learning frameworks, memories and so on.

1.5 Situated knowledges and partial connections

The orientations and re-orientations of this research are further shaped by Haraway's (1988, p.584) notion of situated knowledges, which is an argument against disembodied knowledges, and an argument for 'partial, locatable, critical knowledges sustaining the possibility of webs of connections'. This means that while this research resists any claims to transcendency or the splitting of subject and object, it simultaneously locates the researcher as the stuff that constitutes the research process (Blaise et al., 2013; Osgood, 2019d). Consequently, the direction, orientation and connections made in this research are profoundly but not exclusively formed by my nonbinary, queer, South Asian, and avarna[3] sensibilities. It is not however aimed at a politics of closure, rather it remains open to how "subjectivities" are always already worldly, more-than-human and in-the-making, formed through the entanglement with matter, affect, place, space, temporality, and discourse.

This dynamic is specifically made explicit in Chapter 3 where postcolonial and Dalit "subjectivities" intra-act to generate new connections, tensions and contradictions that shaped the various trajectories in this research, and the kinds of gender relations that were foregrounded. In this regard, situated knowledges enables 'opening up and building complex contact zones with other ways of knowing the world' (Haraway, in Haraway & Young, 2019). This in turn, prompts a re-orientation of the theoretical approach towards a feminist relational onto-epistemology. The aim here is not to create yet another totalising theoretical category, but to hold space to put feminist "new" materialist concepts, anticolonial and decolonial thought and Dalit feminist insight in relation. As Strathern (2020, p.187) contends, 'relations do their work under congruent and under conflicting circumstances'.

It is however important to underscore that situated knowledges do not constitute one's identifying marks or literally where one is (Haraway & Goodeve, 2000), rather they are, as

[3] Avarna refers to someone outside the varna caste system, who have historically been considered "untouchables".

Haraway (2016) argues, a "sympoeisis" or making-with. This is what Haraway's (2016) SF method, particularly the practice of string figuring, embodies and makes possible in this research as a mode of making-with and becoming-with. Each relata[4] chapter in this study presents such possibilities for sympoeisis, initiating the inquiry with an unassuming 'object' in the Montessori nursery, only to realise the object is 'not only' (Mariano, in de la Cadena, 2015), but an eruption of gendered (and more-than-gendered) stories, relations and worlds. Haraway's (2008, p.35) question around 'Who and what do I touch when I touch…?' becomes a potent guide that is marked by profound relationalities and historical conjunctures, working across inherited categories and boundaries, and along multiple scales of time and space.

1.6 The matterings of this study

The "originality" of the study lies in the topic area, as well as its situatedness. I wish to emphasise here that by "originality" I do not mean a radical break, rather a 'cutting togetherapart' (Barad, 2014, p.168) with very rich histories of feminist scholarly engagements in ECEC that have and continue to transform practice related to a gendered workforce. The study offers a reconceptualisation of a gendered workforce in Montessori ECEC by loosening ties with dominant individualised and bounded conceptualisations of gender. A "gendered workforce" is therefore reimagined as *gendered forces* that *work* on, across and through bodies, spaces, places, and times, inseparable from the discursive. This reconceptualisation disrupts entrenched notions of gender neutrality that dominate Montessori ECEC practice, by bringing attention to the multiple, shifting, and contradictory forces that materialise gender in relationally specific and contingent ways. It offers a way to account for the relentless workings of neoliberalism and the gendered formations they privilege, i.e. what Wynter (2003, p.260) refers to as the 'overrepresentation of Man', while at the same time, it illuminates the creative, critical and subversive forces that simultaneously work to generate ruptures and openings. Grappling with these heterogeneous forces opens new modes for fashioning and reconfiguring gender in Montessori.

[4] In this thesis, I utilise Barad's (2007) conception of "relata", instead of "findings" or "data", to highlight how worlds are relationally produced. See Chapter 4, section 4.5.2 for a more detailed justification for the use of relata.

The study further expands the focus beyond number-crunching exercises of merely adding people who look different (Puwar, 2004) (i.e. more men), towards an attunement to how these gendered forces work across human-nonhuman boundaries. This research highlights how traditional humanist approaches, through methodological individualism and human exceptionalism, conceptualise gender in narrow ways, thereby obscuring the effects such conceptualisations have on the more-than-human world. For example, a myopic view that considers how Montessori pedagogical materials contribute to "human development" ignores the multiple human-nonhuman exploitations in 'shadow places' (Plumwood, 2008, n.p.) and ongoing 'forces of earth violences' spearheaded by extractive capitalism (Hernández et al., 2021, p.2) that constitute the ongoing materialisation of Montessori early childhood practice. Therefore, a more-than-human reconceptualisation demonstrates that the very processes that constitute gender are at once economic, industrial, ecological, biological, social, personal and political, and can never be fully mapped or understood (Alaimo, 2010). Further, the active, creative and critical interferences and ruptures produced by nonhuman entities, like for example the unexpected camera flashes in the thick of developmental captures (Chapter 6), emphasise how the unfurling of gendered forces are never confined to human intentionality or volition, making it impossible to say or predict in advance how gender will emerge.

This study illustrates how every encounter is imbued with endless dilemmas, in which problems are constantly being reconfigured (Haraway, 2016; Lury, 2020). For example, a thoughtful gesture such as being offered a hot mug of tea (Chapter 5) is materialised through past and ongoing relations of feminist emancipation, class discrimination, imperial violence, neoliberalisation, caste injustices and subversions, as well as multispecies displacements. Such an optics invites thinking beyond categories of "good" and "bad", but as Haraway (2016, p.98) teaches, involves being 'less deadly' with each encounter. Therefore, unlike grand narratives such as 'recuperative masculinity interventions' that view recruiting more 'men' as a panacea for ongoing challenges facing ECEC, this study invites getting into the thick of everyday nursery life and attuning to the ever-unfolding gendered forces that constitute each encounter. As Barad (2007, p.353) explains, 'All real living is meeting. And each meeting

matters', as it presents fresh possibilities to reconfigure and reorient, to becoming gendered Otherwise (Huuki & Renold, 2015; Renold, 2018).

1.7 Delineating the thesis chapters

In Chapter 1 I have provided an introduction to this thesis as a means to orient and situate the research. In this final section of the chapter, a summary of the chapters that will follow is given to give a sense of how this thesis unfolds.

In Chapter 2, I go on to locate my investigation within the current scholarly landscape by reviewing research literature around gender in the UK early years workforce. The chapter traces the gendered legacies that shape early childhood education and care (ECEC) in the UK, highlighting the centre stage that "men" have occupied in discussions around gender and gender diversification of the ECEC workforce (CACE, 1967; DfEE, 1998; DfES 2001; DfES, 2005; DfE & DoH, 2011; DfE 2017; DfE, 2019a,b). By re-animating feminist research (Osgood, 2006; Osgood, 2009; Osgood, 2012; Burn & Pratt-Adams, 2015; Warin, 2018), particularly feminist poststructuralist scholarship, the chapter focuses on the problematic narratives sustained in male recruitment campaigns, government policies, debates and practices. The dominant narratives that drive inclusion of men into ECEC continue to rely on essentialist and deterministic perspectives that position men as bringing specific recuperative qualities to the sector, i.e. men are deemed desirable as "positive male role models", "disciplinarians", "sportsmen", "father-figures", "leaders" etc (Burn & Pratt-Adams, 2015; Warin, 2018). This inadvertently frames women (particularly, female practitioners and single mothers), communities of colour, and non-heteronormative families in deficit terms. Further, similar deficit framings have been identified in professionalisation drives in ECEC, shaped by masculinist, new managerialist policy reforms that encourage rationality, competition, and entrepreneurial individualism (Osgood, 2006; Osgood, 2012). A feminist poststructuralist reading simultaneously foregrounds subversive stories of women working with young children resisting, negotiating and putting to work alternative conceptions of professionalism (Osgood, 2012). Notwithstanding this rich legacy of feminist research, there is a marked absence of scholarship that critically engages with gender in Montessori. While the issues related to gender composition and challenges related to pay and

status in Montessori ECEC mirror the sector more widely, the gender-neutral framing of the Montessori approach, that views Montessori materials and principles transcending gendering practices (Gustafsson, 2018), forces gender completely out of the picture. A feminist "new" materialist engagement is therefore justified to unsettle such presumed neutrality by attuning to how matter comes to matter in how a gendered workforce materialises in the Montessori classroom.

Chapter 3 then takes up this proposition, and begins by exploring key feminist "new" materialist concepts. This is followed by a set of theoretical moves shaped by challenges, dilemmas and tensions, and the possibilities presented when theoretical heterogeneity is welcomed through an 'ethics of assemblage' (Arola & Arola, 2017). While the "new" in "new" materialisms is an attempt to challenge older forms of materialisms, it has been a matter of contention as it undermines centuries and millennia old philosophies and cosmologies in Indigenous and non-western contexts (Todd, 2016; Jones & Hoskins, 2016; Rowe & Tuck, 2017; Rosiek et al., 2019; King, 2020). In the spirit of situated knowledges (Haraway, 1988) and in an effort to decolonise knowledge, the monist philosophy Advaita Vedanta from the Indian subcontinent was initially explored. However, as a result of engaging more deeply with Advaita, a new set of tensions emerged relating to the role of Advaita in sustaining caste hierarchies and violences in contemporary India. These were further foregrounded by the entanglements of caste in everyday materialisations in the classroom. These tensions and challenges worked to guide the theoretical framework in other directions, leading to the inclusion of Dalit feminisms, and in considering the possibilities potentiated by putting feminist "new" materialisms in conversation with Dalit feminist thought, anticolonial and decolonial concepts. The chapter concludes with a reconceptualisation of a "gendered workforce", that spotlights 'gender in the workforce' generated within these tensions, as atmospheric forces working on, across, and through bodies, places, spaces, and times, that materialise gender in some ways and not others.

Chapter 4 then considers how research can be reconceived through such theoretical reconceptualisations. Situated evocation (Strathern, 1991) is embraced as a generative approach, and Montessori's observational practice is reconfigured for a more capacious view that enables attuning to the more-than-human. Fundamental to such a reconfiguration is

unsettling aspects that would otherwise assume an inert status in traditional research approaches and methodologies such as place, space, time, furniture, recording devices, fencing, and so forth, to account for how they actively constitute the phenomena studied. This more-than-human approach not only attunes to how gendered forces work across human-nonhuman boundaries, but it further makes room for un/anticipated emergences of gender that a deterministic view of gender would fail to detect. Haraway's (2016) SF method is then unpacked to consider the work it does in diffracting and composing worlds, as well as the possibilities it presents in strengthening ongoing ethical response-abilities that far exceed mere procedural ethics.

In Chapter 5 a hot cup of TWININGS ™ Green Mango and Lychee Tea materialises with particular affective intensities. By embracing Tsing's (2015, p.6) call to 'bring curiosity back', an SF practice is mobilised that involves "going visiting" to the TWININGS flagship store, underscoring that tea is 'not only' (Mariano, in de la Cadena, 2015, p.13) a hot beverage, an evergreen shrub or a resource, it is instead an eruption of gendered stories, relations and worlds - lively and contaminated. Stories of tea, tea rooms, the suffragette movement and their entanglements with Montessori, childcare and divisions along gender and class lines are explored. These feminist inheritances are at once complicit in colonial plantation stories of exploitation. Interrogating the printed text *'we've been picking…'* inscribed on the TWININGS product box, unearths troubling accounts related to 'the imperial weight of tea' (Mintz, 1985), that are inextricably enmeshed in the masculinist, militarist legacies of colonial capitalism and plantation economies, and work in consonance with the civilising logic embedded in the formation of "'neoliberal subjects" aka "rational economic Man" (Wynter, 2003). Moreover, by highlighting the forced simplification of ecologies through practices of plantation monocropping, the chapter goes on to demonstrate the historical and ongoing materialisations of plantation feral effects in the form of multispecies struggles and forced human-nonhuman labour (Tsing & Bazzul, 2022). Amidst these troubles, hope is generated through possibilities of plantation afterlives (McKittrick, 2013) as seen in the subversive moves embodied in Dalit women plantation workers walking out of and refusing to labour in plantation sites. The chapter concludes by thinking-with figures such as Mythiri Jegathesan's (2019) *tundu* and Katie O'Neill's (2017) *tea dragons* to attune to the minor gestures

(Manning, 2016) produced in the nursery, through everyday practices of making and drinking tea, that transform the field of gendered relations.

Chapter 6 thinks-with cameras. The chapter begins by attuning to the felt adult/child divide evident at the nursery linked to the use of iPad cameras. The questioning of this divide generates insight into the affective dimensions that position iPad cameras as 'matters of risk'. The risk is two-fold. Firstly, iPad cameras are deemed risky in relation to the harm digital screen-based technologies pose to children's "natural"/ "normal" development. Secondly, the notion of risk is activated in relation to the potential abuse that iPad cameras open children to. Following this, the chapter considers vignettes from the nursery and proceeds to trouble notions of "innocence" and "risk". Vignette 6.1 exposes the masculinist forces of neoliberalism that work across human-camera boundaries implicated in the production of market supply factors, and organised through the masculinist gaze that drives new managerialism, valuing particular masculinist attributes such as rationality, objectivity, individualism, competition etc (Osgood, 2006), and to be produced chrononormatively (Freeman, 2010) to ensure efficient (re)production. Foregrounding the masculinist gaze of neoliberalism that shapes camera-practitioner assemblages, entails engaging with already troubled feminist histories that activate diffractive interferences from the field of feminist film studies - highlighting the persistence of male scopophilia, objectification of women, as well as contentious subversive iterations of the #girlgaze. By thinking-with Haraway's (1985, p.2) 'cyborg', the performative workings of human-machine intra-activity is highlighted and sets the stage for the indeterminate performances of iPad-camera-animacies that generate interruptions to well-established practices of measurement culture and patriarchal gaze. Vignette 6.2 and 6.3 further attune to the other facet of cameras as risk, by examining its intra-active workings with queer nonbinary researcher, child, parents, and nursery spaces that highlight contradictory gendered forces at work that make some bodily and spatial configurations more risky and at risk than others. The chapter concludes by making visible colonial extractivist logic and practices in shadow places (Plumwood, 2008) that are fundamental to the materialisation of iPad cameras and the sustenance of developmentalist logic and related practices.

In Chapter 7, an encounter with snot becomes the focus of the research investigation. After critically considering the developmentalist logic that shapes relations and attitudes to snot in Montessori, the chapter attunes to the gendered, racialized and "classed" performativities of snot matter, highlighting the interruptions produced to entrenched notions of "respectability" through its status as 'matter out of place' (Douglas, 1984). Following this, the chapter shifts its focus to viruses as 'queer figures', which, similar to snot, upset various inherited binaries of western epistemological traditions, towards a conception and practice of transcorporeality (Alaimo, 2010). Adopting a transcorporeal sensibility radically transforms the way human-virus relations are understood, especially as the nursery finds itself in a global pandemic. The early childhood workforce, composed principally of underpaid and undervalued women, find themselves disproportionately affected as 'frontline workers' during the covid-19 pandemic. Committed to Haraway's (1988) situated knowledges and partial perspectives, shaped by postcolonial and Dalit "subjectivities", the chapter attunes to the atmospheric forces (Ahmed, 2014b; Stewart, 2011) activated in the nursery through entanglements of matter, discourse, space, place, time, distance, and touch. The transversal and transcorporeal reading calls into question separations drawn along geographical lines, by accentuating connections, resonances, differences and tensions of living and dying in the Capitalocene. Continuing with Haraway's (2016) SF method, three viral pandemics involving SARS-CoV-2, smallpox and HIV are brought into focus, and read diffractively through one another, to generate insights into the gendered and more-than-gendered forces at work. Re-attuning to hauntings from the smallpox pandemic exposes the dominance of imperialist, militarist and masculinist metaphors of "war" that configure human-viral pastpresences. Further, by re-membering the marks of the HIV pandemic alongside affirmative emergences, absences and resonances in the nursery, the chapter concludes by embracing Haraway's (2003, p.2) metaphor '*compānis'* or 'companion species', that emphasises a 'becoming-with' (Haraway, 2008, p.38). The chapter therefore presents possibilities for becoming gendered Otherwise (Huuki & Renold, 2015; Renold, 2018), in contrast to the gendered formations privileged by anthropocentric and human supremacist accounts that are marked by mastery.

Chapter 8, as the final chapter of the thesis, re-turns to the matters of concern outlined in this introductory chapter and demonstrates how this research through the mobilisation of a feminist relational onto-epistemology has complicated understandings about a gendered

workforce in Montessori ECEC. The chapter underscores how the reconceptualisation of a "gendered workforce" as gendered forces working on, across and through bodies, spaces, places, and times, enables attuning to the multiple, contradictory and transversal ways gender materialises in the Montessori classroom. It concludes with a set of openings to consider how this research has come to matter, and how gender matters in the everyday life of a Montessori classroom. Therefore, I invite the reader to engage with this thesis as a series of provocations in response to the matters of concern towards matters of care that considers the ethical and political obligations for thinking and living in a more-than-human world.

Chapter 2. Tracing the generative entanglements

Debates, policies and practices around gender in the early years workforce have predominantly focused on the under-representation of men in early childhood education and care (ECEC). There have been concerted efforts by government and international organisations to work towards a planned increase of men in the sector (CACE, 1967; DfEE, 1998; DfES 2001; DfES, 2005; DfE & DoH, 2011; DfE 2017; DfE, 2019a,b). In this chapter literature around gender in the ECEC workforce will be reviewed in order to account for the trajectories in this study.

The initial section of this review delves into the troubling historical contexts in which these discussions have arisen in the UK and further examines how gender is framed in contemporary contexts. By exploring extant feminist research, the review will examine and interrogate dominant narratives surrounding the male recruitment drive, particularly narratives shaped by 'recuperative masculinity politics' that blame the so-called 'feminisation' of ECEC. Feminist poststructuralisms have produced critical ruptures to these narratives and enabled important shifts in how gender is conceptualised. Gender is therefore reconceptualised as performative, multiple, shifting and discursively produced. Following this, the review takes a closer look at how gender is specifically understood in Montessori. Whilst the issues relating to gender in Montessori ECEC workforce are not vastly dissimilar from the sector more broadly, the lack of scholarly attention to gender through characterisations of Montessori materials and classrooms as "gender neutral" is brought to focus. In conclusion, the review identifies the dearth of scholarship on gender in Montessori classrooms, justifying the employment of a feminist relational onto-epistemology to investigate how a gendered workforce materialises in Montessori classrooms.

2.1 Tracing the gendered legacies of ECEC workforce

In the following section, histories related to gender in the ECEC workforce is reviewed to contextualise contemporary efforts in gender diversification of the workforce. The gendered legacies inherited in UK early years can be traced back to the inception of the infant school

movement (Whitbred, 1972). In 1816 Robert Owen, a Welsh social reformer opened Britain's first nursery-infant school in New Lanark. He wanted to use education as a medium for social change whereby 'a new socialist society' could replace the existing classed system (Harrison, 1968; Owen, 1920). Owen envisioned the role of the teacher in his schools to not be defined by their sex, rather by their 'unceasing kindness…to all the children' (Owen, 1920, p.319; Burn & Pratt-Adams, 2015). It is noteworthy that Owen's vision kindled the first organised movement for British women's suffrage led by the Langham Place Circle, a group of women who campaigned for improved women's rights in law, education and marriage (Mohandas, 2020). When Samuel Wilderspin became a prominent figure in the infant school movement, differentiation of roles based on "sex" was implemented. Wilderspin believed that men were best suited to teaching young children, since according to him women did not possess qualities such as physical strength and intellectual power, that were required for teaching young children (McCann, 1966; Burn & Pratt-Adams, 2015; Lovett, 2013; Wilderspin, 1825; Clarke, 1985). His views on the role of men in his schools were shaped by 'powerful patriarchal discourses… supported by religious beliefs' (Burn & Pratt-Adams, 2015, p.20) driven by an attempt to reproduce family structures in public domains (Clarke, 1985). This disparity was further evident in the average pay, where women earned half the salary of men (Turner, 1970).

Wilderspin's movement, however, lost impetus in the 1840s and soon men took on a status of theoretical experts, while the physical work with children became a domain of women (Clarke, 1985). These roles within ECEC were further consolidated by the work of Froebel, who believed that women were best suited for this role 'as they possessed an innate maternal tendency' (Hilton & Hirsch, 2000, p.12). Considering the social status of women during the time, where the very thought of women needing an education was viewed with disdain, Froebel's emphasis on 'higher education for women for the purpose of teaching young children' (Ailwood, 2008, p.159) was indeed a step forward in raising the social status of women. However, Lewis (1984) calls this 'civic maternalism', arguing that despite the professionalisation of teaching, women continued to stay within the parameters of the domestically accepted role of mothering. Montessori's own work contributed to these advances as she viewed early childhood as a site for elevating women, the traces of which

materialised in London where a Montessori pre-school called the Mother's Arms was open in East London to support working-class suffragettes (Isaacs & Baynham, 2023).

As a result of the Education Act 1870, formal education was made compulsory for five-year olds. The gender segregation was clearly evident in the different curricula that were provided. The curriculum for boys aimed to prepare them to be leaders, factory workers and soldiers, while the curriculum for girls sought to educate them for domestic roles (Skelton, 2001). Even though the curriculum promoted mixed sex infant classes, the children were separated when they got older, where men were seen as suitable to teach boys, and women, girls (Burn & Pratt-Adams, 2015). The Education Act 1870 is often seen as a step forward in making education accessible to the working class, however, Purvis (1995) suggests that one of the intentions that drove its implementation was an agenda to impose upon working-class the middle-class family structure 'of a male breadwinner and an economically dependent, full-time wife and mother' (p.9). Interestingly, during this time, there was also a surge of unqualified women who were employed to work with young children, which further positioned women as 'merely reenacting their domestic roles in public' (Burn & Pratt-Adams, 2015, p.26). This alarming increase of uncertified female infant teachers also led to the depreciation of early years' teacher status. Ozga & Lawn (1981) argue that as a result of this 'women were used increasingly as cheap labour' (p.72).

In 1919 Margaret McMillan, one of the pioneers in nursery education, set up a training centre to train young girls as nursery assistants with the 'task of nurturing slum children' (Steedman, 1990, p.184). In the same year, the National Federation of Women Teachers (NFWT) called for an 'equal pay for men and women teachers'. However, this was vehemently opposed by the National Association of Schoolmasters (NAS), a trade union representing male teachers, pointing to the damage a predominantly female workforce would cause boys. Littlewood (1995) opines that this reaction from the NAS was an attempt to protect the status of men as they felt their role in education was under threat. Regrettably, equal pay for male and female teachers was only achieved much later in 1961 (LF, 2013). These accounts give a sense and flavour of the gendered inheritances that shape much of the UK ECEC workforce constitution.

2.2 The "brave" 3 percent

> 'In infant schools in 1965 there were only 97 brave men out of a total of 33,000 teachers… Some young children, particularly boys, may respond better to teaching from a man than from a woman' (CACE, 1967, p.313)

The underrepresentation of men in ECEC resurfaced shortly after in the highly influential Plowden report (CACE, 1967). This was the first official document that addressed the shortage of men and sought to recruit more men within the ECEC and primary sector. The report reverted to using similar narratives to the NAS, framing the contribution of women in deficit terms, and seeing men as rescuers of a failing education system (ibid.). Since the Plowden report was published, there has been an increased focus on the recruitment and retention of men. For instance, in 1998, the Green Paper 'Meeting the Childcare Challenge' was launched with plans and strategies established for recruitment of men. A target of 6 percent was set to be achieved by 2004 (DfEE, 1998). Organisations like Men in Childcare (MiC), the Fatherhood Institute (FI), and National Literacy Trust (NLT) have since then developed campaigns to promote career options in ECEC to men. *The Men in Childcare* in Scotland ran men-only training programs with the following invitation on their website: 'Scotland needs more men to work with children in early years' settings, so MiC will train you free of charge!' (MiC, 2019). These initiatives from MiC led to about 900 men signing up to some form of ECEC training (Roberts-Holmes & Brownhill, 2011). Despite these efforts, the proportions of men in ECEC workforce in the UK have persistently stayed at an average of 2-4 percent (DfE, 2010; DfE, 2013a; DfE, 2017; DfE, 2019a). This percentage has been consistent globally as well, with exceptions of 7 percent in Iceland and Turkey and 9 percent in Norway (Eurydice & Eurostat, 2015; FI, 2015; Statistics Norway, 2017).

2.3 Barriers to men's involvement

Barriers to men's involvement have been explored extensively in previous research, ranging from structural barriers, relating to low pay, professional status and working conditions, to attitudinal barriers that frame men as high-risk to children, as well as cultural stereotypes that

depict childcare as 'women's domain' (Robinson, 1988; Rolfe, 2006; Jones, 2007; Thorpe et al., 2018; Plaisir et al., 2020).

Unfavourable attitudes towards men entering the sector have been well-documented (See Pruit, 2015; Jones, 2007; Smedley, 2005). A discourse of suspicion looms over men working in childcare, and as a result their interactions with young children are scrutinised and closely monitored for improper conduct (Murray, 1996; Cameron et al., 1999; Sumison, 2000). Hjalmarsson and Löfdahl (2014) point out that men's "minority" position in ECEC imply that their actions are made visible in more explicit ways, leading to a reified focus on their performance. Pruit (2015) highlights how this hyper-scrutiny specifically targets certain kinds of men, i.e. men who present effeminate or gay masculinities. This is conflated with notions of sexual perversion and child predation, resulting in men either giving up on work in ECEC or avoiding certain tasks that may put them at risk of suspicion (Eidevald et al., 2018). Silin (1997, p.220) identifies these homophobic stereotypes as 'preservers of the social fabric, assuring the economic and biological reproduction of the family through adherence to appropriate gender roles'. Despite these unhelpful characterisations, in a recent survey carried out where parents' attitudes towards men in childcare were collected, 95 percent of the parents showed willingness for their child to be sent to a nursery where male practitioners were employed (King, 2015). This aligns with research in other geopolitical contexts that spotlight parents' general positive attitude towards men working with young children (Sak et al., 2019).

In wider UK society, perceptions of "who gets to care" for young children in families have considerably changed over recent decades. There has been a consistent increase in father-involvement since the 1970s (Altintas & Sullivan, 2017). According to a large European survey, about 87 percent of Britons believe that men are equally capable of caring for young children just as much as women (Scott & Clerry, 2013). Despite these shifts, 95 percent of the participants in this survey believed a mother who worked full-time would inflict "damage" on their children. These beliefs are perhaps informed by theories of attachment and evolutionary psychology. Although attachment theorists do not claim that mothers are exclusively capable of being primary carers, a major portion of research enacted in the area focuses on women as critical attachment figures (Contratto, 2002). Bliwise (1999) argues that

a lack of attachment research from a feminist perspective further implicates mothers and contributes to conservative positions on caring. These give a general sense of the deeply binarised views that continue to shape childhoods in the UK.

2.4 Unsettling the "gender balance" logic

As alluded earlier, men's contributions to ECEC has overwhelmingly relied on essentialist and biologically deterministic views on gender, that attribute fixed essences to men and women. Besides the more explicit ways gender binarism manifests in gender debates, they are also evident more implicitly. For instance, a key idea that recurs in discussions relating to gender diversification is the notion of "gender balance". The Chair of the DfE's Gender Diversity Task and Finish group states: 'We would love to see the United Kingdom lead the world in the *gender balance* of our early years workforce' (Bernard, 2015, n.p., emphasis added). Whilst the notion of "gender balance" seems like a desirable outcome to work towards, and is a term that continues to be used in some research literature (Peeters, 2013; Peeters et al., 2015; Eidevald et al., 2018), Warin (2018) argues that it is a conception that is premised on biological determinism, and sustains binarised understandings of gender. For instance, the etymology of "balance" (Lt. bilanx) has a binary connotation, and refers to 'two scale' (Wedgwood, 1872). The concept of gender balance materialises from normalising manifestations of the heterosexual matrix which 'enables certain sexed identifications and forecloses and/or disavows other identifications' (Butler, 1993, p.3). The gender binarism is reasoned as the inevitable product of innately programmed differences between men and women, i.e. structural differences of their brains that are claimed to produce starkly different ways of learning, problem-solving as well as career pathways (Holloway et al., 1993; Ardekani et al., 2013; Francis, 2001). Besides being shown to have methodological issues and limitations (Allen et al., 1991; Bishop & Wahlsten, 1997; Fausto-Stirling, 1985), Fine (2017) exposes the inherent sexism embedded in these constructions, tracing its roots to patriarchal foundations of Victorian times, that were animated by the views of western philosophers and thinkers such as Aristotle, Galen and Descartes (Russett, 1989). For instance, Aristotle viewed the different societal roles for men and women emerged from differences in their nature. In his work *Politics* he positions men superior to women, 'the rule of the mind and rational…over the passionate' (Aristotle, 1908, p.33). He further fashions "women" as well

as "children" as incomplete forms of men to be ruled over by men. Aristotelian generalisations were unquestioningly transmitted and perpetuated in the sciences as natural and universal truths (Horowitz, 1976). It must be noted that such deterministic beliefs were also the basis for denying women the right to vote, land ownership, equal pay, amongst others. At the heart of the prevailing narratives surrounding the justification of men's recruitment and their contributions to ECEC is this Aristotelian belief that view men as completing women and children, who would otherwise assume an inferior and incomplete status. Feminist researchers in ECEC, particularly feminist poststructuralists and queer theorists, who have contributed to scholarly debates around gender in the ECEC workforce have problematised such binarised and deterministic views of gender (Osgood, 2012; Warin, 2018; Xu et al., 2020; Warin, 2023)

2.5 Feminist poststructuralisms: performativity of gender

Feminist poststructuralisms (FPS) emerged as a critique of the structuralist notion that knowledge is derived from linguistic signs that socially operate in binary oppositions (Warner, 2016). While liberal feminism has historically focused on individual rights to secure inclusion in the public sphere, and radical feminism has embraced essentialist views of womanhood as a way to counteract the negative constructions of women in masculinist discourse, FPS critically examines and destabilises the male/female binary, by shedding light on the constitutive force of language and discourse, and dismantling their apparent inevitability (Davies & Gannon, 2005). It challenges the notion of a stable unified "self", instead subjectivities are formed by participating within available sets of social meanings and practices (Davies, 1989; Davies & Banks, 1992). Butler's work that foregrounds the performativity of gender (Butler, 1990) is a pivotal contribution that considers what language sets in motion through its utterance. In other words, according to them, gender is compulsively and repeatedly acted out from the speech act of gendering/sexing the body, initiating 'a process of materialization that stabilizes over time to produce the effect of boundary, fixity, and surface we call matter' (Butler, 1993, p.9). Therefore, by acting out and performing gender, children and adults are making sense of and producing what it means to be "male" and/or "female". Queer theorists have further built on the FPS by recognising how notions of "femininity" and "masculinity" are indissociable from discourses of sexuality,

and how dominant conceptions of gender are formed through dominant discourses of heterosexuality (Butler, 1988, 1990).

2.6 Prevailing discourses in male recruitment drives

It is important to spotlight that there is a rich legacy of childhood scholars who have tremendously contributed to reconceptualising gender childhoods and in influencing everyday practice with children (Browyn, 1989; MacNaughton, 1997, 2000; MacLean, 1999; Renold, 2005; Robinson, 2005; Blaise, 2010, 2014; Gunn, 2011). More specifically in relation to gender in the ECEC and primary workforce, research directly employing feminist poststructuralism as well as those influenced by it, challenged the masculinist drives shaped by recuperative masculinity politics and new managerialist policy reforms (Skelton et al., 2009; Carrington et al., 2005; Francis, 2008; Martino & Kehler, 2006; Osgood, 2012; Tarrant et al., 2015; Moosa & Bhana, 2017; Burn & Pratt-Adams, 2015; Warin, 2018; Xu, 2020; Xu et al., 2020). Burn and Pratt-Adams (2015) particularly through a feminist discursive analysis trouble the recuperative position that is often assigned to men. In the following subsections, I explore some of these problematic discourses that continue shape debates around gender in the ECEC workforce.

2.6.1 Recuperative masculinity interventions

> 'Such feminism claims that woman, given the opportunity, can do everything that man can do…If this is feminism, then we are anti-feminists' (Graves et al., 1937, p.42)

As discussed in 2.1, over the past several decades, the framing of childcare as the sole responsibility of women has been called into question, leading to concerted efforts to recruit more men into the early and primary years sector. Whilst the efforts to normalise and destigmatise men's involvement may have the potential to shift gender practices in ECEC, it is simultaneously troubling to witness some of the same arguments that fuelled the NAS campaign re-emerge in contemporary popular media as well as government policy documents, as rationale for recruitment of more men (Hepburn, 2018; DfE, 2017; FI, 2015;

Clark, 2012; LEYF, 2012; Osgood, 2012). At the heart of these efforts are assumptions that correlate the feminisation of ECEC and "failing" boys (Acker, 2006).

> 'The influence of a masculine personality is an essential condition of the successful education of boys' (Baker, 1920, as cited in Graves et al., 1937, p.45)

> 'Male practitioners can be positive role models for boys, especially if their own father is absent' (DfE, 2017, p.24)

Such notions are shaped by "recuperative masculinity politics" that construct men as rescuers of a disintegrating and failing system of education (Lingard, 2003; Martino & Kehler, 2006). They are informed by data from national statistics and international league tables that show boys underachieving in comparison to girls, especially in literacy, an area deemed 'increasingly important in modern labour markets' (OECD, 2018, p.4; DfE, 2018). Girls' greater educational success is credited to feminist-driven policy gains in the 1970s and 1980s (Francis, 2001). Such progress has generated a backlash with media-focussed accounts of "boys in crisis" (Martino, 2014a). Works by pro-masculinists such as Biddulph (1998), Whitmire (2010) and Peterson (2018) tap into these anxieties of perceived threats to boys, framing the times as "anti-male" and urgently in need of re-masculinisation. These perceptions of failure are further engineered and driven by masculinist discourses that construct children as competitors in the global economic race (DfE, 2013; Martino & Rezai-Rashti, 2013), and through processes of datafication and inspection, the "failing boys" image is fabricated. It is interesting to note that these scripts were absent in government policies when girls were "failing" in relation to boys (Thornton & Bricheno, 2006). The strategies proposed to close this gap include recommendations of masculine modes of learning experiences through the recruitment of more male role models (Skelton, 2000). Watson et al. (2010) argue that such attempts that treat boys, as well as girls as homogeneous categories, distract our attention from the inter-locking influences of other systemic inequalities, particularly those based on class, race, location as well as socio-economic status.

2.6.2 Positive male role models and father-figures

The two key narratives linked to recruitment of men that have been persistently repeated in government policies include notions of "positive male role model" and the "absent father-figure". Both these discourses in conjunction with other discourses such as the sportsmen, disciplinarian, and leadership have been instrumental in justifying the re-masculinisation agenda. The Director of National Association of Head Teachers (NAHT) recently announced 'the lack of male nursery teachers deprives kids of role models' (Davidson, 2018, n.p.). The former Children and Families Minister, for example, pledged a sum of '£30,000 grant to support the scheme and help provide more male role models for children in the early years' (DfE, 2019, n.p.). In contrast, both these notions have been disputed in research, widely critiqued by researchers for being premised on conceptual naïveté, relying on simplistic notions of gender-matching identification between children and teachers (Carrington et al., 2005; Martino, 2014b; Brownhill, 2014, 2015; Burn & Pratt-Adams, 2015; Warin, 2018). Robb (2019) challenges the "positive role model" rhetoric by pointing out that men in his study recognised women, particularly their mothers, as positive role models. This is consistent with Ashley's (2001) research that suggests children often see those with whom they have strong attachments as "role models", which in his research did not include teachers, but parents and peers. Moreover, Brownhill and Oates' (2017) study not only failed to find a consensus in definition for "role model", but also found that the definitions given by the participants of his research were by no means gender-specific. However, from a feminist poststructuralist perspective, the "male role model" argument glaringly ignores the agency of children, framing children as passively absorbing gender, rather than as actively constructing (MacNaughton, 2000).

The male role model script is further tied to anxieties about absent fathers. These anxieties have been spurred by statistics that show an increase in lone parents since the 1990s (ONS, 2018). Even though both men and women make up the lone parent statistics, Burn & Pratt-Adams (2015) point out how single mothers are overwhelmingly targeted and framed in terms of dysfunction, rarely single fathers. Male teachers are therefore invited to take on the role of surrogate or substitute fathers in hopes of bringing stability to children's lives (DfE, 2017). Research has questioned the benefits of placing the onus on practitioners and teachers to

assume a fathering role when they are employed in a professional capacity (Cameron, 2006, Cushman, 2005, 2008).

> '[M]en who work with children are employed as practitioners or teachers, not as fathers – how is it possible for men to fulfil their professional duties in the setting/classroom while operating as a dad?' (Brownhill et al., 2016, p.28).

Moreover, Silverstein & Auerbach (1999, p.1) reject the 'father absence phobia' and argue that 'neither mothers nor fathers are essential to child development'. Perlesz (2005, p.2) further argues the "absent father" narrative is a 'pretext to retain the hegemony of patriarchal nuclear family life and restore fathers to their 'rightful' positions of power and control within families'. As highlighted in the previous section, "positive male role model" and "father-figure" form core justifications in DfE's (2017) *Early Years Workforce Strategy* for recruiting men. These not only position women as having failed education, but it also imposes a heteronormative family model that views the inclusion of male and female teachers as forming a whole (Warin, 2018). Moreover, it incriminates non-traditional families, particularly queer and trans families as well as children raised by single mothers. However, longitudinal studies carried out comparing children of lesbian parents and single mothers with two-parent heterosexual families have shown no major differences in parenting nor any negative consequences to children's socio-emotional development (Pennington, 1987; MacCallum & Golombok, 2004; Perlesz, 2005; Golombok & Badger, 2010; Baiocco et al., 2018).

> 'There is no research-based credibility in promoting patriarchal, nuclear family formation as a preferred social and family structure to optimise children's emotional, social, physical and economic outcomes' (Perlesz, 2005, p.2)

2.6.3 Disciplinarians, sportsmen and leaders

Burn and Pratt-Adams (2015) employ a feminist poststructuralist analysis to problematise scripts that position men as disciplinarians, sportsmen, and leaders, that enable advantageous subject positions, whilst disparaging women as well as men who do not conform to conceptions of gender that align with those roles. They argue that positioning men as

disciplinarians legitimate and uphold hegemonic forms of masculinity (Connell, 2005), which work in tandem with preserving heteronormative conceptions of gender (Skelton & Francis, 2009). The notion that men are better than women in disciplining is firmly embedded in public discourse (Cammack & Phillips, 2002; Miller, 1997), and emerges from perceptions that associate men with physical prowess and inherent ability for violence (Hepburn, 2013). These deterministic views, consider men's inclusion in ECEC will presumably contribute to an increase in discipline, and thereby a decrease in behavioural issues that would impede children's learning and development (Sargent, 2005). However, as noted by Mills et al. (2008) such an expectation placed on men to be disciplinarians not only precludes other ways of being male, but may contribute to excluding some men from the profession.

The sportsmen script similarly subscribes to stringent constructions of masculinity. Links between physical play and masculinity have historically been made by the NAS campaign as a rationale against equal pay for male and female teachers. Similar connections between sports and masculinity were promoted by New Labour government initiatives, referred to as the *Playing for Success* (PfS) scheme (DCSF, 1997). The PfS scheme was initiated in collaboration with Football Association (FA) Premier League, the National League, and Local Authority (LA) in order to target underachieving children of primary school age, particularly boys. While the PfS scheme was discontinued in 2011, these were tied to the broader cultural project of re-masculinisation, that reinforced 'a system of gender polarization that is grounded in a repudiation of the feminine' (Martino, 2008, p.218). The effects of such re-masculinisation was accounted for in research, for the marginalising effect they had in alienating girls and children from ethnic minority groups (Renold, 1997; Connolly, 1998; Skelton, 2000), and reinforcing from a young age that 'studiousness and academic success conflict with conventional forms of hegemonic masculinity' (Renold, 2001, p.381). This link between masculinity, sports, and boys' learning has been repudiated, and concerns expressed for it actually working 'to alienate men further from entering the occupation' (Burn and Pratt-Adams, 2015, p.52).

Finally, "men as leaders" script sustains the view that men are naturally predisposed for leadership roles. Blackmore (1999, p.23) argues that such constructions link 'rationality to masculinity in leadership, and thereby emotionality with teaching and femininity'. As Williams

(1992) has argued through the notion of 'glass escalator', such constructions work in favour of men towards a rapid promotion to leadership roles. It is a phenomenon that has been noted in the works of Thornton and Bricheno (2006), Lewis and Simpson (2012) and more recently by Cousins (2019). Expanding on this, Williams (2013) further highlights how the effect of this varies along intersections of class, gender identity, sexual orientation and race.

2.7 Negotiating professional identities

Additionally, Osgood (2006) highlights the narrow gendered constructions of professionalism in government discourses, that value rationality, competitive entrepreneurialism, and individualism. Through the dominance and perpetuation of discourse of rationality, early years practitioners are regulated and controlled, demanded to demonstrate that they are competent technicians (Osgood, 2009). However, it has been shown that such masculinised new manageralist demands run counter to the beliefs, values and practices of early childhood practitioners whose work is marked by an ethic of care, collaboration, community spirit and altruism (Osgood, 2004, 2006, 2012). These masculinising forces work in consort with the re-masculinising agenda that dominates male recruitment drives. However, narratives from the nursery highlight that practitioners do not passively conform to new managerialist policy reforms, rather they are were seen to exert personal agency to negotiate gendered discourses by challenging, resisting and subverting prevailing and dominant discourses on what counted as a 'professional childcare worker'. Early childhood practitioners are re-thought as actively negotiating professionalism in critically reflective emotional ways that foreground an ethics of care (Osgood, 2012). In theorising the concept 'gender flexibility' (Warin & Adriany, 2017), it is this potential to challenge hegemonic discourses where some view the role "men" can play in shifting and transforming practice (Warin, 2016, 2017, 2018). It is argued that a gender-flexible pedagogy can be realised through ongoing gender-sensitive training and practices (Burn & Pratt-Adams, 2015; Josephidou & Bolshaw, 2020; Xu, 2021; Warin, 2023).

2.8 Montessori as gender-neutral

In this study I have chosen to focus on the emergence of a "gendered workforce" in Montessori ECEC, owing to my own connection to Montessori approach as a former Montessori practitioner and teacher trainer. In this section, explore the ways gender has been framed in contemporary Montessori practice.

As explained in section 2.1, debates, policies and practices in relation to gender in the ECEC workforce have almost exclusively focused on the recruitment of men. In response to calls for more men to work in ECEC, efforts were made by Montessori training organisations such as the former Montessori Centre International (MCI) to attract more men into their training programmes by extending £3000 worth bursaries to up to three male applicants per year (Marcus, 2016). Although the proportion of men in Montessori ECEC is marginally higher than in the mainstream early years sector, i.e. 5 percent (Payler & Bennett, 2020), the challenges to male recruitment are the same as the sector more widely (Osgood & Mohandas, 2019). However, unlike the sector more widely, there has been a dearth in research that critically engages with gender in Montessori classrooms (Mohandas, 2023). This is likely because a major portion of the research enacted in Montessori scholarly circles (overwhelmingly by Montessori scholars) have focused on validating Montessori theory and practice (Lillard & Taggart, 2019, Lillard et al., 2017, Lillard, 2013, Lillard, 2012), and when gender is mentioned, it is dismissed as not contributing 'significantly to any of the difference reported' (Lillard and Else-Quest 2006, p.1893), without explicating how gender was conceptualised or theorised.

Montessori education is predominantly viewed as a gender-neutral approach, where the materials Montessori instituted are seen as 'gender neutral and that her educational principles transcend cultural factors' (Gustafsson, 2018, p.1454). A typical Montessori environment is distinct with specially designed didactic materials each with very specific purpose and pedagogical intentions. Gendered play objects that are seen in mainstream early years settings such as dolls, princess dresses, superhero costumes, legos, miniature cars, building blocks and so forth, are mostly absent in traditional Montessori classrooms. The absence of gender-typed play objects is therefore claimed to contribute towards "gender-neutrality". While the

desire for gender-neutrality may come from a place of good intentions to promote gender equality, feminist theorisations have highlighted the harmful effect such framings can have in letting gender fall out of view, but further in closing off possibilities for gender expansive explorations (Chapman, 2022). Taking these feminist insights into account, this study calls into question the assumed gender-neutrality of Montessori by considering what a feminist engagement will offer in introducing different ways to think about gender in Montessori ECEC workforce. Moreover, a feminist engagement finds further relevance when the feminist roots and legacies of Maria Montessori is considered, and the active role she played in the suffragette movement (Mohandas, 2023).

2.9 Mattering of a gendered workforce in Montessori

As argued elsewhere (Mohandas, 2020; Mohandas 2023), feminist poststructuralism, through its focus on the discursive, presents great potential to conceive gender differently. However, through my engagement with materially-informed approaches, particularly feminist "new" materialisms, with its focus on unsettling the inertness of matter, seemed more conducive to the aims of this study to question Montessori's gender-neutral framing, and further complicate understandings of gender in the Montessori ECEC workforce.

It is perhaps worth noting that Montessori's early writings reveal traces of a materialist sensibility, where she seemed to highlight the active role matter played in affecting change. For instance, the materials are referred to as the 'principal agent' (Montessori, 1997, p.150), 'informers' (ibid, p.105), 'active' (Montessori, 2008, p.11), while everything in the environment is described as 'the inanimate teacher' (Montessori, 1997, p.105). She further explains: 'The material acts directly on the child and the child responds according to his inner activities to the material…This material liberates the inner life of the child' (Montessori, 2008, p.11). These sensibilities come alive in her critique of the mechanistic form of materialism that was practised by what was known at the time as "schools of scientific pedagogy" (Montessori, 1948), that designed heavy benches using anthropometric measurements to ensure children remained immobile in the classroom. Montessori refers to these benches as an 'instrument of slavery' (Montessori, 1948, p.16). Angered by the effect these had on children's bodies, she provoked the design and manufacture of light weight, child-sized

furniture with hopes of enabling freedom and movement within the classroom. While one can see the marks of a feminist ethic of care, it is clear that Montessori understood the agentic potential of matter to affect and transform. These feminist and materialist conceptions will without doubt lend towards the orientations of this study.

By the time I had started my PhD, there was already a growing body of scholars who were putting a materialist ontology to work to research gender in ECEC (Renold & Mellor, 2013; Osgood, 2014; Osgood & Scarlet, 2015; Lyttleton-Smith, 2017; Osgood & Robinson, 2019; Hodgins, 2019; Bone, 2019). For instance, Renold & Mellor (2013) using a multisensory mapping of objects-sounds-bodies grasps how "subjects" are always produced in relation to other bodies and things. A point laboured by Jones (2013), where she considers how the notion 'becoming' helps reconceive gender beyond boundaries of "child" and "dress". Likewise, Osgood and Scarlet (2015) through their experiment with photographic art and poetry, detail how traditional gender performances are disrupted by an over-sized tutu in outdoor spaces. Lyttleton-Smith (2017) analyses how objects, children and spaces (e.g. "home-corner" and "small world") in an English nursery, flows between different performances of gender to transgress heteronormativity. Finally, Hodgins (2019) through "knotty doll tales" and "tangled tales of car(e)s" narrates the multiple, complex but partial stories of gender and care that materialise when thinking-with everyday nursery items such as dolls and cars.

My thesis joins in and thinks-with such reorientations, to consider what they make possible in reconceptualising a gendered workforce in the Montessori classroom. As mentioned in Chapter 1, even though I initiated my inquiry using a feminist "new" materialist approach, the theoretical framework in this study was expanded further to grapple with emerging tensions and challenges in research. This shift in framework as noted in Chapter 1 (section 1.5) came about through a situated engagement (Haraway, 1988), in which researcher "subjectivities" intra-act with "theory" and the research processes to generate something different (Ringrose & Renold, 2014). The theoretical journeys in this research are traced in the next chapter, to consider the possibilities they present to reconfigure gender in Montessori ECEC workforce.

Chapter 3. Troubling theory, theorising trouble

3.1 Re-orienting

In this chapter I grapple with how the theoretical framework mobilised in this research emerged. As indicated in chapter 2, whilst gender has been theorised, researched and conceptualised variously over the past several decades in the wider early years sector, there is a scarcity of research that has critically engaged with gender in Montessori classrooms. Montessori materials are in fact framed as "gender neutral" or devoid of gendering practices (Gustafsson, 2018). As Jackson & Mazzei (2012, p.720) propose, thinking-with theory opens up 'previously unthought approaches to thinking about what is happening in our research sites and encounters'. Therefore, in light of this presumed gender neutrality, this study undertakes an investigation that starts by unsettling the passive and inert status of matter, which will then enable complicating understandings around how a gendered workforce is multiply materialised in everyday Montessori childhoods.

Prior to delving into the theoretical practice in this research, I want to unpick some taken-for-granted assumptions of what "theory" is and does. Traditionally, theory and practice are said to constitute a binary opposition. Through an exploration of pedagogical practice, Lenz Taguchi (2010) highlights two dominant views in the early years that deepen the theory/practice divide. On one hand, theory is understood as rational, intellectual, logical and predictable, whilst practice is viewed as bodily, disorderly, messy and unpredictable. According to this view, theory organises practice into neat, orderly and predictable outputs, what Law (2004, p.2) refers to as 'distortion into clarity'. As per another line of thinking, practice is deemed as truth, and theory is viewed as of inferior value, as 'no theories can formulate and represent the truth of tacit knowledge in practice; therefore, what we need is to bring out that tacit truth from practice itself' (Lenz Taguchi, 2010, p.21). Both these views are prevalent in Montessori, and are premised on a Cartesian divide between the mind and body. In this research study, I subscribe to the notion that practice is already always theoretical and material, and theory is simultaneously material and transformative. As Haraway (1992, p.295) emphatically states: 'Theory is not about matters distant from the lived body; quite the opposite. Theory is anything but disembodied'. Thinking itself but also

thinking-with theory is therefore an intensely embodied and materialist practice (Haraway, 2016). This aligns with the feminist commitment that 'ask an intensely active question, not 'What does it mean?', *but* 'How does it work?' What can this concept or theory do?' (Colebrook, 2000, p.8).

Taking this materialist commitment seriously, the chapter will proceed to unpack some key feminist "new" materialist (FNM) concepts that will be put to work in this research. Following which, a set of theoretical dilemmas and tensions will be explored, culminating in how these theoretical grapplings help in reconceptualising a "gendered workforce".

3.2 Feminist "new" materialisms

3.2.1 Matter is not a settled matter

As discussed in section 2.9, the Montessori approach to education was partly developed in response to the mechanistic materialist methods employed by what was known as "Schools of Scientific Pedagogy", prominent in Italy, France, England and the US (Montessori, 1912). The materialism enacted by the "schools of scientific pedagogy" was primarily concerned with introducing anthropometry and psychometry in teacher education, with the chief incentive to control children's bodies and behaviours. In contrast, Montessori was interested in instilling the "spirit of science" in teacher education that prioritised an "intimate relationship" between the educator and the child, and was focused on using materialities as a means to liberate children from the oppressive educational regime at the time (Montessori, 1997). While the way matter was conceptualised in her earlier work resembles a "new" materialist ontology (Bone, 2019; Osgood and Mohandas, 2019; Mohandas, 2022), a deeper engagement with her work reveals how her pedagogical approach was shaped to a great extent by modernist views that conceived matter in inert, reductive and deterministic terms.

In response to such modernist conceptualisations of matter and materialities, postmodernism and poststructuralism emerged by emphasising the centrality of language in shaping the world. This has since come to be known as the "linguistic turn", which as stated in section 2.5 has played an important role in shifting and transforming knowledge around gender in the ECEC workforce (Osgood, 2012; Burn & Pratt-Adams, 2015). More latterly, there has been a philosophical and scholarly shift away from the "linguistic turn" advanced by

poststructuralisms, to a re-attunement to the vibrancy and vitality of matter, i.e. the active role matter plays in constituting worlds (Bennett, 2010a). Barad (2003, p.801) contends: 'Language matters. Discourse matters. Culture matters. There is an important sense in which the only thing that does not seem to matter anymore is matter'. Multiple theoretical strands have ushered this shift away from language, including feminist new materialisms, actor network theory (ANT), complexity theory, science and technology studies (STS), posthumanism, animal studies, affect theory, assemblage theory, amongst others.

While the "new" materialist theory can be charted in different ways, for instance, by considering Spinoza and Darwin as progenitors, in this thesis I draw from the foundational work of feminist scholars and philosophers such as Donna Haraway, Karen Barad, Rosi Braidotti and Stacy Alaimo. Braidotti (1991, p.324) initially introduced the term 'neomaterialism' and 'new materialism' in her book *Patterns of Dissonance*, where inspired by the works of Foucault and Deleuze, she proposes 'an-other materialism' by distancing from a Marxist-inflected materialism. The latter viewed history, culture, ideology and politics as an outcome of ongoing material struggles and 'posits the centrality of the human as the organising force in capitalist consumption and use of natural and material resources' (Taylor & Ivinson, 2013, p.666). According to Marx (2015, p.412) the 'full development of human mastery over the forces of nature, those of so-called nature as well as of humanity's own nature' is the ultimate aim of revolution. As van der Tuin (2015) stresses, it was Haraway who planted the seed for the current "turn to matter". In the 1970s through the 90s Haraway insisted on a materialist commitment that refused reductionism. Working within the biological sciences, she opposed both mechanism and vitalism, for an organismic view of materialism, that considered the liveliness of the various components in an ever changing system (Haraway 1976, 1978a, 1978b). She further theorised the production of knowledge and worlds as 'complex material-semiotic-social practices' (Haraway, 1989, p.172; Also see Haraway, 1988, Haraway, 1990), acknowledging the inseparability of matter and meaning. Hekman (2010, p.6) notes: 'Haraway's desire to define a feminist discourse of materialism was lost in the linguistic turn of feminism and critical theory as a whole'. This confirms Somerville and Powell's (2019, p.18) point that 'no paradigmatic movement is a watertight closet; paradigms only represent a trend in majority thought as it changes over time'. However, as Osgood and Robinson (2019, p.10) assert the re-turn to materialism does not

signify linearity, a clear break with the past, or an abandonment of work that came before, they instead argue for 'the importance of traces and entanglements'. Davies (2016) explains the advances made in terms of Barad's "dis/continuity", i.e. neither continuous nor discontinuous. In other words, feminist "new" materialisms can be seen to both depart from and are continuous with feminist poststructuralisms. Thinking of the shift in this way 'doesn't presume there's more of the same or a radical break' (Barad, cited in Juelskjær and Schwennesen, 2012, p.16). As it will be clear in the relata chapters, insights gained on gendered ECEC workforce from previous research informed by feminist poststructuralisms continue to be relevant.

Embracing a feminist "new" materialist ontology therefore does not entail discounting the advances made in the "discursive turn", rather they expand, build on and work with it by underscoring the co-constitution of the "material" and "discursive" in the production of reality, as highlighted in the concatenated terms 'material-semiotic' (Haraway, 1988) or 'material-discursive' (Barad, 1996). In this regard, feminist new materialisms share an agenda with preceding post-philosophies in disrupting what Derrida (1981, p.41) calls the 'violent hierarchy' of binary opposition between body and mind, matter and meaning, human and nonhuman, nature and culture, and science and technology, in favour of a monist view of the world. Furthermore, re-attuning to matter is not an attachment to naïve realism that 'reify or fetishize matter' (MacLure, 2015, p.96), which would re-instate the self-same binaries, instead matter and discourse are viewed as seamlessly insoluble. Reality is thus 'not composed of things-in-themselves or things-behind-phenomena rather things-in-phenomena' (Barad, 2007, p.141). Barad's notion of 'intra-action' presents a profound conceptual shift that rejects the view that positions entities as independently pre-existing their relatings. They use the concept to emphasise the 'lack of natural object-instrument distinction, in contrast to interaction, which implies that there are two separate entities; that is, the latter reinscribes the contested dichotomy' (Barad, 1995, p.57). This shift is fundamental to the re-orientation that this research proposes, where what constitutes a "gendered workforce" is produced through intra-actions of material and discursive. In other words, heterogenous materialities (eg. objects, furniture, outdoor equipment, infrastructure, clothing, food, child bodies, adult bodies etc.) manifest in an inseparable and performative manner with the discursive elements in the classroom (eg. EYFS framework, Montessori concepts, ideas about gender, race and

class, professionalisation discourses, nursery policies, government legislation, neoliberal mandates, assessment and inspection frameworks).

The performativity further entails that the material-discursive is in constant motion, and never static or still. As Feel (2015) highlights everything is in the process of endless becoming. In fact, the notion of an eternal essence according to DeLanda (2006, p.49) is 'a kind of "optical illusion" produced by relatively slow rates of change'. Bodies 'shift and move with/in environments, not as individuals, but as collective assemblages of human and nonhuman, material and immaterial sensations' (Barry, 2016, p.2). As a result, each micro-moment from the nursery is richly layered with 'relational entanglements of people, sensations, sounds, tastes, smells, and matter' (Osgood and Robinson, 2019, p.69). These movements are attuned to in Gandorfer & Ayub's (2021, p.12) notion of matterphor or matterphoric, which 'denotes the articulation of meaning in relation to matter, understood not as fixed entity, but as constantly shifting (-phoric) and thereby establishing entanglements and relationalities'.

3.2.2 More-than-human framework

Moreover, agency in a feminist "new" materialist sense is not possessed by human and nonhuman entities. As its etymology suggests, agency is an enactment; therefore in a materialist sense, it is an enactment that is produced through the intra-action of human and nonhuman components (Barad, 2009). This is vaguely similar to, at the same time distinct from the worldview that Montessori espoused. Montessori believed that 'in the cosmos there is harmony; that everything that is in it, both the animate and the inanimate, have collaborated in the creation of our globe, correlating in doing this their single tasks.' (Montessori, cited in Stephenson, 2013, p.120). Even though Montessori did not view agency as the exclusive domain of humans, according to her, 'among the innumerable agents which participated in this creation, man has had, and has, a very important task' (ibid.). This anthropocentric, human-supremacist view is fundamental to Montessori philosophy and the manner it shapes everyday practice. However, unlike Montessori, feminist "new" materialisms reject viewing animate and inanimate as discreet and bounded entities, instead highlight transcorporeality (Alaimo. 2010), i.e. the impossibility of bodily autonomy, where *we* are 'always already the very substance and the stuff of the world that we are changing' (Alaimo, in Kuznetski & Alaimo, 2020, p.139). Moreover, such a framework de-centres the human, or at least a humanist version of "human". Braidotti (2019, p.40) stresses, '[m]oving beyond humanist

exceptionalism has to include the relational dependence on multiple nonhumans and the planetary dimensions as a whole'. These sensibilities very much drive the conceptualisations of 'natureculture' (Haraway & Goodeve, 2000), 'cyborg' (Haraway, 1985), and 'companion species' (Haraway, 2003) all of which trouble the separations of "human" from the 'nonhuman other' in different ways. A gendered workforce reconfigured through a "new" materialist sensibility therefore dislocates gender from being viewed as something that simply resides in the humanist subject, instead it is seen as being produced in and across bodies – human and nonhuman (Taylor and Ivinson, 2016). Haraway's (2016) notion of sympoiesis and 'becoming-with' enables moving away from viewing gender as something that is self-constructed or proceeding from within the human, instead gender is re-imagined as a more-than-human affair, produced through the entanglements of human and nonhuman.

This is not to uncritically and irresponsibly erase or dismiss all categories or to homogenise the category of "human". An attunement to differences matter here, especially in taking into account how 'the category of the human is being dissolved at a time when many are still struggling to have their humanity recognised' (Hackett, MacLure, and Pahl 2020, p.6). As Murris and Osgood (2022) state, dissolving the category of human 'at this historical juncture amounts to white privilege'. In this regard, I take issue with moves in posthumanisms that seek to flatten and smoothen intensities and densities of experiences. While these intensities are by no means static, and are dynamically produced through the intra-action of heterogeneous entities in an encounter, there is a stickiness (Ahmed, 2004) involved, which I will explore further in the next section. As Jackson (2020) insists 'we must attend to the material histories of our categories…even if (or especially if) ultimately our aim is to be rid of received categories'. Haraway (2016, p.29) puts it succinctly when she says: 'We are all responsible to and for shaping conditions for multispecies flourishing in the face of terrible histories, and sometimes joyful histories too, but we are not all response-able in the same ways.'

The differences in response-abilities are core to discussions around the Anthropocene that problematically present the "human" as a homogenous category, assumed to be equally responsible for contributing to the ongoing ecological crisis. In contrast, others have highlighted how the *anthropos* constitutes a rather small subset of humans clustered mainly in the West, largely framed in terms of the "age of the capital" or Capitalocene (Moore, 2016;

Haraway, 2016; Vergès, 2019). Yusoff (2018) further brings to sharp focus the racial unevenness, which Black and Indigenous scholars have highlighted in terms of the entanglements of colonial capitalism (Todd, 2016; Davis & Todd, 2017) and the plantation economy that sustained it (Wynter, 1971; McKittrick, 2013), referred to by Haraway (2015a) as 'Plantationocene'. The naming of geological epoch is no innocent task, but grappling with them is critical in attuning to gendered and racialised scales of power, that are by no means separate from the encounters in the nursery. This will be visible in the relata chapters, where macropolitical issues are sensed powerfully and differentially in transient encounters in the nursery. Amid the precariousness produced by such anthropocentric modes of living, Haraway (2016, p.55) reminds that 'the world is not finished and the sky has not fallen – yet', and proposes the name 'Chthulucene' as a means to learn the art of living and dying on a damaged earth, 'to follow threads back, to weave threads together, to spin new threads' (Duhn, 2018, pp.1596-7).

3.2.3 Affective atmospheres and stickiness

Feminist "new" materialisms is further shaped by what is referred to as the "affective turn", that considers 'the nonconscious, noncognitive, and transindividual bodily forces and capacities' (Truman, 2019a, p.5). The turn to affect has been inspired by transdisciplinary conversations between the humanities and the sciences, through philosophical works of Baruch Spinoza, Henri Bergson, Gilles Deleuze, and Felix Guattari that underscore bodily or embodied experiences. According to Gregg & Seigworth (2010) these forces or forces of encounter are born in the in-between-ness of bodies, produced through relatedness and the stutters to relatedness. Blackman (2012) notes that bodies are not merely material basis to explain social processes, rather they are defined by their power to affect the world and to be affected by it. Moreover, the capacity of a body is not determined by the body alone, but is aided and abetted by a network of bodies. For contemporary scholars such as Brian Massumi, Nigel Thrift and Patricia Clough, affect is the outward stimulation that hits the body first and then finds its way to the cognitive apparatus. Affect according to them is located outside the discourse of emotions (Blackman and Venn, 2010). Conversely, feminist scholars like Sara Ahmed, Margaret Wetherell, Judith Butler and Lisa Blackman 'criticize the inherent dichotomies of mind and matter, body and cognition, biology and culture, the physical and psychological' (Knudsen & Stage, 2015, p.4). These resonate with the critique from

Indigenous feminist scholars. Rowe and Tuck (2017) explain how drawing distinctions between affect, feeling and emotions is a slippery terrain, signalling how the affective simultaneously encompass the impersonal and intimate. Million (2009) argues for the need for complex telling of stories by considering felt knowledges that have historically been dismissed as the "feminine experience". This is echoed by Ahåll (2018, p.40) who contends that prioritising "affect" over "emotions" de-legitimises feminist scholarly advances that have long been concerned with affect, knowledge and power, and therefore has not only a 'universalising, but also masculinising affect'. In light of this, Knudsen and Stage (2014, p.5) argue for situational specificity, 'by involving the historical entanglements, hauntings and sensibilities of the 'researcher-body' as an important resource for grasping the affective qualities'. Truman (2019a, p.5) summarises this in the following passage:

> 'However, because there is a tendency to ascribe affect to prepersonal sensations, some theorizations of affect can consequently erase identity and appear apolitical. As such, queer, feminist, critical disability, critical race, and qualitative researchers prioritize frictionally attending to intersectional concerns as well as affective intensities.'

In this research, one of the ways I mobilise affect is as "atmospheric forces" (Ahmed, 2014b; Stewart, 2011) that work on, across and through bodies (human and nonhuman). An attunement to the atmospheric underscore how encounters are never neutral, they are charged with shifting rhythms and intensities that animate forms of attachment and detachment. These atmospheric forces circulate with varying intensities, intensities that are felt differently on different bodies (Tembo, 2021). The differences in intensities in encounters are attuned to and grappled with through the notion of affective stickiness (Ahmed, 2014a), where affect/emotions do things that stick or bind some bodies together through the absent presence of historicity. Attuning to affective stickiness is fundamental to this thesis in how 'affect and researcher 'subjectivity' permeate the research process at every stage' (Ringrose & Renold, 2014, p. 772) including the theoretical journeys embarked on, the objects that materialised into relata chapters, as well as the many tentacular directions the research takes. Simultaneously the ongoing performativity of these forces holds potential for attuning to what Manning (2016) refers to as 'minor gestures' that open inquiry and orient encounters to *what else*. As Manning (2016, p.2) explains, 'the minor is everywhere, all the time'. They may

often go completely unnoticed in the humdrum of everyday nursery life, but they also qualitatively shift the field of relations.

3.2.4 Un/doing time

Time and Montessori childhoods are intrinsically entangled concepts. It is interesting to note that conceptions of time in Montessori's writings are often presented in more expansive terms, marked by uninterrupted and prolonged indulgences, while the stages of development appear to be more capacious in terms of being less prescriptive than most developmental frameworks (Burman, 1994; Osgood & Mohandas, 2022; Osgood, 2023). However, contemporary UK Montessori practice that is shaped and reconfigured by the demands imposed by the EYFS framework as will be evident in the relata chapters often yield to the persistent beats of neoliberal time. As a result, children's development is mapped against pre-determined milestones that locate where they fall in their developmental trajectory and interventions are designed to ensure progress along this timeline. Developmental time is therefore conceived as linear, directional and teleological. Time is framed as predictable, measurable, homogenous and identical units of change that children proceed through. Freeman's (2010) idea of 'chrononormativity' identifies such normative and regulatory conceptions of time that organise and regulate bodies towards maximum productivity, towards an economic conception of "human". A feminist "new" materialist theorisation unsettles the epistemic, ontological and political status of time. Time is no longer seen as a neutral and static backdrop, on the contrary it can be understood as an active and dynamic component that shapes encounters and affects bodies (Pacini-Ketchabaw et al., 2017). In this study, I particularly mobilise Katie King's (2004, p.459) notion of 'pastpresent' that accounts for how pasts and presents are insoluble, and how they 'cannot be purified each from the other'. In other words, pasts and presents are seen as continuously co-inventing, co-constituting and collapsing into each other. Time is layered, and each layer is inherited from other layers, temporalities, scales of time and space. These manifest in the relata chapters with affective intensities where the traces and marks of past continue to haunt and shape ongoing presents, and vice-versa. This dynamism is seen in Barad's (2014) notion of 'spacetimematterings', that highlight how matter does not move or evolve in time, instead matter materialises and enfolds different temporalities. Bodied affective hauntological

memories and histories are materialised and re-enacted in thick presents in multiple, concrete and emergent ways (King, 2004; Osgood & Mohandas, 2019; Mohandas, 2022).

3.2.5 Diffraction

These bring me to another key concept that in some ways brings all the various elements together, i.e. the matterphor of diffraction. The concept first appears in Haraway's (1992) essay *The Promises of Monsters: A Regenerative Politics for Inappropriate/d Others* where she offers a different kind of optics than the enlightenment humanist metaphor of reflection. Haraway (1992, p.299) explains that the latter is concerned with 'the reproduction of the sacred image of the same, of the one true copy, mediated by the luminous technologies of compulsory heterosexuality and masculinist self-birthing'. She uncovers the obsession of knowledge apparatuses to represent and reproduce 'the original' as accurately as possible. 'Is the copy really a copy of the original? If you get a reflection and the image is displaced elsewhere, is it really as good as the original?' (Haraway & Goodeve, 2000, p.102). In contrast, diffraction is about difference and making a difference. Diffraction patterns record heterogeneous histories of interaction, interference, reinforcement, and difference, and is a 'metaphor for another kind of critical consciousness' (ibid.).

Barad (2009) through quantum logic extends Haraway's concept of diffraction, to address the entanglement, i.e. an ethico-onto-epistemology. Knowing is therefore a direct material practice, that involves dialogically reading heterogeneous components through each other, which enables a boundary-crossing, transdisciplinary approach that brings about 'respectful engagements with different disciplinary practices' (Barad 2007, p. 93). This will be covered in greater detail in section 4.6, where diffraction is mobilised as a methodological proposal in the form of SF (Haraway, 2016; Haraway, 2018), which is 'relentlessly a relational practice rather than a thing. It's a writing practice, it's gaming, it's speculative fabulational practice, a performance, and it always involves many players. It's collective making-with' (Haraway 2018, p.xxxix). Diffraction in this research fundamentally accounts for the impossibility of representing a gendered workforce, which assumes a distance from the world. In contrast, diffraction underscores how 'knowledge production is never a process of discovering or uncovering pre-existing facts about the natural or social world but is, rather, part and parcel of the world's own becoming' (Barad, 2007, p.91).

3.3 Troubling the "new"

As mentioned in section 3.2.1, the "new" in new materialisms is an attempt to draw a line of distinction from older forms of materialism that are marked by foundationalism, such as Marxist-inflected materialism. The notion of "newness" however has been a matter of contention and raging debate, especially since it ignores century and millenia-old philosophies, cosmologies and knowledge practices in non-western and diverse indigenous contexts (Todd, 2015; Jones & Hoskins, 2016; Rowe & Tuck, 2017; Rosiek et al., 2019). Tiffany Lethabo King (2020, p.58) rightly points out the onto-epistemic violence of posthuman and "new" materialist scholarship:

> 'I think its ability to escape white embodiment and, more specifically, white violence while claiming to have invented a "new" way of encountering the human and nonhuman material world as fundamentally interconnected is only possible through the murder of Indigenous and Black people. More specifically, what enrages me is the way that nonrepresentational and posthumanist discourse disavows Indigenous worldviews that don't (and for centuries did not) rely on the western boundaries between human and things in order to discover these white "new materialisms" as if they had not existed before. It is precisely because white conquistadors and colonizers wiped out these Indigenous worldviews that they can be rediscovered as new and novel'

In the same vein, Eve Tuck refers to the "new" materialist turn, 'as a turn to where we already were' (Tuck, 2014, in Rowe & Tuck, 2017, p.6). Besides the risk of Indigenous thought not being acknowledged or cited, there is the other risk of non-Indigenous scholars appropriating Indigenous thinking 'without Indigenous interlocutors present to hold the use of Indigenous stories and laws to account flattens, distorts and erases the embodied, legal-governance and spiritual aspects of Indigenous thinking' (Todd, 2016, p.9). The challenge and the invitation here is in finding ways to put them in productive conversations with each other without claiming mastery (Boyle, in Sackey et al., 2019; Singh, 2018). Indigenous and Black scholars have brought Indigenous approaches and/or Black feminist geographies in their work with feminist "new" materialisms and posthuman theories (Te Rina Smith, 1999; Watts, 2013; Todd, 2016; Arola & Arola, 2017; Tallbear, 2017). Sackey et al. (2019, p.396) further highlight the issue of framing "new" materialist and posthuman scholarship as a monolith of 'white

male scholars', which he argues 'screens out important feminist posthumanist scholarship'. For instance, Sundberg (2014) shares her own efforts to employ posthuman theories to decolonise while simultaneously sharing the discomfort with its universalising tendency. Such productive frictions between feminist "new" materialist/posthuman scholarship and Indigenous/Black thought have been welcomed and mobilised by many childhood scholars (Taylor & Scarlet, 2012; Rowan, 2017; Osgood & Robinson, 2019; Nxumalo, 2020, Renold & Ivinson, 2022; Huuki & Pacini-Ketchabaw, 2023; Ritchie & Phillips, 2023, Malone, 2023). As you will have noticed, I continue to use the word "new" in quotations in this study as a way of staying with these tensions, challenges and controversies instead of attempting to smooth them out. Erasing the usage of "new" not only erases stories of noninnocence but they also erase stories of strong alliances and coalitions that shape the field of feminist early childhood research.

Notwithstanding this critique, it is equally important to acknowledge that workings of colonialism are felt, sensed and experienced differently. Therefore, a politics of location is fundamental to feminist inquiry and decolonisation (Mohanty, 1988; Haraway, 1988). As Mignolo & Walsh (2018, p.1) argue, the praxis of decolonisation is not concerned with presenting global designs for liberation or to propose 'new abstract universals', rather it is a search for being accountable to situated relationalities. While scholarly work shaped by anticolonial theories, decolonial theories and postcolonial studies all emerge from a common spirit of colonial resistance and a posture of defiance, they simultaneously highlight different scholarly traditions rooted in different geopolitical locations and relations. Shoemaker's (2015) typology of colonialism grapples with the interconnected but diverse manifestations of European colonialism. Having been raised in postcolonial India, in an avarna community in Kerala that was historically considered "untouchable" (See Chapter 1, section 2), complicates and transforms the way theory is grappled with and put to work in this chapter. Although Mohanty's (2003) call for 'feminist solidarity through anticapitalist struggles' resonates deeply with me, as an avarna person I feel a sense of unease with the kind of affinity groupings employed in her essay that ignore caste-based feminist struggles that are shaped by different inheritances that predate colonial capitalism. In the following section, I explore these emergent tensions and chart my journey in the ways these tensions produced justifications for which theories were mobilised and how.

3.4 The trouble with romanticising

3.4.1 When postcolonial critique fails…

In an attempt to trouble the "newness" of posthuman theories, Ferrando (2019) brings attention to ancient Asian worldviews that find revealing parallels with posthuman and "new" materialist philosophies, of which Advaita Vedanta, a school of Hindu philosophy is particularly highlighted. At a particular stage in this thesis, prompted by desires to situate as well as decolonise knowledge, I began exploring Advaita Vedanta as a potential philosophy to put to work with posthuman theorisation. The word "Advaita", literally means "not two", and it philosophises the "real" world as a singular entity (*brahman*), whilst the phenomenal and material world as an illusion or *maya*. Puligandla (1974) argues that this does not mean that the phenomenal world is non-existent, on the contrary, *maya* refers to the transient or temporal nature of matter. *Maya* is thus seen as the perpetual manifestation of *brahma*, neither real nor unreal. Advaita Vedanta is similar to posthuman philosophies in the sense that it emphasises the blurring of human-nonhuman boundaries, the transient and temporal nature of matter, and the non-linearity of time. However, Advaita, unlike posthuman theories, rejects the notion of an essential plurality in what exists, instead regards the appearance of plurality a result of *avidya* or lack of knowledge (Sharma, 2013). According to the Advaita, the true self or *atman* is identical to *brahman* and is simultaneously immanent and transcendent. Puligandla (1974) distinguishes *atman* from the "empirical ego", the latter being in the state of *maya*, temporal and subject to change, whilst the former is eternal and immutable. The latter attains *moksha* or liberation through awareness of the illusoriness of the phenomenal world and by acquiring *vidya* or knowledge of one's true identity as *brahman/atman* (Murthy, 1971; Kumar, 2021). As I continued to delve into the philosophy, I remember feeling viscerally ill even as I realised that Advaita is the de facto philosophy of Hindutva and Hindu nationalist movements in India. Casteist logics and justifications are indeed core to its workings. For instance, transcendence to higher forms of consciousness, a path towards merging with *brahman* is dependent on fulfilling one's dharmic roles, roles that determine the consequences or *karma* and where one is reincarnated in their subsequent life.

In Modi's India, Advaita Vedanta (also referred to as neo-Advaita) is a major ideological force of the Hindutva, in which notions of "oneness" and singularity of essence are emphasised to

evoke nationalist sentiments and feelings as a way to unite various caste groups into one voting bank. Historically, the notion of a singular, universal and undifferentiated "Hindu"/ "Indian" identity was used as a key propaganda to organise anticolonial resistance to British rule in India. However, Reghu (2010) contends that British colonialism cannot be understood monolithically, as its effects were sensed differently across the graded hierarchies of the varna caste system (Ambedkar, 2014). While India was politically subordinated by the British, 'upper' caste Hindus continued to 'rule' over 'lower' caste groups, both socially and locally (Reghu, 2010). Pollock (1995) asserts that the notion of a 'unified indigenous' people obscured local forms of hierarchies that predated colonialism. The conflicting experiences of British colonialism across the graded inequality of the caste system does not permit a categorical hierarchy between what Said (1993) referred to as the "ruler" and the "ruled". The narrative of a single homogeneous "Hindu"/ "Indian" identity de-authored various subaltern communities, particularly avarna[5] communities, from their own histories, spiritual practices, and worldviews. Reghu (2010, p.43) explains that this produced a 'double othering', an exclusion through inclusion, i.e. while avarna communities are included in the Hindu Order, they are excluded from the dharmic domain of caste Hindus. Rawat (in Agarwal, 2016) argues that narratives that centre anti-colonial struggles of the Hindu nationalist elites further conceal how colonial institutions offered avarna communities a way out of the oppressive grip of the caste system.

Interestingly, dominant narratives that inform postcolonial scholarship continue to de-author avarna communities by foisting the blame of caste hierarchies on British colonialism, a claim pre-colonial historians have unequivocally refuted (Chakravarti, 2014, 2019; Jangam, 2015, 2017). This is not to say that colonialism did not re-organise the caste system in India, or to undermine the pernicious workings of colonialism. The challenge here is that by foisting the blame on colonialism, a set of evasions are produced that problematically afford movement towards savarna[6] innocence, and ensure varna futurity (Raj, 2022). For the Dalit subject confronted by the affective intensities of caste hierarchies, this movement towards savarna

[5] Avarna refers to people who were outside the varna caste system, which included a range of groups that were considered "untouchables" on account of their spiritually polluted and contaminated status. Avarnas were further located based on their occupation, which was entangled with the kind of food they consumed.

[6] Savara refers to caste Hindus who form the varna system.

innocence is deeply disconcerting. It relieves savarna responsibilities from onto-epistemic violences that predate colonialism, and more urgently from the ongoing violences sustained through a refusal to be accountable. In this regard, a postcolonial critique and an uncritical endorsement of 'Indigenous' philosophies can work to deflect and evade responsibilities for injustices enacted and sustained by those philosophies.

3.4.2 An ethics of assemblage: navigating with care

As Haraway (1988) argues, situated knowledges is about 'particular and specific embodiment and definitely not about the false vision promising transcendence of all limits and responsibility'. Locating those limits is a critical part in ensuring theories and worlds are not put together thoughtlessly. As Arola & Arola (2017, p.212) argue, this is fundamental to 'an ethics of assemblage', where a good assemblage always considers, 'Who does this assemblage benefit?'. Recently, I came across the more-than-human scholarly works by Thom van Dooren (2011, 2014) on the entanglements of human-vulture relations in India at a time of species extinction. While I respect van Dooren's work and the contributions he has made to scholarship around species extinction, I was struck by how his work around vultures in India (van Dooren, 2015) was wanting in the kinds of attunements that come with being "in relation" with those who will bear the consequence of such knowledge production (Stengers, 2018). A similar tendency is seen in Kristensen's (2020) article that succumb to romanticised narratives of covid, India and multispecies co-habitations. Both van Dooren's and Kristensen's works unwittingly reproduce long-established casteist conceptions and perceptions of local practices that continue to unquestioningly shape life in India. My intention here is not to stage a confrontation, rather to think deeply about questions around what is at stake in enacting care in knowledge production. It brings me back to Arola & Arola's (2017) thoughts on considering what the work of assembling does. With van Dooren (2014), I ask, '*What* am I really caring for, *why*, and at *what cost* to whom?' It is this ethics of assemblage that also guided decisions not to think-with Adivasi[7] philosophies (First Nation communities in India who are marked by their spiritual relations to trees) in this research, since a care-full mobilisation would indeed not only require time, but also sustained efforts

[7] Adivasi refers to Indigenous communities who live in forests all over India, who are increasingly being evicted by the Indian government in the name of conservation and development projects from forests they have inhabited for centuries (See Thekaekara, 2019).

to be in relation with Adivasi activists and communities (that is, if one were to assume that would be a welcome proposition).

3.5 Mobilising Dalit feminisms

The affective disquiet linked to engaging with Advaita Vedanta made it clear that it was an untenable philosophical approach to work-with. However, the re-orientations produced by such theoretical angst along with the affective atmospheres of caste activated in nursery encounters made it impossible to brush aside Dalit concerns. Not erasing the intra-active unfurlings and connections of caste became an ethical obligation. It underscored Barad's (2007, p.382) notion of 'ethico-onto-epistemology, that involves taking responsibility for the 'entanglements "we" help enact and what kinds of commitments "we" are willing to take on, including commitments to "ourselves" and who "we" may become'. In section 3.5.1 I begin by considering key aspects pertaining to caste, and go onto foreground Dalit feminisms and the possibilities for researching a "gendered workforce" that are opened up when Dalit feminisms are brought into conversation with feminist "new" materialisms.

3.5.1 Demystifying "casted" inheritances

The varnas were codified in the ancient legal text called the Manusmriti, traditionally the most authoritative books in relation to Hindu code, as a means to organise the society (Ambedkar, 2014). The varnas are reproduced through the endogamous hierarchies inherent in the caste system, that are inseparable from the predetermined societal functions for each group. The word "Dalit" which means "broken" is a political category used to refer to all those communities outside the varna system, those deemed "polluted" and therefore "untouchable". Purity and pollution shaped the workings of the varna system, and was inextricably entangled with caste occupations as well as through their association with impurity (Pinto, 2001; Sathyamala, 2019). Moreover, the notion of graded purity was at the core of such hierarchical divisions, which meant there were grades of untouchability that were determined by the kinds of occupation attached to each group (Ambedkar, 2014). Varna purity laws and practice of "untouchability" have long shaped and regulated every aspect of life in India (Osella & Osella, 2000). Historically, the varna distance laws meant that the "lower polluting castes" were denied the right to walk on public paths, to drink from common wells, and were obliged to reside in areas strategically located away from savarna

communities. Such were the stringent mandates that a savarna warrior could, in fact, dispatch a Dalit person upon mere encounter (Collins, 1986). Saradamoni (1980) accounts how members of the "lower polluting castes" had to cry out and warn others of their presence, even as they walked on the edge of a road. In Kerala for instance, social reform movements such as those led by Sree Narayana Guru and Ayyankali played a pivotal role in opening up public spaces to avarna communities, including public roads, schools and temples (Saradamoni, 1980; Khan, 2010). As described in section 3.4.1, the ascent of Hindu nationalism under Prime Minister Narendra Modi in 2014, has generated a surge in caste-based discrimination, violence and fatalities. In fact, the varna caste system has been revitalised and romanticised as contributing to and enhancing 'spiritual activity' (Modi, in Saha, 2019, p.37-8).

While caste discrimination, violence and death continue to shape contemporary India, these injustices go largely undocumented, and when brought to attention, they are dismissed as unrelated to caste. The story of a Dalit woman Surekha Bhotmange, as narrated by Arundati Roy (2017), offers a glimpse into atrocious crimes of rape, mutilation and murder, that are far from isolated cases (Diwakar, 2022). Human Rights Watch (2007) writes: 'discriminatory and cruel, inhumane, and degrading treatment of over 165 million people in India has been justified on the basis of caste'. These are not shared to frame Dalit lifeworlds in terms of lack, but to give a sense of the affective stickiness linked to theoretical dilemmas confronted in this thesis. Dalit feminist thought brings to the fore these inheritances and entanglements of caste and gender that are otherwise undermined in mainstream "Indian feminist" or postcolonial scholarly engagements (Arya & Rathore, 2020; Jangam, 2021).

3.5.2 A promising assemblage: the urgency of a materialist ontology

Dalit feminists have critiqued "Indian feminism" or "savarna feminism" for their lack of critical engagement with and accountability to caste-related injustices. Savarna feminists have long argued against the use of feminist concepts and scholarship from the Global North, on the basis that feminist concepts from the Global North account for "western" experiences, and remain untranslatable to feminist concerns in the Global South (Menon, 2017). However, Dalit feminists have rejected this rationale by inviting a sensibility of what those concepts and theories *do* or the ways they can be reworked to make a difference to Dalit lifeworlds (Arya, 2020a,b; Arya & Rathore, 2020). J Devika (2008), speaking of the task of translating

western feminist endeavours in postcolony, critiques the creation of a simple opposition between domination and resistance. Liu (1995, xv-xvi, in Devika, 2008) argues that such a dualism 'ends up reifying the power of the dominator to a degree that the agency of the non-Western cultures is reduced to a single possibility: resistance'. As someone whose lifeworlds do not sit neatly along global divides, the intra-active workings of feminist "new" materialisms and Dalit feminisms allow for the complex telling of stories, which similar to Anzaldúa's (1987, p.80) 'mestiza consciousness', traverse epistemological boundaries and ontological divides of time, space, and being.

Moreover, a materialist commitment is urgent particularly with the ongoing dismissals of the material realities of caste violence, substantiated by Advaita Vedanta's inattention to and undermining of the material world, where an undue focus on the material world is seen as *avidya* (ignorance) and as a state of spiritual inferiority. In the context of such casted realities, it is therefore imperative to refuse a "consciousness only" paradigm, to decisively and substantively bring materiality into the conversation to ensure that an ontology of presence that accounts for "real bodies" and agencies of matter are not forgotten or erased. A feminist "new" materialist approach through the possibilities they present to work across multiple scales of time and space, brings into focus how Dalit lifeworlds, that otherwise disappear into the shadows (Plumwood, 2008), do not unfurl separately from encounters in a London nursery.

3.6 Grappling with colonial capitalist emergences

As stated in 3.4.1, an attunement to Dalit concerns and the refusal of the totalising claims of postcolonial critique, does not entail being apathetic to the ongoing workings of colonialism or the way colonial capitalism intra-acts with varna power relations and hierarchies. For instance, as will be explored in Chapter 5, a fleeting encounter with a "mug of tea" in a London Montessori nursery instantly implicates us in past and ongoing colonial plantation economies that are simultaneously entangled with varna hierarchies, practices and injustices. Such entanglements make theoretical purity or allegiance impossible. In this section, I want to explore some theoretical concepts from decolonial and anticolonial feminism, particularly the works of Sylvia Wynter and Maria Lugones, to grapple with the ongoing materialisations of colonialism. A fundamental focus of these explorations will be in unsettling a western

Enlightenment humanist conception of "human", in order to bring to light the stubborn privileging of particular gender formations.

3.6.1 The overrepresentation of Man

These further align with the aims of feminist new materialist and posthuman theories, and enable the possibilities of holding controversies together, without erasing the problematics of the "new", at the same time demonstrating a logic of difference, multiplicity and a deep sense of coalition at the point of controversy (Lugones, 2007). In this section I turn to the work of Sylvia Wynter's writings that have significantly contributed to more-than-human scholarship, particularly her explication of the "genres of Man". Wynter's scholarship has been particularly concerned with the onto-epistemological privileging of a genre of human that reifies Western bourgeois tenets. Western conceptions of "human" are linked to versions she refers to as Man1 and Man2. The invention of Man1 or *homo politicus* coincided with the "Enlightenment" of the eighteenth century, that broke away but not wholly separate from mediaeval theocratic conceptions of human (*homo religiousus*). Man1 was marked by rationality, i.e. the 'capacity to reason and inquire about the world and make decisions and laws without reference to theology' (Truman, 2019b, p.111), opening slot for Man2, *homo economicus* or the economic Man, 'who practices, indeed normalizes, accumulation in the name of (economic) freedom' (Wynter & McKittrick, 2015, p.10). Wynter's co-related figures of Man1 and Man2 together shape what constitutes "human", and "human development". The developmentalist paradigm that informs dominant educational approaches, including Montessori approach, are implicated in what Wynter (2003) calls 'the overrepresentation of Man', where a white middle-class masculinist mode of universality is installed as the governing logic of social life. For instance, according to Montessori, the development of the rational "man" is core to children's development, who argues that 'the axis around which the internal workings [of the child] revolves is reason' (Montessori, in Standing, 1962, p.206). As will be visible in section 7.3, these intentions are embedded in the everyday material-discursive processes that make up a "prepared Montessori classroom", oriented towards the formation of autonomous and rational utility maximiser in pursuit of self-interest. Further, the inclusion of "economic independence" as a key stage in development is important to note (Montessori, 1976). In contemporary Montessori practice, these aspects have been picked up, reconfigured and intensified by neoliberal drives focused on imparting specific skills that will enhance the

market (DfE, 2013b; Osgood & Mohandas, 2022; Moss, 2014, Dahlberg et al., 1999). These conceptualisations will be useful in the relata chapters as a way to attune to the gendered, racialised and classed emergences in the classroom.

3.6.2 The coloniality of gender

Wynter's conceptualisation of "Man", while emerging from different sensibilities shaped by location, finds great resonance with the works of decolonial feminist scholar Maria Lugones (2010, p.743) who argues that 'the dichotomous hierarchy between the human and the non-human as the central dichotomy of colonial mode'. Lugones (2010) conceptualised the 'coloniality of gender' in response to Quijano's (2000) notion of 'coloniality of power' where he explores how the colonial capitalist characteristics of the modern world continued to persist even after structures of direct colonisation were replaced by postcolonial nation-states. While Lugones (2007) embraces the coloniality of power, she identifies its limitations in how they continue to reproduce multiple cis-heteropatriarchal assumptions, especially framing "sex" as deterministically biological matter. She argues that sexual dimorphism was the "light side" of colonialism, in which the sex/gender binary was seen as a mark of civilisation. Colonial expansion entailed that the binarised gender/sex logic was imposed on Indigenous and non-Western contexts, where there were no gender differentials (Oyěwùmí, 1997), or had more-than-binary modes of gender organisations (Lugones, 2007), or even an indifference to gender difference (Menon, 2015). The imposition of the colonial/modern gender system was therefore constitutive of coloniality of power, which not only worked to force a cis-heteropatriarchal logic but also worked to marginalise and criminalise rich variations of pre-colonial gender/sex formations. Further, as noted by Miñoso et al. (2021), the reorganisations imposed through the coloniality of gender, at the same time worked to undermine and obliterate Indigenous peoples relation to one another, land and the nonhuman world. Pre-colonial gender/sex formations were viewed as primitive and uncivilised, thereby framing cis-heterosexual manhood as the pinnacle of human evolution and civilisation. A point that resonates with Wynter's genres of Man.

> 'The European, bourgeois, colonial, modern man became a subject/agent, fit for rule, for public life and ruling, a being of civilization, heterosexual, Christian, a being of mind and reason' (Lugones, 2007, p.743)

As I have discussed elsewhere (Mohandas, 2022) this finds great relevance in contemporary contexts, especially in the face of ongoing violence (epistemic, physical and medical) towards trans, nonbinary and intersex people, that have persistently tried to erase gender formations that do not neatly fit cis-heteronormative moulds. This necessitates the urgent un/settling of binarised logic that dominates ECEC workforce gender diversification efforts, but also in contesting how these logics uncritically permeate everyday practice in Montessori classrooms.

3.6.3 Staying with the theoretical trouble

These theoretical journeys and grapplings have been marked by ongoing tensions, and rather than resolving them into neat categories, I have followed Haraway's (2016) advice to 'stay with the trouble'. As Mignolo & Walsh (2018, p.1) underscore, the praxis of decolonisation is not concerned with presenting global designs for liberation or to propose 'new abstract universals.' A decolonial perspective is without doubt critical in accounting for the ongoing workings of colonial capitalist logic, which as will be evident in the relata chapters works intra-actively with varna power relations and hierarchies. As explained in section 3.4.1, this must be engaged delicately to ensure that a postcolonial critique does not resolve in an irresponsible move towards savarna innocence. The ongoing work in this thesis mobilised through SF practice (See section 4.5) is a relentless commitment to being-in-relation. A feminist relational onto-epistemology therefore is not so much an attempt to formulate yet another totalising and hybrid theoretical framework (Haraway & Nakamura, 2003; Haraway, 2016), on the contrary, it generates space to grapple with worlds in tension, albeit hesitantly. As Strathern (2020, p.187) contends, theoretical heterogeneity is to be welcomed, since 'relations do their work under congruent and under conflicting circumstances'.

3.7 Reconceptualising a "gendered workforce"

In this chapter, I have explored the various theoretical tensions, challenges and affordances that were encountered since embarking on this journey to complicate understandings of gender in the Montessori ECEC workforce.

As explored in chapter 2, dominant practices related to gender diversification of the ECEC workforce frame gender as a static feature of human bodies whose inclusion into early childhood education is thought to produce a set of predetermined effects. While feminist poststructuralists have disputed such biologically deterministic views, the emphasis on

language and discourse often excise other constituents, such as matter, space, place, affect/feelings, time etc, that play an active role in gender formations. In contrast, a feminist relational approach highlights how these constituents do not pre-exist their relations nor do they subserviently work within the confines of categorical and disciplinary purity, instead they intra-actively and transversally mobilise and perform worlds. This intra-activity and transversality has been critical in attuning to situated entanglements that have guided various theoretical moves in this chapter as explored in sections 3.3 to 3.6. "Situated" not necessarily in the sense of being tied down to one place or location, but a matter of working across places, temporalities and times. This enables a reconfiguring and a reconceptualising of what is understood as a "gendered workforce". A gendered workforce can therefore be understood as *gendered* (which are never exclusively gendered) *forces* at *work* on, across and through bodies, places, spaces and times. They are atmospheric forces that set worlds in motion that stretch across imaginaries, social, political and geographical fields. As a result, as Stewart (2011, p.5) describes it, something just throws itself together through 'the deep entanglement of affect, attention, the senses and matter'.

This reconceptualisation of a "gendered workforce" will be re-visited, and fleshed out further as it is mobilised in the relata chapters. However, before doing so, "methodological" issues are explored in the following chapter - most pertinently, how research might be re-conceived and re-imagined by considering the *work* the theorisations and conceptualisations discussed in this chapter *do*.

Chapter 4. Un/doing methodology

Chapter 3 was marked by a grappling with theoretical concepts, shaped by considerations of what they do and make possible. A feminist relational onto-epistemology was adopted as a framework to bring various theoretical approaches together, as a way to hold space for the theoretical tensions, contradictions and dilemmas encountered during the research process. In this chapter, I consider how research is reconceived when these theoretical shifts are put to work. I start by tracing the journeys that led to adopting 'situated evocations' (Strathern, 1991, p.7) as a research approach. Following this, Montessori's observational practices are reconfigured for a more capacious view that attunes to the more-than-human. Fundamental to this move is in unsettling aspects that would otherwise assume an inert status in traditional research approaches and methodologies such as place, space, time, furniture, recording devices, fencing, and so forth, to account for how they actively compose the research process. Haraway's (2016) SF method is then unpacked to consider the work SF does in diffracting and composing worlds, but also in the possibilities they present to strengthen ongoing ethical response-abilities that far exceed mere procedural ethics.

4.1 ~~Ethnography~~ Situated evocations

At the beginning of this research study, I had naïvely considered using critical discourse analysis (CDA) as a potential research method, owing to my familiarity exploring gendered discourses in media, politics and educational policies (Mohandas, unpublished; Mohandas, 2020). I was interested in complicating understandings of gender and working with approaches beyond that which I was familiar with. In my search for theories, I came across the Deleuzian concept "rhizome", and was instantly drawn to the multiplicitous, heterogenous, non-linear and always-in-the-middle nature of the concept (Linstead & Pullen, 2006). My initial response was to try to accommodate this into my discursive framework. However, as I proceeded to familiarise myself with posthuman and "new" materialist philosophy through the guidance of my supervisors, it became apparent that a purely discursive framework would not align with the research focus that was beginning to emerge. For instance, the conceptualisation of materiality, space and place as inert was fundamental

for a gender-neutral framing of Montessori. The "new" materialist orientation of the research thus necessitated a more capacious and open-ended approach that would help attune to the lively, unpredictable, and unanticipated materialised refiguration (Haraway, 1994) of gender in Montessori. Further, in order to get at the ordinary everyday aspects of Montessori practice, it was important that the approach enabled an embodied and embedded way of researching. For all these reasons, ethnography was deemed as a suitable approach.

Ethnography has its own complicated history. It has its origin in Western anthropology and is conventionally a descriptive account of a particular community or culture, narrated through the immersive experience of a fieldworker. However, the approach is entrenched in colonialist practices and comprises what Smith (2007, p.61) calls a form of highly competitive "collecting", i.e. 'collecting of territories, of new species of flora and fauna, of mineral resources and of cultures'. Clifford (1988) describes such ethnographic histories as highlighting 'ways that diverse experiences and facts are selected, gathered, detached from their original temporal occasions, and given enduring value in a new arrangement. Collecting - at least in the West, where time is generally thought to be linear and irreversible - implies a rescue of phenomena from inevitable historical decay or loss'. Smith (2007) further argues that conventional ethnography is not just merely about "collecting", but 'also about re-arrangement, re-presentation and re-distribution'. This practice of "collecting" has persisted in contemporary humanist ethnographic practices. It entails dislocating the subject/object from their original and temporal set of relations, and assigning a different set of relations and values, which then is re-presented as objective, discreet and value-free. Strathern (1991, p.7) takes this into account and reframes ethnography as an 'evocation', a practice of offering sites for connections, rather than being invested in the impossible task of representation. Haraway (2018, xxxvii) affirms: 'making connections is itself a methodology'. This has been a matter of ongoing ethical consideration that I by no means present as an innocent endeavour, and part of the reason I have been explicit to locate myself in the research processes and to emphasise the embodiments that shape the research processes.

The choice of ethnography was further consolidated through the inspiration of the works of other scholars (mostly feminist). The research enactments of my supervisor Jayne Osgood

(2014, 2019a,b,c; Osgood & Scarlet, 2016) animated through practices of 'deep hanging out' (Haraway & Gane, 2006, p.152) was a segue into the works of other scholars who employed an ethnographic rendering to open up generative ways to attend to the ordinary. Amongst these were Anna Tsing's (2015) *The Mushroom at the end of the world,* a multispecies ethnographic account that traces matsutake mushrooms through globalised commodity chains; and Vinciane Despret's (2006, p.2) *Sheep Do Have Opinions*, where she demonstrates the 'virtue of politeness' in ethnography, i.e. polite ways of entering into relationships with nonhumans that hold open the possibility for surprises. What demarcates their work from traditional ethnography is fundamentally their more-than-human sensibility to research. To mark this shift, I return to Strathern's (1991, p.7) term 'situated evocation', since it not only dislodges the "ethno" (Gk: people, nation), but it permits reconceiving encounters in the nursery as sites of more-than-human emergences. The focus is therefore steered away from methodological individualism that so deeply shapes Montessori practice, in which observation constitutes fixating on the humanised and individualised "child", while the "spiritual preparation" of the "observing adult" entails self-reflecting towards individualised transformation (Montessori, 1966). Situated evocation therefore enables attuning to the performativity of complexly woven relational networks, by de-centering the "individual" and attending to more-than-human relations and enactments (Strathern, 2020; Haraway, 2019a).

4.2 Observing through a more-than-human lens

Moreover, observation became a preferred way of being in the nursery. This aligned well with being a fairly introverted person who wished to be in the periphery of activity, but it also seemed to be the least intrusive approach since observation was core to Montessori pedagogy and practice (Osgood & Mohandas, 2022). The more-than-human perspective would of course reconfigure how observation is understood and practised. In this section, I start by engaging with Montessori's conceptualisation of observation to explicate the ways observation through a relational onto-epistemology both resonates and departs from observational practices in Montessori. In other words, I consider how Montessori's proposed observational approach both *works* and *does not work* in mobilising this research.

Montessori summed up her approach as '*Attendere, osservando*' (Montessori in Kramer, 1988, p.365) or 'Wait, observing'. As a motto, it has serious potential for enabling a slowing down and being patient that is 'central to decentering, because in doing so, we become better attuned to what else is happening around us' (Duhn et al., 2020, p.145). I find it quite generative that Montessori's own views on observation are varied and even contradictory. For example, the traces of positivism can be seen in the invitation to observe objectively. Observation here involves a separation and distancing from that which is observed, 'to see what the children are doing independent of our presence' (Montessori in Lontz, 2016: 122). The observer here is instructed 'to remain absolutely silent and motionless' (ibid.) to witness the unfurling of children's "natural development". This view of observation does not take into account the naturecultural technologies that shape what is understood as the "environment" nor the ontological assumptions that shape its production. In the history of science, this is founded on "modest witnessing" practised at the Royal Society, the oldest natural scientific institution in the world (Heath, 1997). It is at the Royal Society that Boyle performed his air-pump experiments to demonstrate the effects of air on various living entities – birds, mice and insects. These demonstrations drew large audiences, who witnessed the eventual death of the creatures. Amongst the audience were "modest witnesses", white upper-middle-class men who were tasked with witnessing (verifying the knowledge produced). An upper-class woman had once demanded air to rescue a dying bird; consequently, only men were permitted into these scientific demonstrations (Haraway, 1997). Feminist science and technology scholars (Haraway, 1997; Heath, 1997; Potter, 2001) argue that such practices were shaped by gendered notions of objectivity, in which the self-invisible white upper-middle-class man aimed to mirror nature while leaving no mark of his own history.

While the positivist traces can be seen in how observation is understood in the Montessori approach, a closer examination unearths Montessori's subversive feminist tendencies. For instance, the introduction of child-sized chairs in the Montessori classroom was a response to the mechanistic, objectivist and rationalist approaches instituted by what was at the time popularly known as the "school of scientific education" (Montessori, 1912). Heavy benches and desks were used to regulate children's bodies to keep them from moving in the

classroom. Angered by these interventions, Montessori replaced heavy furniture with light, child-sized chairs, desks and tables. These demonstrate the traces of her feminist sensibilities, through the entanglements of observation and care. This relational conception is visible in her writing where she highlights the necessity of an 'intimate relationship between the observer and the individual to be observed' (Montessori, 1912, p.13).

Moreover, while the developmentalist logic without doubt shaped her approach, we simultaneously see a less deterministic view of observation in the following quote, where Montessori is seen to distance her observational practice from modernist science by framing it as an attunement to that which is emergent and unfolding:

> 'Observation, according to the sense of modern science, would mean observing the child in order to guide him [sic], (they would say we must observe the child) in order to know him [sic]. We use the word observation in another sense. We mean rather, the ecstatic observation of the child who is growing, as we observe the marvels of nature, as we watch the opening bud or the flower, in order to learn, to spy out, if I may use that expression, the secret of this opening, unfolding life, our observation we might say proceeds from a mystical point of view' (Montessori, 2016, p.383-4)

The relational, emergent and care-full orientation in Montessori observation resonates with how observation is understood in this research. Such an orientation is sadly scarce in contemporary Montessori practice that has increasingly been shaped by positivist conceptions of observation, where observation has become a matter of guiding, knowing and fixing children (See Chapter 6, section 6; Osgood & Mohandas, 2022). As stated earlier, where the observational practice employed in this research deviates from Montessori's approach is in its focus. In line with the theoretical moves outlined in chapter 3, observation here de-centers the humanist "human", without erasing the human. A strategic way this is achieved in this thesis is to pay attention to the "nonhuman", which as explained in chapter 3 and will

be evident in the relata[8] chapters are never purely "nonhuman" but are formations of human-nonhuman entanglements. Observation therefore is not what the researcher does or something enacted on a research subject, rather it is a deeply relational, sensorial, affective, and immersive practice that transforms all that constitutes the moment. Moreover, the reconceptualisation of a "gendered workforce" as atmospheric forces that work on, across and through subject/object boundaries reconfigures how the practice of observation is understood and which attunements are brought to focus. Ahmed (2014b, n.p.) writes: 'An atmosphere can be how we inhabit the same room but be in a different world. Some might be more attuned to some things, some bodies, some sounds. Attunement helps us to explain not only what we pick up but what we do not pick up.' The "objects" that constitute each relata chapter emerge from such atmospheric attunements (explored in greater detail in section 4.5.2). In the following sections I attune to some of these constituents where place, space, time, matter and discourse actively configure worlds.

4.3 Seedlings Montessori Nursery as lively entanglements

Seedlings[9] Montessori Nursery was identified through contacts in my professional network. The setting was deemed suitable in a practical sense as it was easily accessible and could therefore allow for frequent fieldwork visits during the proposed three-month period. The nursery owner was first contacted via email, who responded the very same day, welcoming the possibility to facilitate and support my study. Informed consents were obtained from gatekeepers, teachers, family, and children on the first week of the fieldwork (Appendix II).

4.3.1 Contesting the research site: re-animating place

In locating Seedlings Montessori Nursery, I consider the entanglements of place, space, matter and time play in how worlds are made. Seedlings Montessori Nursery is a private early

[8] Inspired by Barad (2007) I use the term "relata" is instead of "findings" or "data" as a means to highlight how they are not discrete entities rather they are relationally produced. See Chapter 4, section 4.5.2 for a more detailed justification for the use of relata.

[9] The name "Seedlings" was chosen to indicate the germinal and potent qualities that are flush with innumerable possibilities and imaginings.

years provision in a middle-class suburban residential area in London. Prior to the early 1800s, the region was largely rural and agricultural, with a few large manors and farms. Like most of England, the suburb was controlled by landed gentry. However, with the Industrial Revolution and the development of skilled labour, there was a rise in middle-class families in the area (See Wohl, 2017 for general exploration). Late nineteenth century building development projects in the area were aimed at white middle-class families and were shaped by the government's Slum Clearance project (See Yelling, 1981, 1986 for further exploration). These developmentalist projects were further aided by the opening of the railway station, the construction of roads, and later the incorporation of the station into one of the tube lines. According to Jackson (2003, p.169): 'For the capitalist, the best profits lay in attracting the middle classes, most of whom would walk to their trains at each end'. These relations are never fully erased, the periodical interruption of the peaceful and tranquil atmosphere of the Seedlings Montessori Nursery with the incongruous noise and the flanging squeal of the tube line is an ongoing reminder of the "raced" and "classed" inheritances that continue to shape childhoods, demonstrating how power and place are always interlaced (Tuck & McKenzie, 2015).

After World War II, the housing shortage necessitated the construction of council housing units. Seedlings Nursery is located right beside a stretch of council housing units, yet the suburb tends to be predominantly affluent. On inquiring if children and families from those council houses attended the nursery, I was informed that at the time most children at the nursery came from middle-class families, with the exception of one family that struggled financially and efforts were made to subsidise childcare costs. This is further exacerbated by the fact that termly childcare fees at Seedlings Montessori Nursery is almost twice that of average private daycare rates in London (Jarvie et al., 2021), which according to the nursery owner has been the only way to sustain the business in the area, while also ensuring staff were paid a decent living wage. It is an aspect highlighted in previous research where low levels of government funding for "free" hours are identified as raising childcare costs (Chen & Bradbury, 2020), such that 'providers with higher-than-average operating costs can no longer remain financially viable on the amount provided by government' (Gallagher, 2022, p.18). These also shape Seedlings decision not to participate in the 30-hours-free scheme, a scheme

that the Conservative government has proposed to expand further as a means 'to get more parents back to work' (Thomas, 2023). These demonstrate how what and who constitutes a "Montessori nursery" are not separate from past and ongoing social, political, geographical and economic relations and further underscoring the much needed 'politicized attention to place' (Nxumalo & Cedillo, 2017, p.108; Tuck & McKenzie, 2015).

4.3.2 Fencing: setting the tone for childhoods at risk

Seedlings Montessori Nursery is fenced all around, with a mix of welded metal fence and corrugated metal fence running alongside the road, whilst a closeboard wooden fence used on the other sides of the property. The differences in materialities and positioning of fencing is interesting to note. Attention to fencing offers insight into particular conceptualisations of childhood that unquestioningly inform practice. Power and Somerville's (2015) research on fences in Australia explore the situated ways fences work as colonial technologies of power and control, where they were used to demarcate white settler territory from Aboriginal people. These are linked to the "English enclosure movements" (Linebaugh, 2010), which in England was marked by privatisation drives argued for in terms of "the tragedy of the commons" (See Ostrom 2008 for further exploration) i.e. the risk "commoners" pose to "nature" and in turn to "national economic growth" (Neeson, 1993). The "enclosure" logic persists in how fencing materialises in contemporary English nurseries through the conflation of "nature" and "childhood", where entrenched notions of "childhood innocence" dominate Western imaginations that overemphasise risk to children and childhoods, which further shape the role a practitioner assumes in ECEC. The fence sets the tone and feel of the nursery, and signals to the material-semiotic production of 'special places for children…where the adult gaze monitors potential dangers to provide a 'risk-free' environment for the young child' (Duhn, 2012, p.20). It is important to recognise that the materialisation of risk linked to cameras in Chapter 6 are enmeshed in these material-semiotic relationalities and contribute to the affective atmospheres that work to sustain particular gendered forces and formations that are inextricably entangled with economic drives. Yet at the same time during my time at Seedlings the fence always became something else, through intra-active entanglements with children, wooden planks, tyres, miniature animals, and so forth. As a result, boundaries were constantly negotiated, recreated and reconfigured,

signalling to lively and vibrant potentialities of matter that are otherwise deemed static (Quinones & Duhn, 2022).

4.3.3 Setting up? or "making up" the Montessori classroom?

The setting up, preparation and upkeep of the Seedlings Montessori classroom is the responsibility of the staff, which I must add is composed exclusively of women. Most of the energy and time that goes into setting up the classroom (mostly by two staff members who arrive at 7:30am) goes into bringing out and setting up pedagogical materials, equipment and furniture from a small storage room in the corner of the building, into a large hall. The large hall is set up within the span of 20-30 minutes, which is organised, structured and designed primarily using Montessori pedagogical principles, although intentions informed by the Early Years Foundation Stage (EYFS) can also be discerned throughout the classroom. As is the case with most Montessori classrooms, the space is categorised and divided on the basis of learning areas: Practical Life, Sensorial, Numeracy, Literacy, Cultural, and Creative areas. Each learning area has distinctive learning materials with very specific pedagogical outcomes ciphered into its design. There is a recognisable rhythm, flow and uniformity to Seedlings that is distinctive to Montessori, precisely because the materials are simple, "natural", uncluttered, smooth, and purposeful (Osgood & Mohandas, 2019). These align with the material-aesthetic sensibility and feel of a particular brand of white middle-classness, which is picked up on in my analysis in Chapter 7, where snot manifests as "matter out of place" (See section 7.3), accentuating and rupturing dominant gendered material-aesthetic formations. However, unlike traditional Montessori settings, loose-parts play, role play areas, mud kitchen and home corners can also be seen at Seedlings, some of which are animated in encounters in the relata chapters.

4.3.4 Re-inscribing "boyification of the Empire"

Sticky Figure[10] 1: A palimpsest re-conception of "nursery site"

Space, place and matter therefore are not neutral backdrops, a description, instead they are akin to palimpsests (See Sticky Figure 1), produced through the material-discursive layerings of those matters inscribed, erased, and reinscribed (Barker & Weller, 2003; Duncan et al., 2015;) that matter differently in each encounter. The past inheres and sediments in the present to iteratively shape and reshape relations. For example, upon entering the nursery building I noticed that there were various sports accolades displayed in a vitrine and further instances of scout-related vestiges on the notice boards. I later learned that the building was a Scout Hut, where Beaver, Cub and Scout groups congregated on some evenings during the week. Whilst contemporary scouting movement prides in being an "apolitical" movement and in 'welcoming people of all genders, beliefs and backgrounds' (The Scout Association, 2021), the inherited histories of British colonialist ideals and practices that have shaped and continue to shape the Scout programs are embodied in practice, i.e 'traces of previous

[10] See section 4.6 for an explanation for "Sticky Figures"

inscriptions that have been 'overwritten' (Ashcroft, Griffiths, and Tiffin, 2000, p.158). The movement was originally driven by what Honeck (2016) refers to as the 'boyification of the Empire', the political romanticisation of boyhood innocence, that emerged out of a moral panic amongst Anglo-Saxon protestants who believed there was a crisis of masculinity, in which manhood was 'enfeebled by industrialization, urbanization, and overprotective mothering' (Honeck, 2016, p.443), an argument that sounds all too familiar to contemporary recuperative masculinity interventions (See Chapter 2). Attuning to the spacetimematterings of the nursery demonstrate how gendered forces work beyond human intentionalities and volition, at the same time underscores how the "research site" is far from an inert, apolitical and neutral space waiting to be represented.

4.4 Research devices as more-than-representational

Traditionally research recording devices (eg: cameras, voice recorders, notepads) are framed in objectivist and rationalist terms as simply recording reality. Nordstrom (2015, p.389) questions, 'What might happen when recording devices matter?'. From a feminist "new" materialist sense, these devices actively participate in the research process, not separate from the phenomena studied but as the stuff that produces the phenomena. In this study cameras and fieldnotes were included in the research process on account of their ubiquity in early childhood classrooms, in shaping the experiences of both children and adults. For instance, it is common practice for visitors to be welcomed into nursery spaces with instructions to leave camera devices in a tray in the office, followed by requests to enter one's name, time of arrival, and purpose for visit in a visitor's notebook. Beyond this initial safety screening, cameras and notebooks permeate the everyday experiences in the nursery setting - from documenting children's development, for surveillance and safety, and as pedagogical objects.

4.4.1. Cameras: a site of affective disturbance

During the preliminary meeting with the nursery owner, the lively yet troubled status of the camera was quickly called to account. I was informed that in line with nursery policy, I could not use my personal camera, but would need to use the setting's iPads. Moreover, it was

clarified that every photo taken using the nursery's camera would then be screened by the nursery owner before being emailed out to me, in order to ensure anonymity and safety of all children. It is interesting to note however that the notebook was not subject to the same level of scrutiny. These differences are important from a feminist "new" materialist perspective, as they draw our attention to the differential agencies of matter but further enable us to recognise that cameras and notebooks are not atomistic entities, rather are materialised through contradictory stories of historical, social, economic, political, pedagogical, geographical and ecological relations (Haraway, 2016). The affective disturbances produced in intra-action with iPad cameras set in motion the investigations in Chapter 6. Whilst others have attuned to the liveliness of cameras in their research (Kind, 2013; Harwood et al. 2018; Allen, 2018; Osgood, 2019d), in this research camera relationalities are examined with the materialisation of a gendered workforce in mind.

4.4.2. Notepads and fieldnotes: failure of method?

In this subsection, I turn my attention to fieldnotes. According to Bailey (1996, p.80), field notes are traditionally viewed as 'the backbone of collecting and analyzing field data', in which thoughts, feelings, memories and details of the observed experience are written down (Pane and Rocco, 2009). In preparation, I purchased a Nu A4 Kraft Wiro Notebook from Rymans specifically for fieldwork purposes. They are branded as 'UK's first recycled and eco-friendly notebooks'; FSC certified, and printed with vegetable inks and stitched with natural fibres (Nuco International, 2021, n.p.). The recycled paper is made from a mixture of wood pulps. According to the company's website, the wood is subjected to a process known as Kraft Pulping, in which lignin is removed through the use of chemicals such as sodium hydroxide and sodium sulphide. The kraft process thus results in high yields of strong fibre which enable versatility. Yet a closer consideration offers further insight that troubles its environment-friendly status. For instance, Cheremisinoff & Rosenfeld (2010) highlight that kraft produces large amounts of pollution, with the chemical compounds released identified to cause serious adverse health effects on human and nonhuman life (Singh & Chandra, 2019). I underscore these issues to illustrate how behind the disingenuous green sheen, the implementation of

fieldnotes in this research is implicated in all sorts of non-innocent stories and practices, and does not come into the research assemblage as *tabula rasa,* blank paper waiting to be written.

Additionally, the very practice of writing fieldnotes presented new challenges. I found the rendering of field notes whilst being engaged and immersed in the classroom a significantly complicated and challenging process. These challenges have been identified as being related to having "Attention Deficit Hyperactivity Disorder" (ADHD), particularly linked to struggles sustaining attention as well as issues with holding and retaining "information" (Nadeau, 2005). Finding the time and space to write with any legibility or level of detail without being distracted seemed like an arduous task. Simultaneously, the challenges to working memory necessitated jotting down notes. I managed to navigate this by jotting down short phrases and keywords, which I thought would help with expanding into comprehensive fieldnotes later (Mack et al. 2005; Gray 2014). Yet these challenges made me re-evaluate the work the fieldnotes were doing. As MacLure (2013, p.664) reminds us, 'data' gathered from fieldnotes are inherently humanist and have serious limitations when dealing with elements outside of 'the ideational and cultural aspects of utterances (spoken or written)'. While jotting down keywords and phrases were important, and while I did manage to expand some of them, albeit ineffectively, I felt a sense of relief when their role as a representational device, i.e. to collect, mirror and represent objective facts about social worlds under study, was unsettled. Reconceiving fieldnotes as performative, metamorphic and inescapably relational entities (Bøhling, 2015), enabled viewing them as sites of affective connections and evocations. This aligned with philosophical and theoretical orientations in this research, which is not concerned with revealing something that was "already there" or discovering something "out there", instead about proliferating and evoking partial connections through practices of relating (Strathern, 1991; Haraway, 2018).

4.5 SF: diffracting worlds

> 'It matters what thoughts think thoughts. It matters what knowledges know knowledges. It matters what relations relate relations. It matters what worlds world worlds. It matters what stories tell stories' (Haraway, 2016, p.35).

SF 'is a sign for science fiction, speculative feminism, science fantasy, speculative fabulation, science fact, and also, string figures' (Haraway, 2016, p.10). In this thesis, SF, particularly string figuring, is mobilised as a reading and worlding protocol to attune to multiple relations and connections that materialise a "gendered workforce" in the Montessori classroom.

4.5.1 SF: matter mattering matter

I begin by exploring the work SF does as a metaphor for mobilising worlds. Metaphors have played a core part in Haraway's scholarly work (Haraway, 1976; Haraway & Goodeve, 2000; Haraway, 2016; Haraway, 2018). However, it is useful to note that they are not used in her work in the traditional linguistic sense as "a figure of speech", instead they are described as 'constantly swerving, intensely physical processes of semiosis' (Haraway & Goodeve, 2000, p.86). Metaphors therefore give concrete coherence to highly abstract and complex phenomena, they offer ways to get at the material-discursive densities and intensities (Haraway, 1976). They are perhaps better described as 'matterphoric' (See section 3.2.1), i.e they articulate 'meaning in relation to matter, understood not as fixed entity, but as constantly shifting (*-phoric*) and thereby establishing entanglements and relationalities' (Gandorfer & Ayub, 2021, p.12). SF, particularly string figures, are used in this thesis in this materialist sense, as a practice of making-with and becoming-with.

Strings have repeatedly emerged in Haraway's work as potent metaphors to grapple with the complex ways worlds are made and unmade (Haraway, 1988, 1994, 1997, 2016, 2019a). String games were first introduced in her work by the name 'the game of cat's cradle' (Haraway, 1994, 1997), which was later renamed "SF". The name change was reasoned as a way to unsettle the universality of "game of cat's cradle" (a term specific to US), since string games were not the same around the world, they also did not *do* the same kind of work everywhere (Petit, 2022; Haraway, 2016). A further reason for the change was to acknowledge the colonial and imperial histories, i.e. string games came to Europe through colonial tea trades from Asia (Haraway, 2011, 2013, 2016; 2018). I highlight these to underscore the noninnocence of mobilising such an approach, which reinforces the kind of work it does, i.e. working with

troubled and contaminated relations, stories and worlds. SF is therefore a relational practice rather than a thing, and therefore 'always involves many players. It's collective making-with' (Haraway, 2018, xxxix). Such "collective making-with" involves both human and nonhuman participants. As we have already seen in previous sections, this entails attuning to how place, space, Montessori materials, furniture, research devices, humans etc. come to matter.

4.5.2 Putting your feelers out: feeling "objects"

In section 4.2, I highlighted that a strategy used in this thesis to de-center the human and to attune to the more-than-human was to pay attention to mundane everyday "objects" in the nursery. In this subsection I consider the processes that shaped such attention. In contrast to neoliberal, developmentalist drives that are obsessed with 'looking forward', I am inspired by Tsing's (2015, p.3) invitation to 'look around', which entails being 'agnostic about where we are going, we might look for what has been ignored because it never fits the timeline of progress' (ibid., p.21). Looking around not simply in the regular sense, but with 'fingeryeyes' (Hayward, 2010) or what Haraway (2016, p.31) calls 'feelers'. These feelers take "affect" as a guide in deliberating which "objects" form the focus of the research inquiry. MacLure (2010, p.282) refers to these as 'glows':

> One way to describe its beginnings would be as a kind of glow: some detail – a fieldnote fragment or video image – starts to glimmer, gathering our attention. Things both slow down and speed up at this point. On the one hand, the detail arrests the listless traverse of our attention across the surface of the screen or page that holds the data, intensifying our gaze and making us pause to burrow inside it, mining it for meaning. On the other hand, connections start to fire up: the conversation gets faster and more animated as we begin to recall other incidents and details in the project classrooms, our own childhood experiences, films or artwork that we have seen, articles that we have read.

However, as MacLure (2013, p.229) stresses further, such affective pulls are relational, i.e. 'I have chosen something that has chosen me, and it is that mutual "affection" that constitutes "us". A feminist "new" materialist approach unsettles the very foundation of qualitative inquiry. The qualitative researcher is no longer seen as the active agent mining for "data"

(MacLure, 2017), nor are "data" viewed as discrete entities that can be extracted. Against the anthropocentric imaginaries of qualitative research, in this thesis the notion of "data" is expanded to include nonhuman agencies, where it is seen to emerge and manifest through human-nonhuman intra-activity. While others have reconfigured the term "data" to account for this shift (Koro-Ljunberg et al., 2017; Somerville et al., 2021; Warren, 2021), in this thesis I use the term "relata" instead of "data" to emphasise the relational capacities at work. They account for how 'relation is the smallest possible unit of analysis' (Haraway, 2003, p.24), which then enables working with theories-in-relation and worlds-in-tension. Further, the term "relata" is used in the Baradian sense, where 'relata do not preexist relations; rather, relata-within-phenomena emerge through specific intra-actions' (Barad, 2007, p.334). Relata therefore are not about deterministic relations, rather they are situated, multiple and emergent. Chapters 5, 6, and 7 narrate relata encounters that unexpectedly glow with affective frisson. However, the SF practice is iteratively shaped by such ongoing attunements that grow in deeply situated and tentacular ways.

4.5.3 Situated and tentacular feminisms

Others have mobilised string figuring in educational research (Osgood & Scarlet, 2015; Niccolini et al., 2018; Hodgins, 2019; Osgood 2019 a, b; Zarabadi et al., 2019; Fairchild et al. 2022; Osgood & Odegard, 2022), but what is quite remarkable to note is how differently they have been put to work, underscoring how SF functions more as guiding tendencies rather than overdetermining archetypes, or as Haraway (2018 xxxviii) puts it, 'a toolkit for thinking, feeling, storying, relating, to be taken up, used, modified, offered, shared'. Moreover, they further account for the situatedness of SF as emphasised by Truman (2019c) through the inclusion of "situated feminisms" as means to account for the immanence of "intersectional markers" in encounters. Situatedness here however does not mean positionality or place, instead it is a way of getting at the multiple modes of embedding that are always transversal and tentacular (Haraway & Goodeve, 2000; Haraway, 2016). The tentacularity of SF may seem disorienting for the reader as one suddenly finds themselves in places and spaces far away from the nursery, but as Haraway (2016, p.127) assures us, 'that way lies stories'. A point

reiterated by Bone (2019, p.136): 'It shows how one experience can gather energy and move into new spaces in surprising ways while not following prescribed pathways'.

> 'Tentacular becoming is not gentle, caring, or predictable by nature. It is tricky, slippery, fast, slow, stretching, retracting, sliding, and always more-than-one.' (Duhn & Galvez, 2020, p.738)

4.5.4 "The game takes great skill"

Learning the game of string figuring has by no means been an easy endeavour. Like with all games this has meant practising and embodying ways of thinking and researching, and resisting tendencies shaped by old methodological habits. Quite early on in my PhD (December 2018), my supervisor Jayne Osgood invited me to co-author a paper (Osgood & Mohandas, 2019) for a Special Issue that was concerned with interrogating and going beyond the gender binary in the care and education of young children (Xu et al., 2020). This was the first of many opportunities to put SF to work as a research practice. Since then, SF has been mobilised in other co-authored publications (Osgood & Mohandas, 2021; Osgood & Mohandas, 2022; Osgood et al., 2023) as well as a "sole authored" publication (Mohandas, 2022). In this section, I focus specifically on our first paper together, where SF made conceptualising gender beyond anthropocentric terms possible, by turning attention to a specific Montessori material found in Montessori classrooms across the world: The Pink Tower. Jayne took the lead, as a more practised 'string figurer' (Nordstrom, 2022), whilst as a newcomer to the field, it offered me an opportunity to practise the skills required to play the game. By 'pulling different strings from historical accounts, information from websites, visual images, Montessori literature, news articles, affective memories, personal journals', feminist politics, bodily encounters and more, knots were formed to materialise worlds in some forms rather than others (Osgood & Mohandas, 2019, p.68). SF involved corporeally playing and becoming-with pink cubes in a North London Montessori training centre, as much as the material-discursive-digital patterning made possible through the various review features in Microsoft Word. The patterns were sent back and forth via email exchanges. I

would work on the document and pass it on to Jayne, Jayne would then work on it further and pass it back to me, and so forth (See Sticky Figure 2).

Sticky Figure 2: SF writing assemblage

(See section 4.6 for an explanation of "sticky figures")

String figuring in this manner became a 'process of thinking-with assemblages, thinking-with connective relations, and thinking-with to generate new becomings' (Nordstrom, 2022). However, it is important to note that the process of string figuring was quite challenging initially. Haraway (2018, p.268) was not underestimating when she shared that 'the game takes great skill'. During the course of SFing, Jayne once remarked that while I had the strings in my hand, they were being neatly held side by side. Patterns would emerge momentarily only to collapse suddenly, 'dropping threads and failing but sometimes finding something that works' (Haraway, 2016, p.10). However, as Haraway (2018) stresses, the goal is not to 'master' the game or even win it, rather SF is a 'figure for ongoingness' (Haraway, 2016, p.3).

4.6 Sticky Figures

Sticky Figures, another iteration of SF emerges in this study as a means to move away from representational accounts of encounters and as a way to attune to affective stickiness. They

are situated evocations that enable grappling with the manifold entanglements that constitute and reconstitute an encounter, inviting 'a mode of living that recognises (and celebrates) complexity, uncertainty, and hope' (Osgood, in Strom et al., 2019, p.14). The Sticky Figures are composed through the layering of material, affective, and discursive relations, where the past, present and future coalesce and intra-act. The figures are not easily decipherable, and deliberately so, to generate space to resist the urge to provide an interpretation of what they are and what they might mean. They are included without any explanation or description for this very reason. In this thesis, they are produced with Adobe Photomix ®, using a variety of blending tools such as layering, overlaying, multiplying, colour dodging, soft lighting, pin lighting, transforming and so forth, to generate the desired palimpsest. What is particularly interesting about producing these figures using the features in Adobe Photomix ® is how the various layers and blends result in many unexpected and surprising patterns, generating fresh and ongoing connections and relations. Readers are invited to re-turn to these figures, to pause and ponder on the multiple and emergent relationalities at work, the affective forces they set in motion, the questions they provoke and the work they do.

4.7 Ethical response-ability: a matter of ongoingness

Traditional research ethics is concerned with 'making moral judgments about the aims and methods of a study' (Aubrey et al., 2000, p.156). The British Education Research Association's (BERA) *Ethical Guidelines for Educational Research 2018* offers tangible ways research ethics can be enacted by the researcher. These have been outlined in terms of "responsibilities", i.e. responsibilities to participants, to sponsors, clients, and stakeholders, to the community of educational researchers, as well as, responsibilities for publication and dissemination, and the researcher's own wellbeing and development (BERA, 2018). Shortly after my research proposal was approved, I was granted ethics approval via the Middlesex University Ethics Committee (See Appendix I). Following which I underwent a full DBS-check through the University's Contract, Compliance and Governance Unit (See Appendix III), which authorised me to proceed with a three-month "ethnographic" study at Seedlings Montessori Nursery. As part of the procedural ethics, aspects such as informed consent,

transparency, right to withdraw, anonymity and safe storage of data were underscored (See Appendix II).

In contrast to the emphasis on "responsibility", a feminist relational and more-than-human approach enacted through SF is concerned with ethical 'response-abilities', that is 'a collective known and doing' (Haraway, 2016, p.34). Ethical response-ability is about cultivating a more-than-human sensibility that allows for better ways to become-with each other – human and nonhuman. It proceeds from the understanding that every phenomenon is always already more-than-human, and refers to those responses that enlarge collective capacities and abilities. This entails moving away from pure and predetermined categories of "good" and "bad", instead as in Haraway's (2016, p.98) words, it involves being 'less deadly' in each encounter, to strengthen the possibilities of more-than-human ongoingness. Therefore, each encounter is layered with multiple ethical dilemmas that require responses in relational specific ways.

4.8 Possibilities for a collective making-with

In this chapter, research has been reconceived and reanimated through philosophical and theoretical approaches discussed in Chapter 3. In contrast to traditional methodological practices that are preoccupied with describing research sites, objects, participants and representing them through recording devices, this research views place, space, furniture, objects, recording devices, fences etc as intra-actively working and being worked in the phenomenon being researched. Further, a more-than-human approach radically transforms what it means to enact "ethnography" or what "research observation" looks like. Therefore, the researcher is not merely *in* the research site, collecting ethnographic "data" and performing the analysis, rather the researcher forms the stuff that constitutes research, who with other humans and nonhumans collectively and intra-actively participate in the continued unfolding of research processes and worlds. It is this collective making-with that SF makes possible, which as a relational practice is deeply material, situated, tentacular, but whose "success" is marked by the possibilities of more-than-human ongoingness. In the following chapter, in the spirit of this collective making-with and possibilities for ongoingness, I

proceed to the first relata chapter where SF is mobilised to think-with "tea" to attune to the multiple gendered forces at work that materialise in relationally specific ways.

Chapter 5. Re-storying a hot mug of tea

5.1 Picking up the threads

By mobilising Haraway's SF method (Refer to section 4.5), this chapter thinks-with tea to consider the materialisation of a "gendered workforce" in Montessori early childhood spaces. As indicated throughout this thesis, this research aims to unsettle the idea that Montessori classrooms are gender-neutral spaces or devoid of gendering practices (Gustafsson, 2018). I begin with an encounter from the Montessori nursery that features pretend tea play and "real" tea. From a Montessori perspective, the former is viewed as gender-stereotyped, while the latter is framed as "gender-neutral". As I will go on to demonstrate, these demarcations are undergirded by beliefs that position the "real" and "natural" as exempt from cultural practices of gendering. By using "real tea" as a point of departure, this chapter uncovers the complex, multiple, and contradictory forms of gendered politics of tea that is made salient when a feminist relational analysis is employed.

5.2 Gendered play? Unsettling real vs pretend

> *Thomas, Rian and Alice are at the mud kitchen outdoors. The weather has been overcast all morning. Alice has been using a large metal spoon to fill various metal containers with sand from the sand pit that is beside the mud kitchen. Thomas says 'It's time for tea! It's time for tea!'. Rian empties some of the sand back to the sandpit, while Alice now has started transferring sand from blue and green plastic troughs to small melamine plates. Meanwhile, Thomas transfers sand with his hand from a metal pan and fills a cup half-way. He then carries the cup along with its saucer to the round wooden table to the right. He announces to his friends, 'Tea is ready'. Just then the head of the nursery comes out with two mugs of steaming hot green tea and offers one to me…* (Vignette 5.1)

Although pretend play with tea is an everyday encounter in most nurseries, in Vignette 5.1 it is striking because of how atypical such play is in traditional Montessori settings. Discussions and debates linked to the inclusion of pretend and fantasy play in Montessori spaces have

generated extraordinary levels of tension and has been a key factor to fracture Montessori communities and training organisations across locations (Cohen, 1975)[11]. In a more traditional Montessori setting, children would be offered opportunities to make "real" tea with sufficient guidance and directives from adults. All the various components needed for making tea such as tea leaves, tea pot, cup, saucer, strainer, timer, cleaning cloth, etc are made available on the shelf ready for use (Montessori Album, 2020). 'Tea making' activity like most other activities in the 'practical life' area of the Montessori curriculum is at its core concerned with fostering autonomy. The resistance to pretend and fantasy play is fuelled by beliefs that children under a certain age need "real" life, concrete and hands-on experiences. This is informed by Montessori's experience of observing children's responses to being offered both objects of play and didactic materials, with invariable preference shown to the latter (Montessori, 1949). Based on these observations she concluded that contrary to popular beliefs at the time, children preferred "real" life activities over pretend play and fantasy. Whilst admitting to her personal love for fiction, fantasy and fairy tales (Montessori, 2017), Montessori expresses her concern using fantasy as the primary mode of engagement with children (Montessori, 2012). Regarding this, Mario Montessori Jr., Montessori's grandson, explicates further:

> 'She has fulminated against them in her writings, but that is because people at the time believed that children were too small, too stupid or too immature to understand reality. They thought children believed in a world of make-believe and adults should use that means to communicate to them. It was not just telling stories, whether realistic or imaginary, but cheating them by making them believe what was not true. That is what she was fighting against' (Montessori Jr., 2008, p.108-109)

Although driven by honourable intentions, a closer reading of Montessori's work reveals how 'notions of natural and unnatural overlap with understandings of reality and fantasy,

[11] Montessori training organisations and communities have been sharply divided along the lines of interpretation. In the UK context, the Maria Montessori Institute (MMI), the Montessori training centre established by Maria Montessori herself, adhere to a strict interpretation of Montessori. While other training organisations such as Bournemouth Montessori Centre (BMC), Montessori Partnership (MP) and the former Montessori Centre International (MCI), broadly speaking, take on a more progressive stance.

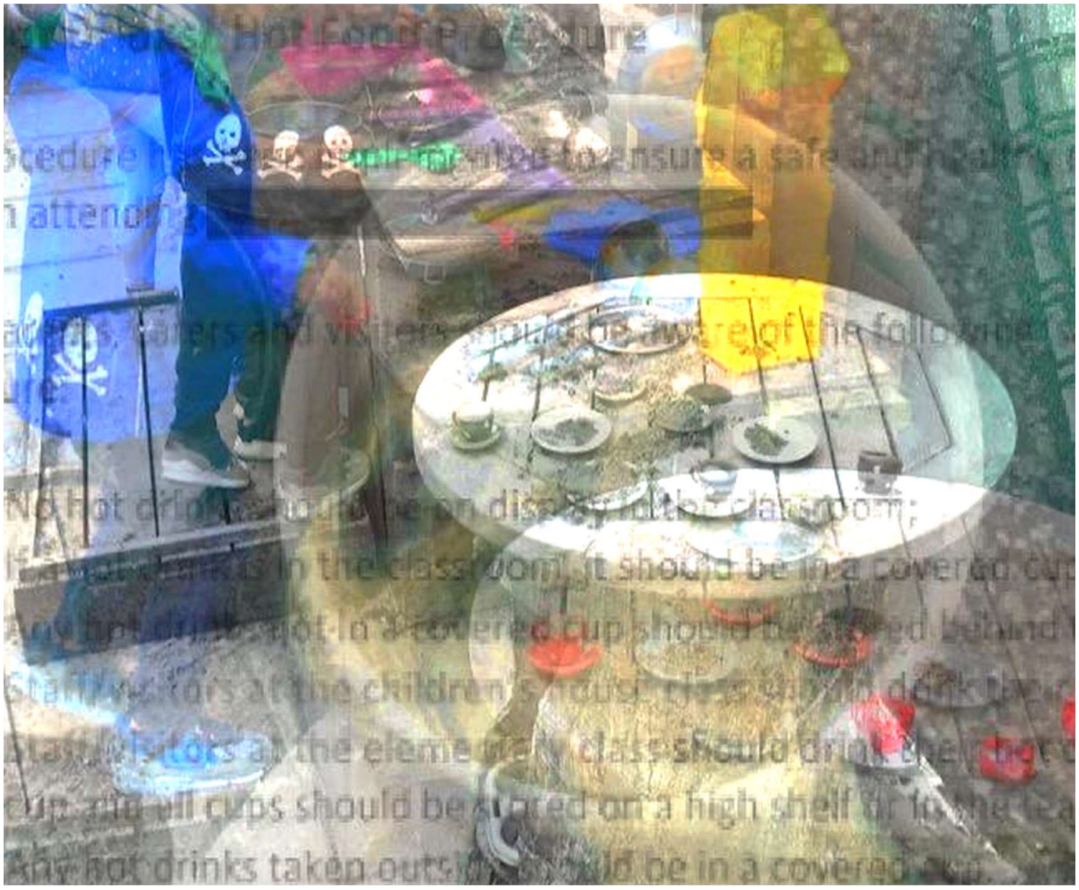
innocence and non-innocence' (Osgood & Mohandas, 2021, p.209). For instance she describes children gravitating towards reality in terms of 'urges of nature' (Montessori, 2012, p.189). According to Montessori (1949), children need "real" hands-on activities for 'normal development' and what she refers to as 'the unification of his [sic] personality' (Montessori, 2012, p.155). She explains: 'the result is that the child cannot develop normally and the longer he [sic] lives in this environment full of toys, the less capable he [sic] becomes of adapting himself [sic] to the real environment, and gradually his [sic] personality is completely deformed'. These views are reflective of the developmentalist logic that was popularised and disseminated during her time as evident in Freud's psychosexual development theory, Piaget's cognitive development theory, or Erikson's psychosocial development theory. These developmental theories rely on what is referred to as the 'Aristotelian conception of childhood' (Chambliss, 1982), that views children's development as merely a "natural" process culminating in 'reason and intelligence' (Aristotle, 1908). Such a developmentalist logic is inextricably entangled to economic logic, i.e. the preparation of children for a capitalist economic workforce (Burman, 1994). Feminist and postcolonial scholars not only demonstrate how developmentalism masks gender altogether (Blaise, 2005), but as explained in Chapter 3 (See section 3.6.1), they sustain the formation and overrepresentation of a narrow imaginary of "human", that is both gendered and racialised (Wynter, 2003).

Unlike traditional Montessori settings, Seedlings Montessori can be described as a "progressive" Montessori setting that embraces and integrates various pedagogical approaches and perspectives, exemplified by the incorporation of pretend play and fantasy. As noted before in Chapter 4 (See section 4.3.3), this is evident in the types of activities made available both indoors and outdoors that would typically not be seen in a traditional Montessori setting. These further signal to the nursery's blended curriculum approach, that follows both Montessori and EYFS. Examining the EYFS curriculum offers further insight into gender in early childhood. Whereas the DfE's (2014) Development Matters makes no mention of gender, the newly published guidance (DfE, 2021a, p.105) urges on 'challenging gender and other stereotypes', without expanding on what that entails. For instance, 'tea sets' are suggested as examples of 'groups of objects' to scaffold for language development, without quite addressing the gendered nature of play that is often observed in early childhood settings.

Play that involves tea sets and tea parties have traditionally been gender-stereotyped as the domain of girls (DeLoache et al., 2007). A Google Image Search of 'tea party play' almost exclusively generates pages and pages of young girls 'playing tea'. In the UK, despite efforts by campaigns such as *Let Toys Be Toys* (LTBT) to persuade toy and publishing industries to stop promoting gender stereotypes, the marketing of toys continues to be heavily gendered (Fine & Rush, 2018). As per their 2020 report on gender stereotyping in Initial Teacher Training (ITT), LTBT identified an overwhelming majority of ITT to lack any form of training related to gender-sensitive practice (Bazeley et al., 2020). As stated earlier, these are reflective of the developmentalist paradigm that dominates early childhood teacher training, i.e. as Blaise (2005, pp.8-9) argues it 'conceals the ways in which gender influences a child's experiences and how these life experiences are interpreted', but also how it 'fails to consider the various ways that children's gender and experiences with gender influence learning and development'. With respect to "tea party" play, for instance, a Montessori practitioner whose practice is influenced and shaped by the logic of developmentally appropriate practice (DAP), would focus on children's abilities to pour without spills, their concentration skills or their ability to work cooperatively. As a result, the emergent gender relations in the encounters are often completely overlooked. However, contrary to the top-down perspective that positions children and adults as passively absorbing gendered stereotypes, feminist poststructuralists and new materialists consider the active production of gender relations, i.e. by actively contesting, perpetuating, subverting, negotiating, and constituting dominant gendered narratives (Blaise, 2005; Osgood 2012; Lyttleton-Smith, 2017; Osgood & Robinson, 2019). These are evident in Vignette 5.1, where gender is queered through the intra-action of boys, cups, mud, and contradictory discourses around gender and domesticity. Others have researched variously about children's gendered becomings with play objects in early childhood contexts (Hodgins, 2015; Hodgins, 2016; Lyttleton-Smith, 2017; Hodgins, 2019; Osgood, 2019a; Osgood, 2019b). In this chapter, instead of focusing on pretend tea play, I turn my attention to the *steaming hot green tea* to consider what a feminist relational analysis can do in troubling correlations between real, natural and gender-neutral, and in turn demonstrate how gender and a gendered workforce materialises in Montessori early childhood spaces.

5.3 Attuning to gendered affect: feeling a hot mug of tea

As stated above, the removal of gender stereotyped toys such as the tea set and introduction of "real" tea to the classroom is viewed in Montessori terms as supporting children's "natural" development (Montessori, 2012). In this section I re-turn to the encounter to draw attention to "real" tea, and attune to the gendered affects that disappear out of vision when childhood is viewed through theories that position themselves as real, rational, objective, and neutral (See Sticky Figure 3 for an affective sense). In attuning to these affects, it is worth remembering Fairchild and Mikuska's (2021, p.1184) point that 'affects are never neutral'.



Sticky Figure 3: Hot drink hauntings

As I was handed the mug of (real) hot tea, it stimulated a range of conflicting affects and emotions, from being touched by the kind and generous gesture of the head of nursery, to displeasure with flavoured green teas, but most prominently to being haunted by poignant memories from a pre-school I had worked at previously –

particularly their hot drink procedure, corresponding safeguarding policies and disciplinary mechanisms. My body tensed. I held tight to the mug, whilst feeling overcome by an irrational fear that the hot tea was going to spill on child bodies and I was in turn going to be reprimanded [12]. Instead I noticed that the head of the nursery and the rest of the staff placed their hot tea on low surfaces in proximity to children. I am a bit puzzled. I wanted to take a photo of my mug of tea to register affect. I knew I would need to place the hot mug of tea on a low surface, since taking a photo using the iPad would require using both my hands. But I was still too overcome by anxious feelings generated by haunted hot drink policies. So, I make my way inside the building, and place the hot mug of tea on the kitchen counter and take the image using the nursery iPad. (Vignette 5.2)

The affective hauntings and temporalities of hot tea unveil ways in which objects can 'disrupt boundaries where they can disturb and offend as well as delight and comfort' (Jones et al., 2012, p.51). As Ahmed (2004, p.92) reminds: 'It is important not to neutralise the differences between objects and to recognise that some objects become stickier than others given past histories of contact'. Tracing the affective intensities illuminate the sticky entanglements and materialisations of bodies, objects, boundaries, images of childhood, policies, disciplinary technologies etc. As Snaza (2020, p.112) explains: 'Classrooms are not just spaces where ideas are aired, shared, critiqued, and debated; they are sites where affects emerge, circulate, and enter into conflict'. Of particular relevance here is the mattering of safeguarding and child protection in ECEC. EYFS statutory framework offers elaborate information and instructions around safeguarding children in nurseries, a focus that has expanded over the years as a result of numerous serious case reviews. Whilst the interventions to tackle various forms of abuse and prevent death of young children are urgent and critical, these safeguarding moves have led to the emergence of other undesirable regulatory effects. Through the imposition of a particular image of childhood as innocent and pure, children are viewed as needing to be sheltered 'from the corrupt surrounding world - violent, oppressive, commercialised and exploitative - by constructing a form of environment in which the young child will be offered protection, continuity and security' (Dahlberg et al., 1999, p.45).

[12] Subsequently, I learned from the manager at Seedlings Montessori that the nursery did not have a hot drink policy, and the absence was intentional as they believed children were capable of managing risks just like in the home environment. The settings Food and Drink policy were akin to the guidelines provided in statutory framework for the early years foundation stage (DfE, 2017), i.e. focused on dietary needs and care.

However, as pointed out by Gittins (1998, p.107): 'Children, generally well looked after and protected, are nonetheless extremely vulnerable as a result of their own dependencies, isolation, silencing and disenfranchisement'. Moreover, such an image of childhood further results in positioning some bodies as perverse, to be subjugated and brought under diligent surveillance (Pruit, 2015; Mohandas, 2021). For instance, I have narrated elsewhere (Mohandas, 2021) how queer brown bodies are made hyper-visible and exposed to the panoptic gaze through the workings of complex webs of technologies, a matter that will be explored in Chapter 6 in relation to cameras.

Continuing for now with the affective hauntings and forces set in motion through hot tea entanglements, they signal to the top-down application of policy through masculinist new managerialist approaches that regulate and control early childhood providers and practitioners, needless to say a principally feminised workforce (Ozga, 1995; Osgood, 2004). The 'Hot Drink Policies' of the setting in question was implemented with intentions to be beyond reproach and circumvent Ofsted's disciplinary gaze (DfE, 2021b). As Osgood (2004) pointedly describes: 'an ethic of care and commitment to emotional labour can all too readily be denigrated in an instrumentalist masculinist culture as irrelevant and time-consuming when new managerialism demands attention be paid to performativity and prioritising finance above education'. The materialisation of these hauntings are contrasted and interrupted by the more relaxed, thoughtful and careful relations that shape nursery policy and practice at Seedlings. Therefore, the material-affective and discursive attunement offers insight into how gendered forces circulate across and through various boundaries and bodies (hot mug of tea, practitioners, children, researcher etc.) to generate atmospheres and spawn worlds (Barad, 2007; Stewart, 2011), in relationally specific ways.

5.4 Going visiting: TWININGS ™, 216 Strand and beyond

The next day I was at the nursery, the affective disturbances albeit attenuated, continued to haunt and puzzle me. Tsing's (2015, p.6) realisation of disturbances being productive spaces inspired me to take her advice 'to bring back curiosity'. On inquiring further, the manager informed me that the tea blend they served me was TWININGS ™ Green Tea Mango & Lychee. On my next fieldwork day at the nursery I decide to inspect the product box in the

kitchen. As a regular buyer of the TWININGS ™ brand, I am struck that I had never paid attention to the printed text or the images on the product box. Printed just above the 'TWININGS ™ OF LONDON' is the royal coat of arms emblem and beneath it is the text 'Royal Warrants of Appointment: By Appointment to H.M. Queen Elizabeth II, Tea & Coffee Merchants R. Twining and Company Limited. London'. The royal coat of arms appears in seals, coins, vessels, liturgical vestments, maps, public buildings, royal websites as well as products and goods of royal warrant. Each member of the royal family has a uniquely designed royal coat of arms emblem and they are 'only borne by the Sovereign' (The Royal Household, 2021). The Queen's royal coat of arms emblem comprises a lion (representing England) and a unicorn (representing Scotland) holding a shield or a escutcheon which is surmounted by the royal crown. The escutcheon shows three lions of England in the first and fourth quarters, the lion of Scotland in the second and the harp of Ireland in the third. The escutcheon is surrounded by the text *Honi soit qui mal y pense* ('Evil to him who evil thinks'). The Royal Family website states that the emblem 'reflects the history of the Monarchy and of the country'(The Royal Household, 2021). Entwined in this history are stories that justify the right of the British monarch to govern and rule, a divine mandate expressed in the words *Dieu et mon droit* ('God and my right hand') below the emblem. Whilst the presence of the emblem and text on TWININGS ™ product is according to the Royal Warrant Holders Association (2021), 'a mark of recognition to those who supply goods or services to the Households of HM The Queen, His Royal Highness Duke of Edinburgh or His Royal Highness, The Prince of Wales', the affective residues of imperial expansions, colonial conquests, gendered slave labour are felt as the box of tea is held. MacLure (2018) affirms that by focusing on affective intensities or 'hot spots' makes intimate scholarship possible, which further enables us to relearn multiple forms of curiosity (Tsing et al., 2017). But as Haraway (2016, p.127) alerts us, 'curiosity always leads its practitioners a bit too far off the path, and that way lie stories'.

Sticky Figure 4: An assemblage of TWININGS ™

Following what Haraway (2015b) refers to as 'curious practice', which involves 'going visiting', engaging the wholebeing than just the imagination, I visit the TWININGS' flagship store on the Strand in London. The Strand was much identified with the British upper classes between the 12th and 17th century until the Great Fire of London, with many historically significant series of aristocratic mansions including the York House, Durham House, Essex House, Arundel House, Somerset House, Savoy Palace, and Cecil House (Jones, 1980). The TWININGS store sits right opposite the Royal Courts of Justice, and is nestled in between Pret A Manger and Soho Coffee Co. Amidst the street full of stone-coloured buildings, the shop stands out with its stark white façade. TWININGS further stands out, in juxtaposition to the newer franchises on either side, through its publicised image as distinctive and

exclusive on account of its esteemed heritage. Despite this elitism, TWININGS has been subject to the same processes of McDonaldization that are characterised by the model of rationalisation, prioritising efficiency, predictability, calculability, and control over uncertainty (Ritzer, 1983). As I will go onto unpack in section 5.6, it is a model that the early childhood sector is deeply familiar with, and which Montessori is not exempt from.

A closer inspection of 216 Strand discloses the material-discursive inscriptions of coloniality and capitalist trade histories. Atop the shop entrance are two exoticised Chinamen figures, a gold-coated male lion, and right at the centre you see the Royal Coat of Arms again. Upon entering the narrow hallway, both walls are adorned with large portraits of various colonial figures, including Thomas Twining, the founder of the TWININGS™ brand. Starting at the entrance and running almost the entire length of the shop are dark wooden shelves, stacked high with boxes of tea leaves and bags from across the world. As I wander through the store I spot TWININGS ™ Green Tea Mango & Lychee, and sense unexpected feelings of delight, like meeting a familiar friendly face in a strange environment. Visiting in this manner entails seeing affective frictions as productive zones for enacting care, it is a point laboured in Indigenous feminist praxis where visiting is understood as 'centering relationality and an ethic of care' (Tuck et al., 2023, p.144). As stated in Chapter 4, SF enables centering relationalities, and offers ways to unpack the density of experiences – a bringing together of disparate stories and reading them through each other to produce 'another kind of critical consciousness' (Haraway and Goodeve, 2000, p.101; Haraway, 2018). Through the proliferation of relations that SF generates, the gender-neutral status of tea in Montessori settings can be unsettled, instead tea can be viewed as an eruption of gendered stories, relations and worlds – lively and contaminated. Stories, relations and worlds that make 'attachments and detachments; they make cuts and knots; they make a difference; they weave paths and consequences but not determinisms; they are both open and knotted in some ways and not others' (Haraway, 2016, p.31).

5.5 Tea, tea rooms and the suffragette

A diffractive reading of tea offers exits from practices and premises of methodological individualism, a well-worn western tradition that gives primacy to the individual and discrete

entities. While Montessori's cosmic plan emphasises interconnection, it continues to draw from dissociated modes of knowledge production, which shapes much of the practice in the classroom. Each item in a Montessori classroom, whether that is the pink tower, moveable alphabets or tea making activity, has a single purpose that contributes to the cosmic whole (Grazzini, 2013). A feminist relational approach reconfigures the TWININGS ™ Green Tea Mango & Lychee in Montessori early childhood setting as 'not only' (Mariano, in de la Cadena, 2015) a hot drink or a pedagogical tool, but a multiple array of possible connections that always materialises to relational specificity (Haraway, 1988). In search of relational specificity, I consider the pastpresents of Twinings, how pasts and presents 'perpetually coalesce, co-invent and re-enact worlds' (Mohandas, 2021, p.20). The Twinings (2021) website proclaims:

> 'Explore over 300 years of innovation, creativity and masterblending expertise. For us, tea is more than just a drink. It's been part of our daily lives and the lives of generations of tea lovers'.

Thomas Twining (1675-1741), who was originally from Gloucestershire, moved to London during the recession where he worked for Thomas D'Aeth, a wealthy merchant with the East India Trading Company (EITC). In 1706, Twining bought the original 'Tom's Coffee House' from D'Aeth, and introduced tea. At the time coffee houses were male arenas for social interaction, 'meeting-places for writers, and scientists, venues where ideas were circulated and exchanged' (Vogt-William, 2010, p.135). While women were not explicitly barred from coffee houses, it was deemed uncustomary for women to be seen at coffee houses, with the exception of women serving as staff, i.e. the coffee-women behind the bar. Ellis (2008, p.162-63) writes: 'virtuous women of the middle station, who wished to be thought well of, would not go to the coffee-house…The spatial organisation of the room reinforces the hierarchical and gendered structure of the coffee-house: the boys inhabit the space around the table, while the woman proprietor is separated off from the customers in her little booth'. This simultaneously disallowed children from entering these spaces. Within this tensed context the introduction of tea helped slacken some of these gendered structures and boundaries. By this time tea-drinking was already popularised by the Portuguese wife of Charles II, Catherine of Braganza, and considered a fashionable drink amongst upper-class women (Mintz, 1985).

Tea became a domesticated drink that upper-class women served in their drawing rooms, a routine that developed into afternoon tea parties of the Victorian and Edwardian era. Twinings (2021) was amongst the first to introduce tea in his coffee house:

> 'Convention may have prevented these
> ladies from stepping inside Tom's Coffee House,
> but it didn't stop them waiting outside.
> While they sat in their carriage
> and their footmen would buy the sought-after tea.'

Towards the end of the 18th century, coffeehouses had almost entirely disappeared, and tea shops and rooms started gaining popularity, many of which were owned by women (Bakken, 1994). Unlike coffeehouses, tea shops and rooms were places women could visit, 'where their presence was not seen as an invitation to molestation – where they could eat and drink – and, most importantly, use the lavatory – without breaking any social taboos' (Crawford, 2012). Moreover, tea rooms in various parts of England played a pivotal role in the suffragette movement, as sites of gathering designed with 'women' in mind. For instance, Crawford (2012) reports how suffragettes met at Lyon's tea room close to the Parliament Square in 1911 to plan a meeting to smash windows of government offices. As Barad (2012, p.20) explains, 'performing the labour of tracing the entanglements, of making connections visible, you're making our obligations and debts visible, as part of what it might mean to reconfigure relations of spacetimemattering'.

Notwithstanding these advances, the classed inflection of the suffragette movement cannot go unaddressed. For instance, tea room access and suffragette movement was sharply divided along class lines. Whilst many working-class women were actively involved in the suffragette movement (Jackson, 2015; Neal, 1967), it was still organised and led exclusively by upper-class women and concerned with addressing issues more specific to upper and middle-class feminist struggles, i.e. matters relating property laws and rights. Jackson (2018) narrates the class-inflected violence and differential treatment working-class women experienced, with 'poorer suffragettes, women quite unknown, receiving more brutal punishment from police, prison wardens and magistrates'. The involvement of working women in the suffrage

nevertheless cannot be underestimated or forgotten, nor their feminist entanglements with the early nursery school movement. For instance, Sylvia Pankhurst and the East London Federation of the Suffragettes (ELFS) founded a Montessori nursery and baby clinic called the *Mothers' Arms* in Bow, East London, to support working-class mothers and their children; providing both medical, nutritional and educational assistance for working mothers (Mitchell, 2018; Isaacs & Baynham, 2023).

Tea, tea rooms and Montessori nursery spaces therefore have intertwined feminist inheritances. They have historically served as sites of activism, blurring the divisions between the private and public, and opening up access to women who had not previously worked in the public sphere. Montessori who was active in the early feminist struggles, implemented, theorised and popularised the notion of civic or social motherhood, advocating for private virtues of care to permeate the public arena (Moretti, 2014; Mohandas, 2023a,b). Simultaneously, they emphasise the deep-seated class-divide in feminist histories, an aspect that continues to be pertinent in contemporary Montessori practice. Osgood and Mohandas (2019) highlight the contrast between Montessori's contemporary reputation as a 'middle-class phenomenon' and its origin with working-class children in the impoverished districts of San Lorenzo. However, the struggles and challenges of the Montessori early childhood workforce in contemporary context are reflective of that of the early years sector more widely, a principally female workforce that is undervalued and underpaid (See section 5.9). Bone's (2017, p.1) diffractive re-positioning of Maria Montessori as a 'domestic goddess', questions 'what being domestic/ate/d means in terms of being a woman in a femin/ised/ist educational space'. Re-visiting vignettes 5.1 and 5.2, and reading them diffractively through feminist inheritances unsettle "real tea" as inert and bounded matter, instead demonstrate how they are materialised through material-discursive relations, processes and practices that are always already gendered.

5.6 *'We've been picking…'*: The imperial weight of tea and childhood

The affirmative feminist tea histories, however, do not offset contemporaneous grim realities linked to tea trade, imperial expansion and colonial tea plantations of the British Planter Raj[13]. The description on TWININGS ™ Green Tea Mango and Lychee packaging reads:

'Our crisp and refreshing green teas start their journey from the dewy, misty tea gardens of China. We've been picking the best leaves and buds for three centuries'

The mystical collective pronoun "we" in the description gives pause for thought. As Todd (2015) reflects 'Who is included in this 'we'? Such a simple word, all of two letters, and yet it has an ambivalent presence. It can be an act of loving kinship—we are here together. We look out for one another. Or it can be an act of violence through the denial of difference: 'we' are just like you, so your concerns are invalid. *We know what's best.* We are not amused'. To be included into the "we" is to silence stories of difference that are intertwined in materialisations of tea, in this case a London Montessori nursery. In wider debates around the Anthropocene and the 'Anthropos', Yusoff (2018, p.12) explains how 'the supposed "we" further legitimates and justifies the racialized inequalities that are bound up in social geologies'. The gendered and racialised inequalities that are attached to past and ongoing devastations of tea plantation extractivism needs to be brought into focus to expose the stories mobilised to sustain such complex exploitative and unjust networks. Through 'thingification', the turning of relations into 'things', the modest mug of hot tea gets positioned as inert depoliticised matter (Barad, 2003). SF reinnervates tea relations and stories to produce multiple and contradictory gendered forces at work across space, place, times, and boundaries.

Contemplating on the '*journey from the dewy, misty tea gardens of China'* to a Montessori nursery in London, offers insight into the 'still unfolding histories of colonial and capitalistic processes of globalization' (Adsit-Morris, 2022, p.56). Inspired by Tsing, Osgood (2022)

[13] It must be emphasised that the grim realities of tea trade, imperial expansion and colonial tea plantations are not stories wholly unique to the TWININGS™ brand, other brands are equally implicated in these stories. The situated nature of the research entails attending to situated entanglements.

urges us to re-learn the arts of dystopian storytelling in early childhood contexts. In this spirit, I consider histories linked to British-Chinese trade relations and tensions surrounding the tea-opium trade, which 'would pave the way for both the unravelling of dynastic rule in China and the planting of tea in its Indian colony' (Chatterjee, 2001, p.32). While China had a monopoly on tea trade until the 19th century, it was the British that expanded production and trade across continents which eventually took shape as the 'empire of tea' (Ellis et al., 2015). Mintz (1985) refers to this as the 'imperial weight of tea' which as Karlsson (2021) elaborates, is 'the power, resources and infrastructures that enabled the British to establish its empire of tea, controlling land, labour and markets'. Re-membering the historical conjunctures infused in a "hot mug of tea" disrupt neo-colonial accounts that story tea as innocently and harmoniously picked by the mystical "we", while also attuning to the ongoing colonial transformations that shape tea and childhood formations. An SF consideration of tea in Montessori early childhood spaces does not present tea, childhood and Montessori as separate strands, but they constitute 'common worlds' (Taylor & Scarlet, 2012) where these forces intra-act to produce connected, but heterogeneous patterns.

Critical to this patterning is the historical role of The East India Trading Company (EITC) in the tea trade. EITC was a joint-stock company formed by a group of merchants 'for the honour of our native country and for the advancement of trade of merchandise within this realm of England' (Sainsbury, 1864). In 1600, Queen Elizabeth I granted them a charter for exclusive overseas trade. The EITC was importing a wide range of products from around the world such as cotton, silk, sugar, salt, indigo dye, opium as well as tea. By the end of the eighteenth century, tea's status as a drink of aristocratic women had expanded beyond the drawing rooms. Its popularity amongst the emerging middle-class and a growing urban working-class ensured further commercial expansion and demand (Chatterjee, 2001). At the time, China was the sole source for tea, and trade with China for tea alongside other goods such as silk and porcelain was extremely lucrative for EITC. Uninterested in most British goods, except wool and Bombay cotton, the Chinese sold theirs in exchange for silver, and as a result EITC accrued a trade deficit with China. To circumvent the deficit, the EITC smuggled opium grown in India into China, for which payment in silver was demanded

(Brockway, 1979; Liu, 2010)[14]. This was then used to buy tea and other goods. By 1839, the entire tea trade was paid for through the illegal sales of opium. As a result of the economic effect of the opium trade as well as the physical and mental deterioration of opium users, the Chinese government tried to curb smuggling through the implementation of laws. These tensions then led to what is now referred to as the Opium Wars (Fay, 1997). After the First Opium War (1839-1842), Hong Kong island was ceded to Britain under the Treaty of Nanking, resulting in the opening of the Chinese market to opium traders from Britain. Whilst the Second Opium War led to the Treaty of Tientsin that legalised opium import (See Fay, 1997 for more information about the Opium Wars).

De-glamourising and troubling *'we've been picking the best leaves and buds for three centuries'* enables foregrounding colonial capitalist pastpresents of tea as well as childhood. The militarised attacks that opened up ways for colonial capitalist expansion and violent domination was above all a massive assertion and exertion of imperial masculine energies, powers and status (Dawson, 1994). Justifying colonial violence and expansion, and celebrating imperial masculinity, Rudyard Kipling in his poem 'White Man's Burden' orients the 'white Man' as morally obligated to civilise the primitive 'Other', the 'half devil, half child' (The Kipling Society, 2022), encouraging economic, social and cultural progress. Indeed the 'White Man's Burden' underpins the developmentalist logic, which within in Montessrori is embedded in the notions 'normalised child' and 'universal Man'. The child is said to self-perfect through 'continuous conquest' (Montessori, 1989, p.29). Moreover, "Man" according to Montessori (2007, p.55), is 'the only species capable of an indefinite evolution of his [sic] activities in the outer world', from which she reasoned 'flows the development of civilisation' (ibid.). This is made explicit further in her idea of supranature, i.e. human transformations of nature, where "Man" is positioned as the 'transforming agent' and 'builder of the supranature' (Montessori, 1973, p.14). The anthropocentrism and speciesism that are integral to Montessori's view of human development are also defining features of colonial versions of development. These demonstrate the remarkable parallels between Western colonial conceptions of "human"/

[14] Rolf Bauer (2019) unearthed extensive archival documents linked to opium trade, use and consumption in India. Bauer's research reveals EITC exploitations of Indian poppy cultivators, where crude opium was bought at less than an economic price, ending up impoverishing the local cultivators.

"nonhuman" and theories of child development, including Montessori theory, that were emerging concurrently in Europe (Nieuwenhuys, 2013). Western humanist education with its civilising focus of 'making humans' (Snaza, 2013) and its entanglements with colonial tea trade that privileges a "human" that masters nature signals to the ontological violences authorised by Eurocentric epistemologies that unfold in seemingly innocent ways. The project of individualised development is co-shaped by capitalist social and economic development models, that reconfigure human and nonhuman as resources for economic development, violently appropriated for imperial advancement (Kanji, 2017; Murrey, 2017).

> 'We have inherited a vision of "the economy" as a distinct sphere of human activity, marked off from the social, the political, and the ecological as a domain of individualized, monetized, rational-maximizing calculation. This economic sphere rests upon and utilizes an earthly base of (often invisible) ecologies that are swept up into its domain to become "resources," passive inputs for production and consumption measured primarily by their market value' (Gibson-Graham & Miller, 2015, p.8)

Recognising the more-than-human manner these rationalising and economising processes work, underscore how both tea and childhood are shaped by Euro-centric and western notions of development and progress 'explicitly concerned with the comparison, regulation and control of groups and societies, and is closely identified with the development of tools of mental measurement, classification of abilities and the establishment of norms' (Burman, 2016, p.14). The growth and development of tea and its manufacture, much like child development, is configured through linear processes, streamlined using diverse technologies, standards and measures, and processed into different products for the tea market (Drew, 2019). At the heart of this developmental work is a 'libidinal economy', that advances through investments in 'phallic ideals and objects that capital valorizes or derives value from' (Cremin, 2021, p.4). Ideals such as commodification, competition, calculation, choice, and individuality are enacted and honed to generate the story of quality and high economic returns (Moss, 2014; Osgood, 2012) or what Ranasinghe and Wickramasinghe (2021, p.656) in relation to neo-colonial tea plantations identify as 'neoliberal captures', i.e. the 'strategic exploitation of prevailing institutions, cultures or even political ideologies simply for profit-making purposes'. Through the fabrication of particular images of progress, which is justified through processes of standardisation, datafication, assessment and inspection, both children and tea

are coded into the markets as competitors in the global economic race (DfE, 2013b; Ranasinghe and Wickramasinghe, 2021). The production of what Walkerdine calls 'neoliberal subjects' is not a subjectivation that works solely on children, instead they work across human-nonhuman divides. While this will be explored in greater detail in Chapter 6, it is important to highlight how Montessori early childhood practice is not spared from such market logic. By paying attention to material-discursive unfoldings, Osgood and Mohandas (2019) call to attention how Montessori materials in contemporary practice are reconfigured as a measurement tool to assess children's abilities against predetermined milestones in the *Development Matters* curriculum framework. Elsewhere (Mohandas, 2022) I narrate the entanglements of humans and child-sized chairs that work transversally to generate 'green zones' of 'optimal' development, to ensure the incessant production of the rational economic "Man" (Wynter, 2003; Moss, 2009; Orrell, 2022).

Robert-Holmes & Moss (2021, p.70) highlight, under 'neoliberalism, with its drive for privatisation and marketisation, early childhood education and care, and especially 'childcare', has become big businesses on a global scale'. Osgood & Mohandas (2019) note the strong position that Montessori schools occupy in the childcare market, bolstered by the investments made by tech-giant Bezos, and made a desirable and aspirational choice through what has been referred to as the 'Prince George effect' (Hiles, 2018; Parkes, 2016). What I want to specifically highlight here is that in embracing this business model and a market logic, the childcare market, much like the tea production market, is based on the politics of individual choice. As Ball (2008) recognises, choice systems in themselves promote inequality, by obscuring how the possibility of choice is profoundly shaped by economic capacity, location and social group (Spencer-Woodley, 2014; Vincent and Ball, 2006). As I will go on to uncover in section 5.8, tea plantation and cultivation relies principally on an underpaid and undervalued Dalit female workforce, which underscores how the discourse of increased 'consumer choice' is a reflection of a neoliberal concern that restricts the voice and perspectives of the workers (Bhadra, 2004).

By relaying strings from tea trade histories, imperialist expansion, capitalist violence and figuring them through contemporary Montessori, child development and tea drinking practices, complex gendered, "raced" and "classed" patterns are generated. From a feminist

relational perspective, tea is 'not only' (Mariano, in de la Cadena, 2015) a hot beverage, a resource or an evergreen shrub, but it is a lively eruption of stories that take investigations on a gendered workforce in unanticipated directions. Tea may have played a pivotal role in women's emancipation and liberation in the wake of the twentieth century, yet the historied presence of tea in English tea rooms and tea parties, and its materialisation in Seedlings Montessori nursery in North London a century later continues to be textured with non-innocent stories that trouble *'we've been picking…'* stories. By foregrounding this relational onto-epistemology, a gendered workforce is profoundly reconfigured from being a fixed quality that resides in the bounded humanist "human" to gendered forces that work transversally in multiple and contradictory ways.

5.7 Tea origins and discoveries in patriarchal voice

Before I continue with plantation stories, in this section, right in the middle of the chapter, I pause to consider tea origin stories and discoveries, as a way to attune to how stories are always thought and made with other stories, following Haraway's (2016, p.35) insistence that it 'matters what thoughts think thoughts. It matters what knowledges know knowledges. It matters what relations relate relations. It matters what worlds world worlds. It matters what stories tell stories'.

Tea origin stories are numerous. In one Chinese legend, the story of tea begins with the Emperor Shen Nong (2737 – 2697 BCE), who was known as the Divine Healer and Cultivator (Saberi, 2010). As per this story, tea was discovered through serendipity. Shen Nong, who was concerned with health and medicine, had decreed that water be boiled to purify it from contaminants. As the folklore goes, some tea leaves accidentally fell into the water that Shen Nong's servant was boiling. Shen Nong tastes the tea infused water and feels immediately refreshed. Stories of tea origin by others follow similar lines of thought that credit the serendipitous manner that the tea was 'discovered'. Whilst these may be well-rehearsed fictitious and mythical stories of origin, as Haraway (1981) states, we have inherited these stories in a patriarchal voice. In her *Carrier Bag Theory of Fiction*, Ursula Le Guin (1986, p.150) provokes: 'But it isn't their story. It's *his*'.

It was also *his* story when the evergreen shrub was named after a Morovian Jesuit, a missionary to the Philippines, Rev. George Kamel as *Camellia sinensis* (Morton, 2004). The Linnaean taxonomy served as a colonial tool to universalise, standardise and homogenise western knowledge, with each new species that was "discovered" named after a male European coloniser. The Latinate names of plants erased indigenous naming and knowing, as the existence of the plant could only be legitimised through the proclamation by a European male scientist (O'Donnell, 2010; Subramaniam, 2020). The naming of plants celebrated the physical courage and fortitude of these valiant men, highlighting the risks and dangers they had to endure to bring home their findings (Terrall, 2011). Tsing (2005, p.90) shares how 'botany was perhaps the first science concerned with uniting knowledge from around the globe to create a singular global knowledge'. As she goes on to explain, such colonial naming practices led to the erasure of 'collaborations that made global knowledge possible. European botanical knowledge in the sixteenth and seventeenth centuries was gained by learning from Asians, Africans, and Indigenous Americans who introduced Europeans to their native plants. Botanical treatises from this period acknowledge the centrality of these knowledge exchanges. As European power grew around the world, however, European botanists came increasingly to imagine themselves as communing directly with plants and the universality of science without the mediation of non-European knowledge' (Tsing, 2005, p.91).

Moreover, botanical understandings of plants were broadly informed and shaped by eighteenth century ideas about gender, sexuality, and race (Shiebinger, 2004). For example, Linnaean taxonomy is founded on *nuptiæ planetarum* or the marriage of the plants, with gendered hierarchies coded into classification. For example, plants were classified based on the number of stamens (i.e. parts assigned 'male') to determine the 'class', and the number of pistils (i.e. parts assigned 'female') to determine the 'order'. Since 'class' stands above 'order', the male parts were prioritised in determining the status of the organism (Shiebinger, 2004). The coloniality of gender (Lugones, 2007) thus finds its way and gets coded into scientific naming and classifying practices, without making explicit the ontological assumptions embedded in such practices. It is interesting to note that the sciences that have traditionally excluded women, people of colour, queer, trans, intersex and nonbinary people 'are unmarked by the politics of race, ethnicity, class, gender, sexuality, and other critical social

variables' (Barad, 1995, p.45). Robinson (2005, p.19) writing about the pervasive materialisation of heteronormativity in early childhood spaces explains that '[t]he perceived "normal" and "natural" status of heterosexuality is presumed through the process of normalisation; it takes on an unquestionable position of being the "true" sexuality, the natural order of things, primarily through the way that it is linked to the male–female biological binary and procreation'.

Sticky Figure 5: 'It matters what stories tell stories'

At various points during my time at Seedlings, children were seen to nonchalantly work with different puzzles from the Montessori Botany and Zoology Cabinets. These puzzles are intended to offer a way for children to name and categorise parts of a plant or animal, and they are often complemented with Terminology Cards that are used to 'extend the child's vocabulary by learning the specific names of the parts of a plant and linking the names with the function of these parts' (MCI, 2013, p.30). Moreover, these puzzles align with Montessori's goal to bring children in touch with the real "natural" world (Montessori, 1997). As I contemplate on the work these puzzles do in the nursery, I am particularly drawn to the

inclusion of 'Parts of the Flower' puzzle in the nursery (See Sticky Figure 5). While as a practitioner I had at numerous occasions invited children to engage with these puzzles, in light of ongoing anxieties and accusations of imposing queerness on young children (Silin, 1997), I find it amusing to see the remnants of the Linnaean sexual system of classification. The wooden puzzle of flower parts highlight 'male' and 'female' sexual reproductive organs, i.e. stamen and pistil. Ironically, the images of these were once viewed as obscene pornographic depictions that women and children were to be sheltered from (Fara, 2003). Nevertheless, the gendering/sexing of flowers into male and female organs mark cis-centric sexual dimorphic heteronormative logics, fabricated through the closeting of queerness in "nature". According to this logic, "nature" is figured as "real", stubborn and inert, whilst culture is viewed as evincing limitless malleability. However, Hird (2004) argues that a non-linear biology offers a wealth of evidence to unsettle static notions of sexual difference. For instance, with over 200 stamens and a pistil, tea flower/plant confounds dimorphic moulds, in fact, they would be more readily classified as "intersex". Attuning to the queerness of bio-matter produces ruptures to notions of "real" and "natural", and bring to light the inherited gendered stories and relations that are unsuspectingly used to tell other stories. By moving away from individualised humanist accounts of gender, a feminist relational onto-epistemological account highlights how gender spills over into origin stories, tales of discoveries, and entrenched taxonomical practices – even in something as mundane as a mug of hot tea.

5.8 Plantation forces: stories from shadow places

5.8.1 Plantation feral effects: more-than-human entwinements

The Linnaean botanical classificatory scheme, however, as Tobin (2005) argues is not 'better science', on the contrary its power to de-contextualise from local relations, sustained by dominant forces of colonialism, multinational businesses and prestigious knowledge institutions, is a key factor for its dominance and popularity. Its power to de-contextualise is also the mechanism that lets matters such as gender, race, ethnicity, sexuality etc. fall out of the frame. The power of coloniality therefore lies in its ability to assume neutrality whilst displacing relations and imposing a different set of relations on both human and nonhuman.

Tea plantations with its landscape mode of scalability have their origin in colonial India, which stood in sharp contrast to the small plot cultivation in China (Weatherstone, 1992). Tea plantations similar to knowledge around tea are engineered through a series of displacements and dissociations. Black feminist thinkers such as Katherine McKittrick (2013) and Sylvia Wynter (1971) have made germinal contributions to the field of plantation studies to account for how the plantation links to a global economy that 'thrives on the "persistent underdevelopment" and "persistent poverty" of black life' (McKittrick, 2013, p.2). Building on their work, South Asian feminist scholar Mythri Jegathesan (2021) extends the analysis beyond the Afro-Caribbean and American contexts to spotlight the ongoing 'caste oppression, landlessness, displacement, and inhumanity' in South Asian plantation afterlives (See section 5.8.1). These broadly resonate, complement, at the same time stand in tension with the work of feminist scholars from the Global North, that draw our attention to the exploitation of humans and nonhumans in the sustenance of the slave plantation system. In a transdisciplinary *Ethnos* conversation in 2014, a group of scholars (Haraway et al, 2016; Haraway, 2015a) rightfully proposed the era to be named as 'Plantationocene'. Haraway (2015a, p.162) expounds: 'Scholars have long understood that the slave plantation system was the model and motor for the carbon-greedy machine-based factory system that is often cited as an inflection point for the Anthropocene'. By tracing the entanglements of the plantation economy and forced multispecies forced labour – human and nonhuman, past and present - that sustain global production of tea, presents more openings for what constitutes "workforce".

Continuing on with Tsing's (2020) invitation to tell 'terrible stories beautifully', I consider the ecological entanglements linked to tea plantation, by focusing on infrastructures through the lens of colonialism, industrial imperialism, and capitalism and the modular simplifications that they produced. I will then go on to discuss Tsing's (in Tsing et al., 2019; Tsing & Bazzul, 2022) concept 'feral proliferations' to account for the undesigned effects of such modular simplification. Tracing the history of the tea plantations makes visible the military fiscalism of EITC. Charles II's charter to EITC permitted the use of military force for the establishment of trading stations. As a result, many well-fortified trading stations were instituted in various locations in India. EIC used its private army to establish governmental control over large territories in India. By the beginning of the 19th century more than half of

India was conquered by the British army. The dual function of governmentality and trade of EITC generated a great deal of controversy back in Britain: '[W]e object to their being allowed to combine in their own persons the separate and irreconcilable functions of tea dealers and the rulers of a might empire…We protest against their being allowed to carry a sword in the one hand, and a ledger in the other, - to act as once as sovereigns and tea dealers' (The Edinburgh Review, 1831, p.316). In 1834, Parliament's new charter for EITC abolished its trading functions altogether, instead EITC became an agent of the British government, ruling and administering British India on behalf of the Crown. The need for plantations arose with EITC being relieved of any trade with China.

Robert Bruce was appointed by EITC as a superintendent of tea forests and assigned the task of finding ways to cultivate tea. Assam became an area of interest as indigenous tea plants were found growing in the area. With the guidance and assistance of the Singhpo tribe of Assam, Bruce initiated the planting process (Mohan, 2016). The highland forests in Assam were deemed by the British planters to produce higher yields, leading to large swathes of land being cleared. Arupjyothi Saikia (2014) explains that the clearing of forests led to massive changes to the soil, particularly its hydrological character. Intensive agriculture and deforestation had contributed to a reduction of the absorptive capacity of the soil, disturbing the existing drainage system and logging of water, turning the area into a malaria-carrying mosquito breeding ground. Saikia (2014, p.74) informs: 'Planters could not afford to risk the loss of life of one single labourer, and yet mortality increased during this time due to malaria and cholera'. Tsing (in Tsing & Bazzul, 2022, p.310) refers to these as feral effects, i.e. effects stimulated by human infrastructures that are 'built by imperial conquest on one hand and industrial development on the other'. They are not generated unintentionally, instead Tsing (in Tsing & Bazzul, 2022) contends what marks the generation of ferality is a lack of care for the 'extra effects' that certain infrastructures would produce. Haraway (in Haraway, Tsing & Mitman, 2019) expands on this further: 'With forced monocropping, you take a complex area of the world, and you not only radically simplify its ecology, but you also radically reduce the kinds of organisms that live there. Then, you displace the labour force that's already there and import another labour force, using various forms of force, contract, and indentured labour. You bring in new crops that will produce at high rates, preferably for global markets, and you bring in a labour force that literally can't run away. And you call that "agriculture."'

As stated in the beginning of this section, the forced simplification of ecologies produced through displacements and detachments dictate what stories get told, what knowledges and worlds are deemed valid. Interrogating the presence of "real" tea in Montessori early childhood unearths how tea is often dissociated from relations that produce it. Colonial knowledge practices are marked by forceful displacements, displacements of human and nonhuman other, in the service and sustenance of western humanist conceptions of development and progress, principally concerned with the "disappearance" of ferality (Montessori, 1966). Attending to the feral effects, integrates worlds that are otherwise seen as separate from childhoods and brings to focus the more-than-human relations that are entangled in everyday practices of 'doing Montessori'.

Re-turning to the legacies of colonialist modes of tea plantation and extraction in Assam, drainage trenches have since been built to forestall water stagnation and the effects produced by them. The tea plantation trenches however generate a new set of feral effects. Fobar (2020) discloses that the creation of tea estate trenches has resulted in elephants falling into them, breaking their legs, being separated from their herds and their eventual death. While the efforts to invest in elephant-friendly tea cultivation (i.e. by cultivating tea on slopes, diversifying the ecology, and avoiding the use of chemicals that are harmful to elephants), these efforts are marginal (Pradhan, 2019). Elephants continue to be reported to fall into tea plantation trenches, and there is a sustained decline in the Assamese elephant population (Talukdar and Choudhury, 2017; Kar et al., 2016). These feral stories bring to light multispecies struggles in sites of tea production, sites that Plumwood (2008, p.146-47) refers to as 'shadow places', 'all those places that produce or are affected by the commodities you consume, places consumers don't know about, don't want to know about, and in a commodity regime don't ever need to know about or take responsibility for'. Recognising this harmful disconnection that sanitises the production and consumption of tea, and exposing the production of what Harstock (1983) calls 'abstract masculinity', i.e. epistemic erasure that seeks to transcend everyday relations, enables weaving in stories that complicate conceptions of a "gendered workforce". Therefore, whilst the plantation system is viewed as economically efficient, its dependence on forced labour of human, nonhuman and more-than-human world is undeniable. Bringing these relations into view generate more questions

and openings: *What do we understand by workforce? Who is the workforce? What forces are involved in doing this work? What work are they doing?*

5.8.2 Tea plantation afterlives: பெம்பிள்ளை ஒருமை

The publication of the *Ethnos* conversation and the framing of plantations by Noboru Ishikawa as 'just the slavery of plants' (Haraway et al., 2016, p.556) has attracted a host of critique from Black scholars and feminist scholars of colour (Jegathesan, 2021; Davis et al., 2019; Murphy & Schroering, 2020). Davies et al. (2019, p.6) problematise the flattened multispecies ontologies, that results in a 'cursory treatment of racial–sexual oppression and the ways it shapes and is shaped by plantation economies.' The flattening of ontologies is a concern I share with these scholars. As Hackett et al. (2020, p.6) point out, 'the category of the human is being dissolved at a time when many are still struggling to have their humanity recognised'. This flattening is a concern in Montessori too, since the desired "human" is conceptualised as an undifferentiated, homogenous and superior category. For her, education is concerned with the production of 'a better type of man, a man endowed with superior characteristics, as if belonging to a new race; the superman that Nietzsche caught a glimpse' (Montessori, 1943, p.21). By staying with the patchy and uneven distribution of intensities, universalising abstracts and forces that subsume the embodied 'others' under the imagined "we" are rejected (Haraway, 1988).

Constructing plantation as 'just the slavery of plants' voids plantation landscapes of human-nonhuman relations and histories. In contrast to the colonialist practice of erasure and avoidance that occurs through the violence of forgetting, re-membering the pastpresence of more-than-human relations in plantation sites produces 'rich ground of imagining possibilities for living and dying otherwise' (Barad, 2017, p.56). In this section, plantations as 'just the slavery of plants' is troubled by drawing on patchy stories from plantation futures and afterlives (McKittrick, 2013). Although the British abolished slavery in 1833 through the Slavery Abolition Act, tea estate capitalists turned to contractual labourers, workers that were displaced from their homes and kept in conditions of near bondage. Not much has changed for these workers since Indian independence or since Tata Tea Ltd assumed ownership (Kamath & Ramanath, 2017). An increasing number of scholarships attunes to the appalling

working conditions of tea plantation workers (See Misra, 2003; Bhowmick, 2005, 2015; Baruah, 2008). In September 2015, 12,000 Dalit women tea plantation workers walked out of giant tea plantation companies and dominant trade unions in South India, in resistance to exploitative labour practices (Raj, 2019), demanding an increase in daily wages. The women worked on steep slopes, carrying heavy loads up and down the slopes, bitten by insects, plucking leaves with swollen, calloused and bloodied fingers, from 6:00 am until 6:00 pm for daily wages of 232 INR (2.28 GBP). In contrast, men engaged in cutting weeds, chopping branches and spraying pesticides from 8:00 am to 1 pm are paid the same wages. The ancestors of these Dalit women were imported to colonial plantations in Munnar from Tamil Nadu. Despite the welfare measures that The Plantation Labour Act 1951 offers plantation workers, stories from the Dalit women plantation workers bring to light how the company had suspended and/or diluted many of the provisions, i.e. provisions related to health, welfare, safety, accidents, amongst others (Raj, 2015). A key aspect that was highlighted by the strikers was the 'corrupt alliance between the trade union leaders and the plantation company' (Raj, 2015, n.p.). The workers formed an informal collective known as பெம்பிள்ளை ஒருமை (*Pembilai Orumai* or Women United), and later founded their own trade union *Pembilai Urimai Thotam Thozhilali Union* (Women Plantation Workers' Union), as a means to champion the interest of women workers (Kamath & Ramanath, 2017).

Similarly, Mythiri Jegathesan's (2021, p.81) research among the landless, Dalit tea plantation residents point to the 'vernacular afterlives of ethical creativity and survival' that is made possible through plots or *tundu. Tundu* is a 'plot of land that is unowned, mostly - invisible from the main roads, and unaccounted for in management logs and maps' (op.cit., p.82). Jegathesan narrates lively stories of co-habitation of human and nonhuman, informal practices of leisure, care and co-presence within and beyond the boundaries of the plantation. Davies et al (2019) writes: 'Examining the underlife of the plantation…both reveals the racialogical-ecological systems of plantation life and affirms a revolutionary praxis of kinship'. Re-membering these stories, is not about 'remembering' or going back to what was, rather they are about the material reconfiguring of gendered relations, stories and practices, and they aid in composing what constitutes a "gendered workforce" in Montessori, as a means 'to produce openings, new possible histories by which time-beings might find ways to endure'. Barad (2017, p.67).

5.9 Tending the tea dragons

Sticky Figure 6: Greta and Minette with tea dragon Chamomile.

[Image retrieved from O'Neill (2017)]

The *tundu*, the plot, the neutral, the void, is 'the yearning and the imagining of what might yet have been, and thus also the infinitely rich ground of imagining possibilities for living and dying otherwise' (Barad, 2017, p.56). In this final section, I use the figure of the 'tea dragon' from nonbinary artist and writer Katie O'Neill's comic *Tea Dragon Society*. Osgood & Axelsson (2022) explain how children's literature are a 'generative space from which to immerse in, escape and divert attention from, the political realities of life in the Anthropocene'. O'Neill's tea dragons are tiny, delicate creatures that through close relations with and care from their carers produce tea leaves on their horns. They choose and draw their carers in, bring their carers together to form a tea dragon society. Through close connection and care, tea leaves are care-fully collected from the horns (at the risk of being snapped at by the tea dragons), and then used to prepare tea. Drinking tea produced from the tea dragons may allow one to 'experience some of the memories the dragons share' (O'Neill, 2017) – entangled memories

of past queer kinship, love, and deep alliances, as well as memories of hopeful futures. The figure of the *tea dragon* is a hopeful and generative trope for thinking and becoming-with tea in the ruins of colonial capitalism.

Over the many days and months of visiting Seedlings Montessori, tea featured regularly. The generous offering of tea in the encounter at the beginning of this chapter was not an isolated case, tea was regularly served and shared. Not just for visitors, but staff members brewed tea for one another, a hot mug of tea offered with a warm smile. It was further brought to my attention that making tea at Seedlings Montessori was akin to taking a 'deep breath', marking a pause and a slowing down from the constant hustle of childcare practice. Like the figure of the *tundu*, tea produces a rupture, a 'minor gesture' which although may pass unperceived, transforms the field of gendered relations (Manning, 2016). The rather informal, everyday gesture of making tea is indeed a shimmer amidst capitalist–imperialist–casteist forces of violence and exploitation. As Manning (2016, p.2) argues 'There is no question that the minor is precarious. And yet the minor gesture is everywhere, all the time'. The figures of the *tundu* and *tea dragon* I have collected along the way are inventive metaphors that make new creative and response-able modes of existence possible.

5.10 Re-turning and re-membering

Circling back, re-turning and re-membering the entangled gendered and more-than-gendered pastpresents have generated multiple stories (Barad, 2017; King, 2004). Tea party play, brewing and drinking "real" tea in Montessori early childhood settings are not discrete events, instead they inhabit the temporality of the thick, matted, and clumpy 'now', imbued with stories of gendered, racialised, classed and "casted" struggles and transformations (Haraway, 2019a). By thinking-with tea, this chapter unsettles ideas that position Montessori as gender-neutral and devoid of gendering practices, and instead by tracing entangled tea stories, relations and worlds, the always already gendered relations that form and unform Montessori practice are brought into focus. A 'gendered Montessori workforce' is thus shown to materialise and re-materialise through multiple, contradictory and transient relations, that are relationally produced across categorical and disciplinary boundaries (real/pretend, human/nonhuman, past/present, material/discursive, nature/culture, Global North/South).

The chapter does not resolve in determinisms or deterministic solutions, instead it invites a sense of attunement to the feral and un/predictable ways gendered forces work on, across, and through bodies, spaces, places and times. The ongoingness that such scholarly engagement entails is underscored by how the TWININGS ™ Green Tea Mango & Lychee has been discontinued as a product since this chapter began to take shape. The chapter further welcomes an attunement to the minor, to insignificant gestures such as making and offering a hot mug of tea, that are vibrant with potentialities and possibilities for reconfiguring and reimagining a "gendered workforce". Continuing with Haraway's (2016) SF practice, the next chapter will think-with another 'object' that unquestioningly constitutes everyday Montessori practice.

Chapter 6. Re-visioning the risky matterings of cameras

6.1 Tracing another tangle

In this chapter, I continue with the aim of investigating how a gendered workforce is produced in Montessori spaces, by turning attention to encounters with cameras. By employing a feminist relational analysis, the taken-for-granted status of cameras as gender-neutral instruments in the service of developmental capture and representation of the "child" is disrupted. Similar to the chapter on tea, what will be overwhelmingly clear in this chapter is how dominant relations that materialise cameras in Montessori classrooms are configured through developmentalist conceptualisations of childhood that mask how narrow formulations of gender are reproduced often in imperceptible ways. By continuing with the practice of string figuring, cameras are understood as part of an extensive political, social, historical, ecological and economic field, where a gendered workforce is produced in relationally specific and contingent ways through the intra-action of materiality, space, affect, temporality and discourse.

6.2 Locating cameras in Montessori

In contemporary English nurseries, cameras play a prominent role in profiling children, charting their development, safeguarding as well as being used as pedagogical tools. This prominent role was reflected in material-semiotic emergences of cameras at Seedlings Montessori nursery, made explicit in their camera policy: 'The setting has a camera which is used to take photographs for learning journals and wall displays. Photographs are passed onto parents when the child leaves or [photos are] destroyed'. It is interesting to note that cameras in this instance are configured exclusively in relation to adult activities, i.e. for practitioners to generate photographs for learning journals and wall displays. This adult-child divide was evident in observations from the nursery too. During the three-month field work, iPad cameras were used by adults for purposes of documentation, but never by children. Moreover, traces of camera activity were seen on nursery wall displays that exhibited photos of children's participation in various activities, as well as on the nursery's website and social

media platforms. Additionally, when the iPads were not in use, they were mostly kept on high surfaces, often out of reach from children. On inquiring further about this adult-child divide, I was informed by the head of nursery that the idea of children using digital technology, and cameras specifically, was something they had contemplated but were hesitant to pursue for a variety of reasons.

6.2.1 Digital technology vs "natural development": a site of adult/child divide

The head of nursery's hesitancy alludes to the moral panic and anxiety that is prevalent in wider society which shapes debates, discussions and practices around the appropriateness of digital technologies in early childhood, particularly the use of touch-screen technologies such as the iPad (Yelland, 2006; O'Connor & Fotakopoulou, 2016; Sakr, 2020). Similar to the affects that circulate in relation to hot drink policies in section 5.3, such anxieties that materialise as atmospheric forces, have been linked to constructions of childhood as "pure", "innocent", "natural", at risk and in need of shielding from the adult world (Higonnet, 1998; Cannella, 1997). The conflation of childhood and nature plays a critical part in the development of the protectionist narrative, which, as will be demonstrated throughout this chapter, works to let gender completely fall out of analysis. Identifying with this protectionist stance around children and technology, digital technology is seen as somehow robbing children of their childhood (Palmer, 2007). This view is further embraced by outdoor play movements like Project Wild Thing (Bond & Jones, 2013), that report children as suffering from a 'nature-deficit disorder' (Louv, 2010). Such interventions view childhood as more aligned with spending time outdoors in "nature", rather than indoors through solitary pursuits of screen-based technology. The nature/technology dichotomy is further deepened through beliefs of what constitutes "natural development", an outcome that is often associated with embodied hands-on experiences that is at the heart of traditional play-based approaches. Palaiologou (2016, p.305) identifies that although practitioners are digitally competent in their personal lives, 'there is a dominant ideology regarding the nature of play-based pedagogy that hinders the integration of digital devices into their practice'. For now, I will consider the distinctive ways these tensions materialise in Montessori settings.

Although the form of play in Montessori contexts differs from traditional play-based settings, the nature-technology/ child-adult divide persists. It is equally important to note that while

the apprehensions linked to harms caused by digital technology are quite dominant in Montessori circles, these are by no means uniform. Different interpretations of the role of digital technology in Montessori classrooms roughly overlap with Montessori training affiliations [15]. Training organisations and nurseries that are concerned with authenticity and fidelity of Montessori practice have often discouraged the use of digital technology in Montessori early childhood classrooms. Even though the introduction of some digital technology is welcomed in Montessori primary and secondary classrooms linked to these training organisations, MacDonald (2016, p.106) reasons that one must refrain from introducing digital technology to young children until 'sensorial avenues have been explored… and exhausted'. Further: 'Access and usage will also likely increase parallel to age, as our elementary children and our adolescents steadily acquire the technological skills and know-how that they need as they take successive steps towards adulthood' (ibid.). This is further complemented by panic-mongering of the harm digital technology induces on 'normal' development for children under six (MacDonald, 2016). In contrast, Montessori settings like Seedlings Montessori, that are associated with a more progressive movement within Montessori, display an openness to considering the pedagogical potential of digital technology. This openness, whilst still limited, was seen in the images shared on the nursery's social media platform where children were seen using the iPad camera to generate photos of their art creations during the pandemic[16]. However, these merely had a utilitarian role, as a means of preserving children's art creations, while also ticking boxes corresponding to developmental goals. Mapped against and shaped by the EYFS curriculum guidelines, the

[15] Differences in interpretations of Montessori approach have split Montessori communities globally. As Isaacs & Baynham (2023, in press) indicate, in the UK, these have been on the basis of fidelity. Montessori organisations such as Maria Montessori Institute, an organization that claims to offer 'authentic Montessori training' (MMI, 2022), takes a more uncompromising approach in relation to technology, while organisations such as the former Montessori Centre International (MCI) have held a more curious approach, with hopes of better understanding its pedagogical value (Isaacs, in Nursery World, 2015). MCI's position was reflected in their 2015 MSA Conference *Technology and Montessori in the 21st Century*.

[16] This is perhaps linked to the shifts in perspectives and relations to digital technology when nurseries and schools were forced to move learning online to video conferencing platforms like Zoom.

role of digital cameras then get narrowed down to the acquisition of skills for learning and development (DfE, 2014; Griener, 2020)[17].

6.2.2 Cameras, gender and affordances in Montessori

Notwithstanding the slight openness to children's association with iPad cameras, as identified above, these tend to be strictly confined to supporting and sustaining children's development. While the apprehensions linked to digital technologies (iPad, in this case) are negotiated by finding ways to include them into the developmentalist paradigm, camera presence is further fraught with anxieties shaped by risk discourse. As noted in section 4.5, the affective tensions linked to cameras as "risk" were sensed from the outset at Seedlings Montessori. These tensions are inherited from stories and allegations of camera abuse (Nursery World, 2009). As I will go on to explore in section 6.7, the emergence of risk discourse spurred by protectionist motives unwittingly works to conserve particular gender formations, whilst stigmatising, regulating and curbing others (Taylor, 2010; Blaise, 2013; Robinson, 2008). Furthermore, through the conflation of childhood innocence and vulnerability, children are positioned as incapable of agency, and as Meyer (2007, p.91) argues 'may be seen as producing vulnerability rather than protection'.

More recently, pedagogical approaches influenced by sociocultural theories such as the Reggio Emilia approach have valued and celebrated children's agencies (See Kress, 1997; Rinaldi, 2006), where cameras have been increasingly acknowledged as important pedagogical tools as well as in multimodal meaning-making. Clark (2017) explains that cameras act as semiotic mediators offering opportunities for adults and children to develop shared languages that are not confined to dominant linguistic skills and practices. Moreover, cameras are seen to offer children agency to document what is important to them, and to enable their voices to be listened to as well as to affect change (Clark, 2017, Cowan, 2019; Fleer & Ridgway,

[17] In the 2014 *Development Matters* document Technology was included as a key part of the specific learning area "Understanding the World", however this has been removed from the 2021 revised document, in which the only mention of technology is in relation to practising 'sensible amounts of screen time' (DfE, 2021a, p.56). However, additional comments from the author have underscored technology's role in early learning, as a support or tool for learning and development (Griener, 2020).

2014; Cook & Hess, 2007). Researchers have used cameras as a tangible strategy to tap into children's own gendered knowings by means of photo elicitation (Almqvist & Almqvist, 2014; Hill 2015). Despite the benefits of such an approach in co-producing meanings around gendered experiences and their potential in generating shared insights on gendered childhoods, socio-cultural approaches continue to rely on views that position cameras as tools to "capture" and represent reality, and thus discount the active role they play in the phenomenon of gendering. Sociocultural approaches, much like naturalistic approaches that Montessori is based on, rely on the same kind of thinking that positions "nature" and "culture" as separate and distinct. Thinking of cameras through Haraway's (in Haraway & Goodever, 2000) notion of 'natureculture' affords possibilities to dislodge cameras from their neutral status. It highlights the 'impossibility of thinking nature, realism or reality in isolation' (Merrick, 2017, p.103). Therefore, the fundamental proposition in this chapter is to displace cameras from human-centric figurations, i.e. cameras are neither positioned as objectively representing children's "natural development" nor as tools for capturing shared gendered meaning-making. Instead, cameras are understood as situated and partial material-discursive networks that actively reconfigure what constitutes a "gendered workforce"

6.3 *'I got it!':* the gendered politics of developmentalist capture

> *As I sit down with my notes, I notice a few children building with unit blocks and coloured mirror blocks at the entrance of the hall. The coloured mirror blocks were positioned vertically on the floor and the unit blocks were used to create bridges. Within moments I see Kay, a practitioner, approach the site with long rolls of easel paper, and stick them on the wall behind the block construction. I sense excitement in the air. The entire nursery is hailed to the scene. Children gather around the blocks and Kay, as if they were about to witness something unravel. Another practitioner turns the classroom lights off, while the head of nursery turns her mobile phone torch light on and projects the light through the coloured mirror blocks to produce shadows and coloured superimpositions on the paper on the wall. Children and adults play and experiment with light, blocks, mirrors and shadows. A practitioner uses the nursery's iPad to produce photos. I notice camera flashes go off a few times at first and then more photos are 'taken' without the flash. Seeing the practitioner's puzzled face, I reason that perhaps the camera's autoflash setting was turned on. Although momentarily, it is captivating to watch the camera flash interference with the block and mirror projections. The entire event is an exhilarating and exciting performance… But soon the excitement wanes. The classroom*

lights are turned back on, and children and adults disperse and move onto other things. On the other side of the nursery's hall children have been producing creations with dried leaves and sticks. Some of them start carrying their creations to where the blocks were erected and arrange them around the blocks. Riika, who is perhaps three-years-old, has created her own dried-leaves-sticks assemblage. She places them by the blocks and then rushes to find a paper and pencil. Kay joins her and they chat while Riika draws a giant serrated leaf on a stem. Riika then proceeds to carefully write her name in all caps. Just then another practitioner appears with the iPad and captures the moment, and tells Kay 'I got it!'. (Vignette 6.1)

In this section, I will first foreground the politics of developmentalist "capture"' embedded in '*I got it*' moment to uncover the dominant gendered relations that shape 'developmental captures' in Montessori early childhood settings, before I delve into the rest of the encounter. Like most early childhood settings in the UK, processes of observation, assessment, and planning form a core part of practice at Seedlings Montessori Nursery. Observations are fed into an online recording system called 'My Montessori Child' (MMC), a platform that was created specifically for settings that follow the Montessori method. MMC allows practitioners to upload the camera "captures" along with relevant observation notes, to match children's activities to the corresponding developmental goals and observation checkpoints in the DfE's (2021a) *Development Matters* framework. Competencies, next steps, and activities are planned which determine where children stand in the "developmental path". The observations along with camera "captures" are then accessible to the children's family.

6.3.1 The masculinist gaze of new managerialism

As stated earlier, cameras in these instances are seen 'to possess no intention, agency, vibrancy, or force that isn't triggered by humans or attributable to their actions' (Allen, 2015, p.48). When human-camera relations are viewed as intra-activity (Barad, 2007; Lenz Taguchi, 2013), then it becomes possible to de-centre the human subject, to see the vitality of cameras in the production of a "gendered workforce". The prompt appearance of the iPad-camera-practitioner for the developmental capture of Riika's literacy skills is not an unfamiliar scene in early childhood settings. These are reflective of the expanded emphasis on literacy, an area of learning deemed 'increasingly important in modern labour markets' (OECD, 2018, p.4). Somerville (2013, p.12) makes this connection explicit: 'Literacy is a primary site of the

operation of these technologies of standardisation because of the perceived relationship between literacy and economic competitiveness'. Early years practitioners are pressured to prepare and "ready" children who can 'successfully perform in primary schools' test-based culture' (Roberts-Holmes, 2021, p.251). While Montessori's (1912, p.304) own position on supporting children's literacies was far more laidback, where she did not 'believe in making a knowledge of written language obligatory before the age of six', in contemporary Montessori practice that is shaped by the "school readiness agenda", practitioners are pressured 'to get children ready for a prescribed school curriculum at an ever-earlier age' (Darbyshire et al., 2014, p.818). Such practices attest to the terrors of performativity (Ball, 2003) that have shaped the early years sector (Osgood, 2006; Kay et al., 2021). It is important to note here that the outcomes and processes that activate "developmental capture" are anything but gender-neutral. In addition to these performative pressures falling squarely on a principally female workforce, 'literacy development' in itself is governed by values that privilege and reinforce particular kinds of humans and gendered formations (Wynter, 2003; Hackett, 2021)

Moreover, the processes and qualities that are connected to the project of developmentalism are organised through particular gendered qualities which Martínez-Alemán (2014) has referred to as "new" masculinity. Feminist early childhood scholars have progressively theorised the masculinist rationale that drives the regulatory gaze of new managerialism (Reay, 1998; Francis, 2001; Walkerdine, 2003; Osgood, 2006), which values masculinised attributes such as rationality, objectivity, individualism, competition etc to achieve its goals. The iPad-camera-practitioner assemblage comes together to perform prescribed and truncated forms of professionalism that result in the formation of competent technicians, in which images are hesitantly produced to fulfil neoliberal mandates (Osgood, 2009; MacRae, 2011). These performative pressures have been evidenced in previous research enacted in Montessori contexts (Mohandas, 2022), as well as at Seedlings Montessori (Osgood & Mohandas, 2022). These pressures re-emerged in this study at Seedlings Montessori, where women have had to wrestle with the increased demands for accountability, attainment goals, early years curriculum and standardised approaches to quality control. These were picked up in my conversations with the nursery head at Seedlings Montessori, who shared the high levels of anxieties linked to Ofsted registrations, inspections, pressures to always show children in progress, and difficulties with financially sustaining the business. This emphasis

on progress further surfaced in Seedlings Montessori's inspection report where explicit instructions are given to 'monitor progress of different groups of children to ensure they make strong and sustained progress' and 'target teaching more precisely on supporting children to build on what they know so they make further progress' in order to 'further improve the quality of the early years provision'. Interestingly, these are standardised statements that you find in most inspection reports. As Osgood & Scarlet (2016, p.153) contend, such imposed quality standards need to be understood as 'deeply political and driven by economic imperatives'.

6.3.2 A speedy capture: workings of chrononormativity

Affective attunement to the intensities further spotlight the workings of time and speed itself. Time is a core feature of the developmental framework, with specific conceptualisations of time playing an active role in producing 'the developing child' as well as in the politics of "developmentalist capture". Developmental time is understood as linear, chronological and teleological. The development of children's "literacy" for instance, moves along a linear time-bound path, from when children are able to distinguish marks (22-36 months), to ascribe meanings to mark (30-50 months), to writing names and attempts to write short sentences (40-60 months) (DfE, 2014). The emphasis on time and speed are further evident in the 2021 Development Matters (DfE, 2021a, p.75, p.81), i.e. '*speedy* working out of the pronunciation', '*speedy* recognition of familiar printed words', 'read the sounds *speedily*' etc. This sense of speed, and urgency is felt strongly in vignette 6.1, where a *speedy* "capture" involves the swift identification of the object of developmental interest (in this case, Riika writing her name), the prompt "capture" and reproduction of image, and subsequent datafication that promises the fast-paced delivery of market supply factors. Speed, acumen and efficiency are therefore critical to ensure iPad-camera-child-practitioner do their work to generate maximum economic returns. At the same time, it is worth noting that the intensities of developmental time are differentially felt, this includes the challenges to "taking" photos quickly enough as a neurodivergent researcher or the way chrononormativity makes some child bodies more sticky than others (Ahmed, 2014a), as noted in the following comments by a practitioner at Seedlings:

> 'The new framework allows us to be more relaxed about observations. Photos are now taken with parents in mind…But when it comes to SEND, we have to follow the tight developmental milestones' (Practitioner at Seedlings Montessori)

This discloses how the ways in which ableist notions of time 'disable bodies that cannot perform normative temporalities' (Pasley, 2022, p.44) and thereby get configured on the basis of their failure 'to match the capacities of the idealised human subject' (Shannon, 2022, p.2). The heterogeneity of such emergences are further accentuated when attending to how such conceptions of time and speed get coded into the very making and configuration of cameras, which becomes a necessity for effective reproduction of the desired event. For instance, fast shutter speed is critical in the production of clearly identifiable images, without which the image would be rendered blurry. Its economic value is indicated in the increased demand for high-speed cameras in the market over the years, with growing use of high-speed cameras in scans, entertainment & media, and sport industries. Integrating and assembling these wider connections and forces illuminate the extensive workings of chrononormativity (Freeman, 2010; See section 3.2.3) in which temporal regulation is inextricably entwined in capitalist economic regulation. While the *'I got it!'* moment of "capture" seems fleeting, affect is disclosed in fleeting moments, traces, and embodied reactions which are not necessarily accessible to conscious control or reason (Blackman 2019). They are more-than-personal and more-than-human, and exceed bounded individuated bodies, spaces and times.

6.3.3 Refusing the 'pull' of the camera

> 'Photos are now taken with parents in mind…' (Practitioner at Seedlings Montessori)

The collection, assessment and fabrication of data is especially a pressing need in a competitive market where childcare selection by parents may depend on the overall performance of the setting as deemed by Ofsted (Spencer-Woodley, 2014). In conversations with a practitioner at Seedlings, it was disclosed that cameras played a key part in strengthening parent-nursery relations, i.e. the ongoing expectations to document children's progress with cameras in order to gratify parents' desires to always be-in-the-see. She highlighted the vibrant agencies (Bennett, 2010a) of iPad cameras to 'call forth' attention and provoke practitioners to tear away from savouring the 'magical learning moments', for purposes of digital documentation and parent satisfaction. However, she also spoke of times

when 'the pull of camera' was ignored, which may be read as a subversive response to neoliberal policy manoeuvres (Archer, 2022). Interrogating the seemingly mundane scene of "developmental capture" of Riika's 'literacy capabilities' with an iPad camera, when viewed as an intra-active material-semiotic and affective phenomenon uncovers the masculinist undertones of neoliberalism that prioritise political rationality over an ethic of care, reproducing masculinist imaginaries of what counts as a 'competent workforce.' (Osgood, 2012)

6.4 Feminist inheritances: disrupting the masculinist gaze

It is apparent that women at the nursery are subjected to the panoptic masculinist gaze of new managerialist policy reform that seeks to regulate forms of femininity that are a hindrance to the production of the desired outcomes. These regulatory forces necessitate practitioners to be caring, but not too caring. Foregrounding the masculinist politics that shape cameras in Montessori nursery spaces further means engaging with already troubled feminist histories. Tracing the feminist inheritances and tentacular connections through practices of string figuring, generates sticky knots in the field of feminist film studies that draw attention to histories of feminist concerns that haunt the field of camera relations. Feminist film studies have uncovered how the objectification of women is indeed the leitmotif in the visual arts. Laura Mulvey's (1975) theorisation of the 'male gaze' in her essay *Visual Pleasure and Narrative Cinema* exposes the masculinist heterosexist depictions of women in cinema, in which women bore the burden of sexual objectification materialised through the supposedly neutral status of camera, the voyeuristic act of the viewership, and the actual sexist interactions of characters. The pleasure of the gaze is according to Mulvey (1975, p.62) 'split between active/male and passive/female'. The active masculinist forces at work in production of images is indeed relevant in configuring cameras to limit the possibilities of vision. The 'female gaze' developed in response, subverts the ubiquitous male scopophilia and voyeurism, undermining the passivity of women by privileging a female perspective in film.

Contemporary efforts such as the #girlgaze project (de Cadenet, 2016) celebrates how women see the world, fitting within the scope of the fourth wave of feminism through its

emphasis of intersectionality, solidarity, but more so for its reliance on social media. Looft (2017, p.898) highlights the exclusions that emerge despite efforts by #girlgaze to define their movement as being international and intersectional: 'the creators of GirlGaze fail to take into account the class and socio-economic implications of connecting to an audience via social media'. It resonates with earlier critiques by hooks (1992) who rejected a unified category of women or attempts to capture the "female experience", to point to how the female gaze has historically been denied to "women of colour". She wrote: '[M]any feminist film critics continue to structure their discourse as though it speaks about "women" when in actuality it speaks only about white women' (hooks, 1992, p.123).

As Haraway (1985) argues, attempts to name the "female experience" are marked by a crisis of endless splitting and search for a new "essential unity". Beyond this deterministic model of the "female experience"' Haraway (ibid., p.66) recognises that 'we all are chimeras, theorised and fabricated hybrids of machine and organism; in short, we are cyborgs. The cyborg is our ontology; it gives us our politics'. There are no unmediated photographs in accounts of human bodies and cameras, there are only highly specific material-discursive possibilities, each with 'wonderfully detailed, active, partial way of organising worlds' (Haraway, 1988, p.583). Weaving these relations back into the nursery, camera relations beam with feminist potentialities and vitalities. While masculinist regulatory forces work to satisfy the demands for performativity and technicist practice, narratives from nurseries account for a "professionalism from within", micro-resistances that stand as a direct challenge to limiting versions offered in neoliberal government discourses (Osgood, 2010; Archer, 2022; Archer & Albin-Clark, 2022). Osgood (2004) found that in resistance to the emphasis placed by neoliberal agenda on rationality, competition, commercial acumen and entrepreneurialism, early childhood professional identities were produced through practices of collaboration, care and community. Taking seriously Haraway's (1988) insistence for elaborate specificity and difference, makes feminist cyborgian versions of objectivity possible that helps re-imagine situated response-abilities.

iPad-camera-practitioner-child intra-activity in vignette 6.1 demonstrates the non-innocence of such cyborgian formations. Haraway (1985, p.67-8) highlights the 'main trouble with cyborgs…is that they are the illegitimate offspring of militarism and patriarchal capitalism, not to mention state socialism. But illegitimate offspring are often exceedingly unfaithful to

their origins. Their fathers, after all, are inessential'. When one zooms out from the gendered/ing "capture" of "human development", to consider affect and more-than-human animacies, other ideas about gender are given space to emerge. While cameras as intra-active phenomena are a product of patriarchal capitalism, a 'part of the material-discursive technologies and assemblages that produce neoliberal subjects' (Mohandas, 2022, p.24) they simultaneously exert agencies that override 'human intentionalities' (Fairchild, 2020). Much like how iPad agencies push against neoliberal imperatives of datafication in Fairchild's (2020) research or how cameras in Ivinson & Renold's (2016) research with school girls worked to displace the threatening phallocentric and predatory gaze, the iPad-camera-flash in vignette 6.1 can be viewed as interrupting established practices of the measurement culture and patriarchal gaze. These were made more explicit when I was informed later that the light-shadow activity in the vignette was a suggested activity for '3 and 4 years olds' in DfE's (2021a, p.106) *Development Matters* document for exploring 'how you can shine light through some materials but not others. Investigate shadows'. The indeterminacy of the camera flash stands in stark contrast to the pedagogical intentions circulating in the scene, and the standardised and rationalist approaches that are used to determine "quality" in early childhood education. The animacies of the iPad-camera-flash do not simply interrupt the scene, but actively participate in the creative play and interference with coloured glasses, wood, paper, clothing, light, shadows and human bodies. The encounter is an example of socio-material instances that manifest like eddies, running contrary to dominant currents, flows and intensities. From being located in the intentionality of practitioner subjectivity, attuning to the more-than-human relations that constitute the developmentalist "capture", make visible the ongoing material-discursive and affective re-making and re-imagining of worlds that innervate everyday encounters.

6.5 Cameras, risk and surveillance

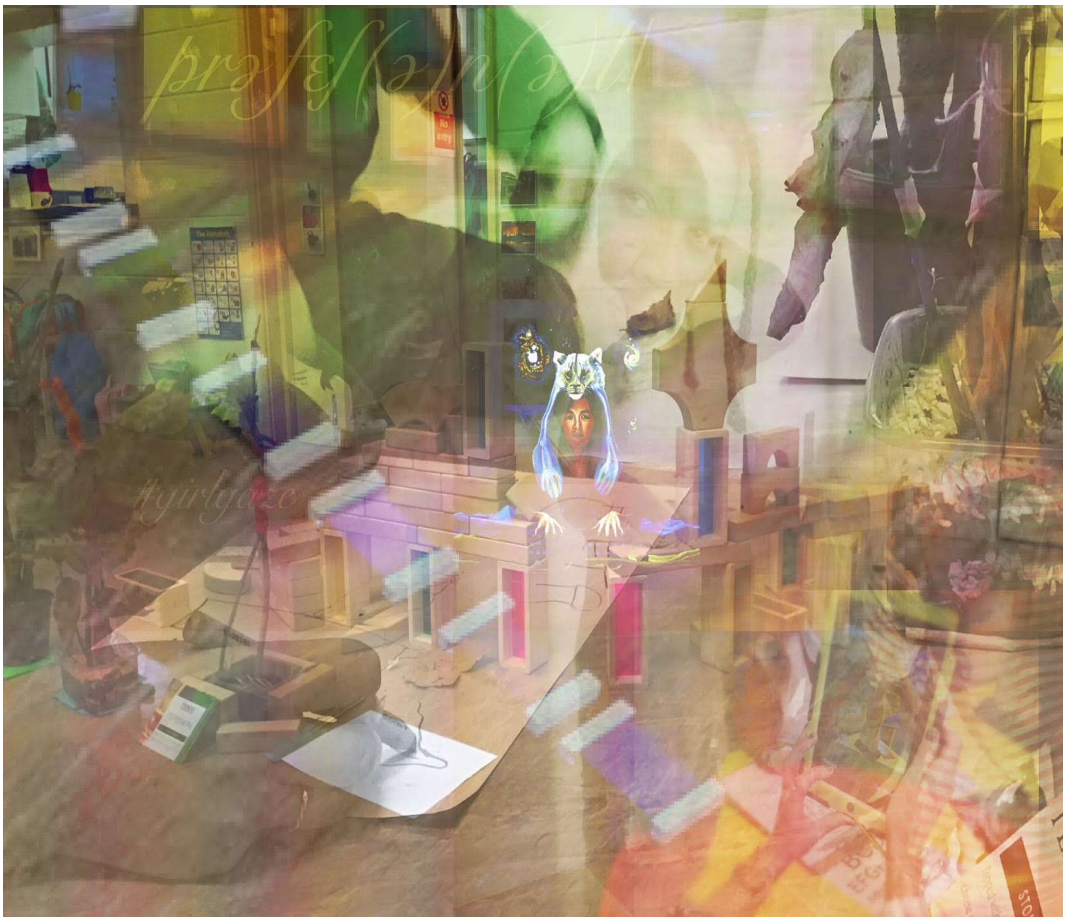
At this juncture, I would like to re-turn to and further examine the feelings of apprehension generated through the proximity of iPad-cameras (See section 6.2). According to the EYFS statutory framework (DfE, 2021b, p.21), nurseries are required to have safeguarding policies and procedures in place that 'cover the use of mobile phones and cameras in the setting' and

it is imperative that '[l]eaders of early years settings implement the required policies with regard to the safe use of mobile phones and cameras in settings' (UKCIS Education Working Group, 2019). As stated earlier in section 5.3, these safeguarding and protection policies have burgeoned in response to numerous serious case reviews over the years to protect children from various kinds of abuse, reviews that questioned its very presence in nurseries: *'Is it time to ban cameras?'* (Nursery World, 2009). While safeguarding and protecting children from abuse is without doubt indispensable, as discussed in section 4.3 "risk" is exaggerated through a wide array of material practices to sustain Western conceptions of "childhood innocence". As stated in section 6.2, these can have undesirable effects on marginalised communities being treated with suspicion and their movements unduly monitored and scrutinised. In this section, I re-turn to the notion of cameras as "matters of risk". While cameras are critical to fulfil the developmentalist mandate, when they are in intra-active relations with some bodies, spaces and places, risk is accentuated and surveillance intensified. By continuing to attune to affective dimensions, I consider how gender manifests differently when bodies are read in narrow, deterministic ways, materialised through sticky associations between cameras, spaces, time, orientation etc.

6.5.1 'What will he do with the photo?'

As indicated in section 4.5, the affective capacities of cameras were sensed from the outset. According to nursery policy, mobile phones or any other camera devices have to be left at the office on entry. Moreover, when the nursery head was informed during the initial consultation about the possibility of including cameras in my research (See section 4.5), I was apprised of the nursery's policies on camera use. The nursery policy only permitted the use of the setting's iPads. It was therefore agreed that the manager would e-mail the photos to me each day to ensure photos adhered to principles of anonymity and confidentiality. These guidelines were applicable to anyone who came into the nursery. The setting has three iPads, and I was given permission to access them during my time at the nursery. However, everytime I associate with the nursery's iPad camera, it is with apprehension that I do so, acutely aware of the intensities of suspicion generated by association of queer bodies with cameras in early childhood spaces. In the following event I narrate these affective intensities as they materialised at Seedlings Montessori:

Thomas is seldom still, seldom quiet. After a morning circulating in and out of the classroom, he suddenly stops by the sensorial shelf, pulling out Montessori Colour Box 3, used to refine children's chromatic senses. He takes out the colour tablets and lays them one by one in an astral fashion. A teacher says: 'Thomas, darling. Make sure to do that on a mat'. Thomas lets out a sigh and begins to put the tablets back into the box. Hailed by this moment, I approach with the iPad, intending to "capture" the event. Standing there about to document, suspicion hangs in the air. A parent there to help her child settle in watches me intently. Sensing the affective charges, I walk away from the scene. I then hear the parent ask the manager, 'What will he do with the photo?', who reassured her that any photos taken would be vetted by the nursery. I wonder to myself 'Why did this suspicion not emerge when others were seen with the iPad camera?' (Vignette 6.2; Osgood & Mohandas, 2022)



Sticky Figure 7: iPad-camera entanglements

In this unanticipated affectively charged encounter, through specific and temporal material-discursive configurations a set of ontological discomfitures are produced for variously implicated bodies (Taussig, 2009) – the reproved white child, the anxious white parent, and the suspected queer brown nonbinary researcher with an iPad (See Sticky Figure 7). The entanglements of gender, gender identity, race and sexualities are impossible to tease out, but it is fair to say that the affective associations stick (Ahmed, 2014a) to some bodies more than others (brown, queer, nonbinary). As someone *assumed to be* male in early childhood contexts, I am deeply familiar with the naturecultural technologies that work to position some bodies as out of place, to be subjected to constant surveillance. As noted in chapter 4, section 2, it is worth emphasising that atmospheric attunements are not a matter of perception. As Ahmed (2014b, n.p.) explains, an 'atmosphere can be how we inhabit the same room but be in a different world. Some might be more attuned to some things, some bodies, some sounds.' She goes onto add: 'Attunement helps us to explain not only what we pick up but what we do not pick up. It is important to add here: the distinctions between subject and object or between right and wrong perception do not work here. I do not think it is the case that one of us perceived things rightly; another of us wrongly; that one of us projected her feelings onto a situation, another of us did not. Situations are orientated; bodies are orientated'. There is a historicity at stake that orients some bodies certain ways, i.e. in this case, as more risky and at risk than others. Experiences of men encountering considerable suspicion concerning their motivation for working with children has been well-rehearsed in previous research (See Skelton 1991; Murray, 1996; King, 1998; Sumison, 2000; Pruit, 2015). Farquhar et al. (2006) reports how men who enter childcare are viewed suspiciously as potential paedophiles. Eidevald et al. (2018, p.408) account for men manoeuvring suspicions by 'avoiding certain tasks, or doing the tasks but in ways that minimize suspicion'. Researching from a Montessori context, Pruit (2014, 2015) for instance specifically highlights the performance of heteronormatively complicit forms of masculinity to escape suspicion, a negotiation that Bhana et al. (2018) argue upholds and deepens the gender/sex binary. As Ahmed (2004, p.120) explains, "what sticks" is always 'bound up with the "absent presence" of historicity'. Tracing the historical entanglements of queerness and childhood offers more insight into materialisation of this suspicion. Silin (1997, p.215) for instance explains:

> '[T]he new scientific disciplines of the nineteenth century pathologized the homosexual and the child as special beings, members of discrete populations, who could be observed, classified, explained, and ultimately controlled. Both were regarded as suffering from the need for immediate gratification of undeveloped, egocentric impulses. Both required constant surveillance to check an assumed surfeit of erotically suspect energies'

The iPad camera becomes something else, more than just a research device, it activates the production of gendered suspicion and fear. While the researcher (assumed male) is readily categorised as queer and dangerous, the child is normatively understood as "naturally heteronormative" and "innocent", so denied the possibility of queerness (Stockton, 2009). As stated elsewhere (Osgood & Mohandas, 2022; Mohandas 2022), drawing links between the coloniality of gender and childhood sheds further light into the marginalising and civilising processes at work. Cameras have historically played a pivotal role in the categorisation of Indigenous and nonwestern people through western scientific taxonomies of race and gender (Ryan, 1997). Anthropologists were known to produce thousands of 'mugshot' images of diverse Indigenous people, assigning unique specimen numberings and imposing reductive man/woman/child categories (Ryan, 1997; Basu, 2019). These utterly ignored local modes, knowledges and practices of naming and organising societies (Oyěwùmí, 1997; Hines & Taylor, 2018; Hinchy 2019). Indigenous gender possibilities and configurations that threw western gender/sex binaries into question were framed as primitive, uncivilised, rendered deviant and even criminalised (Morgensen, 2012; Hinchy, 2019). "Sex" as passive matter is resourced for its representation as gender (Haraway, 1988). Considering the categorising function cameras played historically, it is ironic then that the mis-gendering and exclusion set in motion in the above encounter is through intra-active association with the camera. The affective manifestations of risk here becomes a matter of ontological erasures, through the fallacy of misplaced concreteness (Whitehead, 1978), that regulate and determine bodies for the (re)production of gendered hierarchies.

6.5.2 CCTV-less spaces, gendered labour and risk

> *In order to get to the adult bathroom at the nursery one must go through a space that is allocated for nappy changing. I need to use the loo, and I feel a sense of wariness grip hold of me. I am forcefully*

aware of the absence of CCTV in nappy changing spaces, although there are no children in the nappy changing room, I hurriedly use the loo in order to exit as quickly as possible (Vignette 6.3)

Continuing on with the SF practice and with investigating the emergences of risk and surveillance, the above fragment is considered to highlight how the specificities of bodies, spaces, matter, discourse as well as material absences affectively work together to generate gendered phenomenon. The specificity of relations in vignette 6.3 matters in accounting for differences, not just in the way the event materialises, but also in the consequences and the response-abilities that are strengthened as a result. Others have demonstrated how different cameras, orientations, positions and configurations transform phenomena. For example, Elwick (2015) draws attention to the differences that emerge when two different camera technologies were employed in their research, while Caton & Hackett (2019) in their research with children and GoPro cameras have highlighted the differences that emerge when cameras are oriented and configured differently. In this section, I explore what camera absences or the absentpresence of cameras do to produce gender differently. While camera presence generates gendered suspicion in vignette 6.2, in the following paragraphs I examine how the intra-active becoming-with camera-absences modify and transform gendered "subjectivities" in the nappy changing room, that simultaneously disclose the gendered forces that are invisibilised.

Closed Circuit Television (CCTV) has been criticised for its non-consensual invasion of privacy with the collection of big data. In most early childhood settings, classroom spaces, school entrances, corridors, gateways, gardens, offices and staff rooms are fitted with CCTVs as a means to safeguard children, with the exception of bathrooms and nappy changing rooms. In contrast to the affective materialisations produced in 6.5.1, the absence of cameras in this scene generates a sense of stickiness that is qualitatively different. The material-affective marks left on space reconfigures relations. To offer further insight, in majority of the settings I have worked in, the management has insisted that I did not change children's nappies. This was in fact a huge relief, not just because of being relieved from the obvious displeasure of dealing with faeces, but it also evoked memories of being baselessly accused by some parents for 'behaving inappropriately' in two separate instances with two different children. Even though both those instances had nothing to do with nappy changing, and my innocence was proven after scrutinising every movement on CCTV footage, it had

considerably altered the way I moved in CCTV-less nursery spaces. If I was accused, I would not have evidence to prove my innocence. These affective tensions in relation to nappy changing rooms have been well-rehearsed in previous research (See Duncan, 1999; Åberg et al., 2019). Ahmed (2004, p.8) in her analysis of affective economies, highlights how 'feelings do not reside in subjects or objects, but are produced as affects in circulation'. Encounters such as these map the 'ways mixtures or assemblages change, effecting alterations of subjectivities' (Hickey-Moody, 2013, p.82). While the absence of CCTVs in nappy changing spaces is fundamental in ensuring children's privacy is respected and in nurturing 'cultures of consent' (Dowty, 2008; Powell & Goouch, 2012; Osgood, 2019d), the absence simultaneously prompts questions around what else is invisibilised. An undesirable outcome of such gendered surveillance and exclusion is that labour related to intimate care, sanitation and hygiene practices fall disproportionately on female early childhood practitioners. Diaper changing of many children, many times a day involves lifting and carrying children, bending to pick them up, as well as assuming awkward postures to accomplish the task (Gratz et al., 2002). The harmful effects linked to this, such as long-term musculoskeletal pain and injuries have been well-documented (King et al., 1996; Gratz et al., 2002; King et al, 2006). These gendered differentials around labour and risk are important to note as it highlights how an underpaid and undervalued workforce is constantly 'implicated in the preservation of capitalism but at an extraordinarily high cost to personal health and well-being' (Osgood, 2022, p.60).

6.5.3. Surveillance watches, sanitation work, and Dalit lifeworlds

Enacting an SF methodology entails pursuing tentacular stories that cut across space, place and time. This means not being hesitant to make and unmake connections that activate fresh insights. As Bone (2019, p.136) explains, 'It shows how one experience can gather energy and move into new spaces in surprising ways while not following prescribed pathways'. When the absence of cameras in bathrooms and nappy changing spaces, surveillance mechanisms and gendered labour and risk are thought through Dalit concerns and sensibilities, more sticky knots are generated.

> 'Munesh sits by the roadside near a crowded market in Chandigarh, a city in India's North, on a January day. She is flanked by several other women, all of them sweepers

> hired by the Chandigarh Municipal Corporation. She shows the smartwatch she is wearing and says, "See, I didn't even touch it, but the camera has turned on.' (Inzamam & Qadri, 2022)

The workings of smartwatch cameras in this scene bring fresh insights into how capitalist networks intermingle with complex gendered and casteist forces. As explained in section 3.5, the varna caste system has historically dictated every aspect of Hindu religious and social life, with each caste group occupying a specific place in the complex hierarchy from birth. Dalit people were relegated to the role of sanitation work or what is commonly referred to as "manual scavenging", which involves manually cleaning, carrying and disposing of human faeces from dry latrines and sewers (United Nations, 2013). While untouchability and caste discrimination is constitutionally banned, social exclusions and hierarchies on the basis of caste remain in contemporary Indian society. Today 95 percent of sanitation workers are Dalit, out of which 99 percent are Dalit women (Wankhede, 2021). Dalit women are not only forced to undertake "manual scavenging", but they are further refused any other form of work in line with caste purity laws. Moreover, major health related-risks and hazards have been linked to their work, where protective measures are often denied (Abhiyan, 2013; Aery, 2015). The implications of "manual scavenging" have wide-ranging exclusionary effects on everyday Dalit lifeworlds. Kumar & Deepalatha (2022) account for how children of "manual scavengers" are not spared from the workings of caste discrimination and the politics of untouchability. For instance, Thorat and Lee (2005) point to how Dalit children are forced to sit separately and maintain distance from other children. The absence of cameras and 'care for children in nappy changing rooms' in an English nursery is complicated by what camera does to the Dalit subject, and to entangled Dalit lifeworlds.

Munesh is amongst 4000 sanitation workers hired by the corporation that makes it mandatory for workers to wear smartwatches called Human Efficiency Tracking System - which are fitted with a GPS tracker, microphone, SIM embedded to communicate with workers, and cameras to ensure attendance. Workers report threats of fines that cost half a day's wages for switching off the smartwatches. The tracking system is run by Imtac India, a tech conglomerate that costs the corporation an estimated 278,000 USD a year. The smartwatch surveillance cameras through its entanglement with Dalit-women-bodies, toilet spaces, varna caste ideology, capitalist exploitation, excluded child-bodies and health risks imposed, find

both connections and disconnections to workforce conditions in the nursery. They modulate how gendered affect is sensed and made sense of. These highlight the patchy nature of life in the Capitalocene, marked by uneven conditions and dynamics of more-than-human livability, where local oppressive structures and practices such as the varna caste system are reconfigured, exploited and dominated by capitalist extractivist regimes. A diffractive reading of these accounts demonstrate the posthuman performativity (Barad, 2007) of cameras away from the representational function that is often assigned to them. Such readings complicate how gender, risk, childhoods and workforce are understood, where affective meanings and resonances are constantly being reconfigured in deeply relational, embodied and transversal ways (Ahmed, 2004; van der Tuin & Dolphijn, 2010).

6.6 Cameras and ongoing colonial capitalist legacies

By plucking out fibres in dense, matted events and encounters, I follow the threads, to track them, and find 'tangles and patterns crucial with staying with the trouble in real and particular places and times' (Haraway, 2016, p.3). Tracking the developmentalist relations that shape everyday Montessori experiences, it becomes inconceivable to think of cameras without accounting for the colonial histories and inscriptions that continue to feature in contemporary Montessori practice. In the following sections I will highlight two key aspects that feature strongly with respect to cameras in Montessori spaces. The first feature pertains to the notion of "vision" itself that regulates camera activity, which Haraway (1988) refers to as the 'god trick', i.e. cameras are configured as 'eminently democratic machines' (Haraway, 1989, p.44) that are claimed to objectively represent the world. This will be explored in section 6.6.1. The second feature, which heavily relies on the first for its sustenance relates to how camera relations are marked by an extractivist logic that views humans and nonhumans as "resources" to be extracted for what governments consider economic growth, which will be explored in section 6.6.2. As we will go on to see, the act of not locating "vision" has historically worked to justify militarised interventions, violence and extractions, and continues to texture contemporary extractive practices in the nursery. In the following section, I interrogate the persistence of 'colonial vision' in how cameras are configured in Montessori.

6.6.1 The persistence of colonial vision

Histories of modernist science may be powerfully told as histories of visual technologies (Haraway, 1988). The 'invention' of the proto-type of the modern-day camera, the daguerreotype, occurred around the same time as the colonial experiment. As noted in 6.5.1, cameras were deployed by colonial ethnographers as instruments to *represent* Indigenous and non-western worlds, whilst concealing the underlying ontological assumptions made. Questions related to ontology were fundamental to the colonial materialisation of cameras, so much so that the late 1800s were marked by legal debates and disputes around authorial rights. Most courts approached the camera as an industrial machine that merely recorded pre-existing reality (Eileraas, 2003). This was of course reflective of the dominant discourses around "scientific objectivity" that invisiblised embodied colonial authorship as merely "modest witnesses". As explained in section 4.2, feminist science and technology scholars (Haraway, 1997; Heath, 1997; Potter, 2001) identify the "modest witness" figure as gendered, racialised and "classed", in which the self-invisible white upper-middle-class man aimed to mirror "nature" while leaving no mark of his own history. The practice was fraught with troubling implications as to what counted as knowledge, and who decided what constituted as valid knowledge.

> 'Racial, class, sexual and gender formations (not essences) were, from the start, dangerous and rickety machines for guarding the chief fictions and powers of European civil manhood. To be unmanly is to be uncivil, to be dark is to be unruly: Those metaphors have mattered enormously in the constitution of what may count as knowledge' (Haraway, 2018, p.30).

The persistence of such colonial vision is evident in the way cameras and practices of observation are understood in Montessori theory and practice. As explained in section 4.2, observation is core to Montessori practice (Montessori, 2008). Montessori's own views on observation are varied and sometimes contradictory (Osgood & Mohandas, 2022). They are primarily shaped by the logic of "modest witnessing" that required a distancing from that which was observed. For example, she emphasises that 'observation should be absolutely objective, that is, free from preconceptions' (Montessori, 1967, p.191). However, she is also seen to faintly diverge from this view by describing the connection between the observer and the observed as marked by an 'intimate relationship' (Montessori, 1912, p.13; See Osgood &

Mohandas, 2022 for further exploration). Despite this reference, Montessori observation insists on a form of disembodiment, modestly expressed as the observer being a 'nobody' (Montessori 1972, p.101). Yet her "original" observations of children have been deemed as the only basis for practising "Montessori" credibly. The extractions from her observations have been viewed as fundamental for universalising and legitimating Montessori practice globally. This uncovers the persistence of colonial vision that entails severing the moment of "capture" from situated and ongoing relations, to universalise meanings through colonial capitalist re-readings and relatings of what constitutes a "developing human". The work of Indigenous filmmaker and scholar Genevieve Grieves (2005) offers insight into how images "float" around, disconnected from the complex moments surrounding the "taking" of a photograph to deliberately frame Indigenous children as abandoned and neglected, impressing upon the viewer the 'necessary' interventions of western developmentalism. As Rollo (2018) exposes, these deficit figurations of Indigeneity and childhood have been fundamental to the West's civilising mission, a mission that continues to dominate contemporary early childhood practice sustained through binarised notions of savage/civilised, nature/culture, undeveloped/developed, illiterate/literate etc. Camera observation then becomes a practice of mis-seeing, towards misplaced categorisations and interventions. In vignette 6.1 this can be seen in the way camera observations sever the desirable "developmental" moment from extensive performative relations (gendered, racialised, sexualised) that innervate the scene. As underscored elsewhere (Mohandas, 2022), a gaze that constitutes such severance ensures the unremitting (re)production of whiteness in everyday practice with children.

6.6.2 Camera hunting: capture, protect, and preserve

> 'West is now going to reincorporate us neocolonially, and thereby mimetically, by telling us that the problem with us wasn't that we'd been imperially subordinated, wasn't that we'd been both socioculturally dominated and economically exploited, but that we were underdeveloped' (Wynter, in McKittrick, 2015, p.20)

Notions of underdeveloped/developed have routinely been used to justify practices of extractivism. As Kind (2013, p.427) identifies, it is interesting to note how the extractivist logic has been absorbed into the very language of photography itself: 'We *take* photos, *capture*

images, *expose* images, go on a photo *shoot*, use *point and shoot* cameras.' For instance, the movement and language in the *'I got it!'* moment evokes a hunting imagery, where the hunter pursues and captures the moving quarry to extract meat. Such extractivist logic and rhetoric is seen in Montessori's own work, where children are viewed in extractivist terms as 'a treasure which has never been exploited, more precious than gold' (Montessori, 1989, p.29), for the ultimate goal of the 'formation of Man' (Montessori, 2012). On the other hand, the nonhuman world is narrowly confined to the role of 'material for [human] development' (Montessori, 1966, p.143). This is further seen in the imagery used to describe children, where interestingly, the camera is used as a metaphor for children and their absorptive capacities. Montessori (2012, p.52) explains, 'It is just like a camera: it clicks, and everything is there all of a sudden'. This further complicates vignette 6.1. For instance, at the point of "capture" of Riika's literacy skills, the camera works as an extractive device, while "child" who is figured by Montessori as "camera" produces letters by extracting from her environment. They work together to materialise particular imaginations of 'progress' and 'childhoods.'

In this section, I think-with Haraway's account of Carl E. Akeley's Hall of African Animals in New York to make more explicit the workings of the extractivist logic. Akeley, an American taxidermist, biologist and photographer, first conceived the diorama in 1909, a material and ideological product of his hunting life. For Akeley the highest expression of sportsmanship was hunting with the camera. He reasoned 'camera hunting takes twice the man that gun hunting takes' (Akeley, in Haraway, 1989, p.43). Haraway explains how elite white men like Akeley sought to blend civilised manhood with primal masculinity. The overlapping ambiguous usage of cameras and guns indicate that they were used symbolically to fashion a new conception of masculinity and manhood (Haraway, 1989; Dunaway, 2000).

> 'The gun represented their longings for episodic, masculine violence; the camera embodied the necessity for manly restraint, for the conservation of wildlife' (Dunaway, 2000, p. 220).

Dunaway (2000) argues that conservationists like Akeley hoped cameras would help protect the remnants of pristine wildlife, which not only framed Indigenous people as primitive prehistoric beings, but also denied the ways they had shaped and had been shaped by their own land. Akeley's taxidermic diorama was therefore co-produced through the entanglement of material technologies (camera, gun) and clusters of meanings (colonial narratives, as well

as masculinist imaginaries and conceptions of manhood). While camera "captures" conserved and preserved a contrived image of "nature" and the "natural", as pure, pristine and separate from technology, the gun furnished the material for the reproduction of that image (Ryan, 2000; Haraway, 1989). There are important connections to be drawn here with camera activity in the nursery, particularly how camera documentation becomes a matter of 'capturing' contrived images of what constitutes natural development, and further skilfully conserving and preserving them. Re-turning to vignette 6.2, one can see the pedagogical intentions and interventions to support "natural development" enmeshed in the scene. The practitioner's instructions to use the mat is driven by the objective to help children regulate their bodies, to delineate their work space. Moreover, the pedagogical motives embedded in the colour tablets are concerned with visual discrimination as well as the introduction of comparative language in connection to colour gradation (e.g. lighter than, darker than, lightest, darkest). The acquisition of these skills is seen as part of supporting the "natural" development of the child. Therefore, childhood like nature and as nature is framed as in need of protection and conservation from risky and contaminating influences such as the phenomenon of queerness of gender and sexuality.

> 'Whereas the Child as a figure of futurity is sheltered from the present-day violence of class, race, gender, sexuality, capitalism, and neoliberalism, real children and their presents as well as futures do not enjoy this shelter, even as a symbolic war is waged presumably on their behalf and to protect their innocence' (Nolte-Odhiambo, 2016, p.148)

The violence of extractivism is therefore an ontological violence authorised by Euro-centric epistemologies, that kill specific ways of life, in order to conserve and preserve cis hetero white masculinist imaginations.

6.6.3 iPads, lithium batteries and maimed bodies

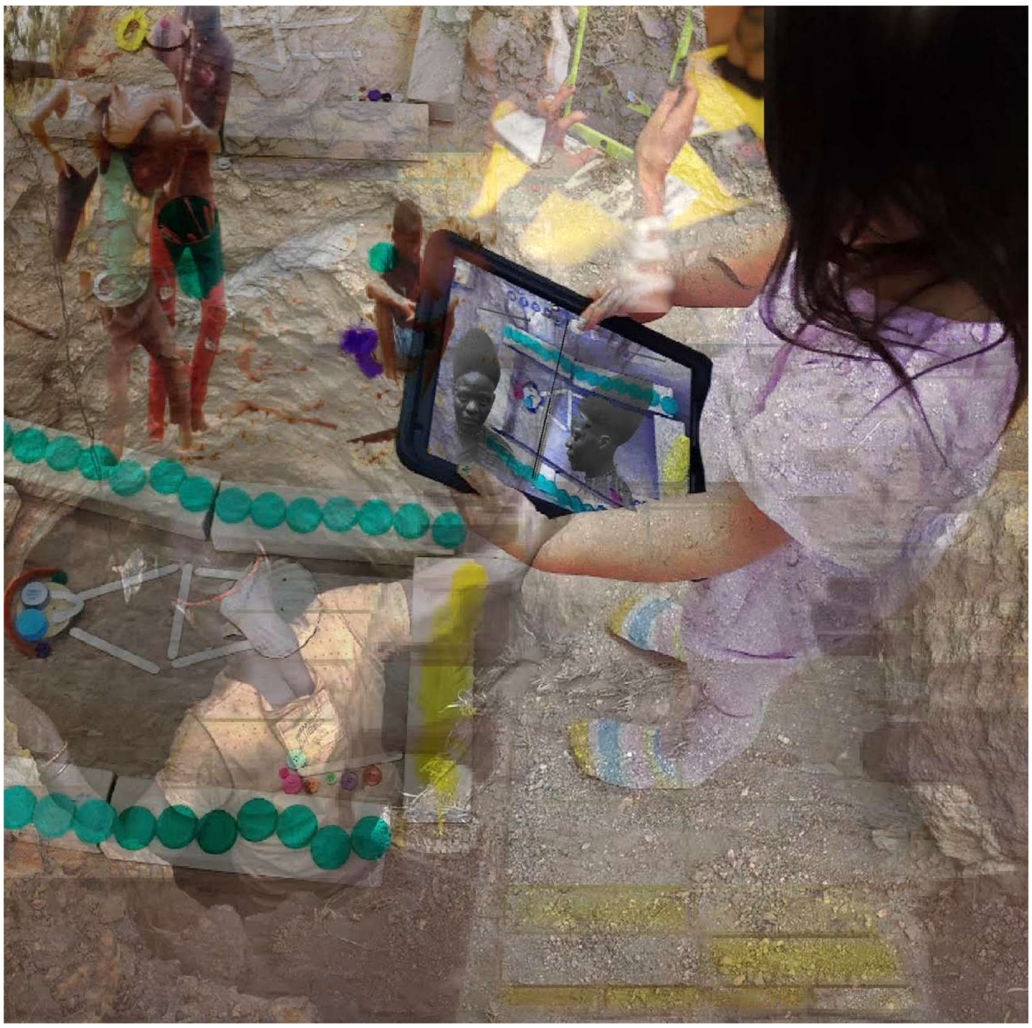
Protectionist narratives highlight suspicions, risks and harms related to bringing digital technology and cameras in close proximity to childhoods, while at the same time driving practices of documentation, surveillance, and dataveillance towards narrow constructions of development and progress. As stated in section 6.5, EYFS statutory framework (DfE, 2021b, p.21) specifically insists on safeguarding policies and procedures covering 'the use of mobile phones and cameras in the setting'. The framework claims to be concerned with 'education

and care of all children in early years provision' (ibid., p.6). Notions of 'care of all children' are troubled when tentacular lines of inquiry are pursued that expose the nefarious practices of capitalist extractivism. For instance, the materialities that constitute an iPad camera materialities are intertwined in mining stories, with each part of the camera-material-assemblage sourced from minerals extracted in locations in the Global South. Such extractions involve contamination of waters, pollution of air, mass deforestation, loss and displacement of Indigenous ecologies and so on. The repercussions are endless, but as Ahmed (2008) argues there is a politics to how we distribute attention. Again, I turn to affect as a guiding energy to attend to the matterings of knowledge.

During my time at Seedlings nursery, a lawsuit was being filed against Apple Inc. by International Rights Advocate (IRA) over harmful extractivist practices in the cobalt mines of Democratic Republic of Congo (DRC) that jeopardised the lives of young congolese children. It must be noted that more than half the world's cobalt originated from DRC at the time (Amnesty International, 2019), and formed an essential component for the rechargeable lithium-ion batteries that are used in iPads.

> 'Rechargeable lithium-ion technology currently provides the best performance for your device. Compared with older battery types, lithium-ion batteries weigh less, last longer and charge more efficiently' (Apple, 2020)

The landmark lawsuit that was launched on behalf of children who were maimed and killed as a result of mining accidents, produced a report with distressing images of young children with crushed legs, smashed hips, metal braces, as well as children in forced labour (Collingsworth, 2019). While the lawsuit eventually forced Apple Inc. to halt extractive practices in DRC and take their extractive practices elsewhere, extracted materialities continue to haunt everyday childhood practices such as those in Seedlings Montessori. Drawing attention to childhoods in DRC cobalt mines amidst protectionist narratives that dominate contemporary childhood practices in the UK illuminate the gendered and racialised workings of colonial capitalism that expose the differential value of some childhoods over others in the Anthropocene (See Sticky Figure 8).



Sticky Figure 8: Risky captures

Further, the lawsuit reports that the mine was owned and controlled by a UK-based mining company called 'Glencore'. The cobalt extracted by Glencore-owned mines was then sold to a Belgian metal and mining trader 'Umicore' (Collingsworth, 2019; The Guardian, 2019). The battery-grade is then sent to Foxconn, which is Apple Inc.'s largest iPad assembler based in New Tapei City, Taiwan (CNBC, 2019). China Labour Watch's (2018) recent report reveals more distressing records of workers subjected to low wages, unsanitary working and living conditions. This assemblage that has come from and been to many places is then finally distributed by Apple Inc. to homes, schools and workplaces through extensive networks. Integrating and connecting these troubled, contaminated and messy stories with the narratives on protectionism, safeguarding, and innocent childhoods expose the gendered

forces at work. Forces that powerfully shape everyday practice in the Montessori nursery and are critical for the ongoing project of developmentalist "capture". "Interference" stories such as these radically challenge what constitutes "workforce" and further poke holes in grand and well-rehearsed narratives that blame a 'feminised workforce' for various crises. The work of interference is 'not just to read the webs of knowledge production but to reconfigure what counts as knowledge in the interests of reconstituting the generative forces of embodiment' (Haraway, 1994, p.62).

6.7 Relaying risky patterns

Continuing on with the aim of investigating how a gendered workforce materialises in the Montessori classroom, this chapter considers another ordinary 'object' whose presence in nurseries has proliferated over the years, including Montessori nurseries. Cameras are normatively assumed as gender-neutral instruments, understood as 'eminently democratic machines' (Haraway, 1989, p.44) that are seen to objectively capture reality. However, an affective attunement to encounters from Seedlings Montessori demonstrate the ongoing tensions that materialise cameras as 'risky matter', perceptions of risk produced by investments in various binaries of adult/child, nature/technology, human/nonhuman and masculine/feminine. These perceptions of risk emerge in two distinct ways. Firstly, through the conflation of childhood and nature, digital technologies (iPads in this case) are framed as dangerous to children's "natural development". Secondly, cameras are positioned as 'matters of risk', a site for potential abuse from the gendered 'deviant other'. Both these narratives deepen the protectionist logic, further cementing child-camera separations. As a result, cameras are mobilised narrowly either as instruments to capture children's "natural development" or are embedded in the pedagogical process as developmental aid (DfE, 2021a).

By engaging in practices of string figuring (Haraway, 2016), and thinking camera emergences in the nursery through feminist histories, colonial capitalist legacies, and casted inheritances, new insights are generated that make it impossible to view cameras as discrete objects devoid of gendering. For instance, a closer consideration of cameras as instruments to capture developmental progress, unveil the pervasively masculinist politics that shapes its

materialisation. Cameras are part of the material-discursive processes concerned with the formation of a particular gendered subject aka *homo oeconomicus* (Wynter, 2003), while the top-down regulatory gaze of new managerialism and the desired professional qualities are simultaneously shaped by masculinist logics. These resonate with previous research on the gendered dimensions of professionalisation of the ECEC workforce (Osgood, 2012).

Further, the persistence of the masculinist gaze of colonial capitalism entails that certain disembodied forms of seeing, and constricted forms of human-nonhuman relations shape the workings of cameras in the nursery. Cameras assume 'a view from nowhere' (Haraway, 1994), capturing and extracting, protecting and preserving particular modes of living. At the same time, they ensure some "childhoods" are identified as "innocent" and "natural", to be shielded from the risky presence of queerness, the racialized other, and Dalitness through surveillance practices. While cameras work to make some bodies hypervisible, they concurrently present risk to gendered 'others' through onto-epistemic erasures and violences.

Enmeshed in these deeply problematic gendered power relations and hierarchies, the chapter highlights feminist inheritances, iPad-camera-practitioner negotiations as well as iPad-camera-flash animacies that beam with potentialities and push understandings of gender in other directions. The chapter therefore unpacks the densities and intensities of gendered forces, relations and stories in modest unassuming encounters in the Montessori nursery. Each encounter is layered with complex, multiple, distressing, affirming, transversal and contingent gendered relations that cannot simply be resolved through grand solutions (such as, male recruitment). Instead, it invites an ongoing attunement to how matter, place, space, time, discourse, and affect intra-act in an iterative fashion to produce a "gendered workforce", which is always already more-than-human. In the following chapter, I turn my attention to 'viral snot', another substance commonly associated with childhoods and deemed 'matter out of place' (Douglas, 1984), to further investigate how various binaries work to sustain gendered hierarchies in the ECEC workforce.

Chapter 7. Re-figuring viral snot as queer companion

As an early childhood educator, catching a cold during the first few months of the school year was almost inevitable. No matter how meticulously I prepared or took precautions, I inevitably caught the virus. There is a reason early childhood spaces are referred to as 'germ factories'. This time was no different either, as I found myself succumbing to a cold within the first week of fieldwork. Sniffling, blowing, wiping, dispensing, sneezing…I feel quite hazy with a light headache. I struggle to concentrate while taking notes in the company of a few children who are engaged in tea play at the mud kitchen.

Just then, the manager appears with a piping hot cup of tea. I feel a bit better after a few sips of tea, and so I decide to go inside and sit down in a corner of the classroom to organise my thoughts. As I begin to take my notepad and pen out, I hear the sound of a child's laughter. I gaze up to see little Ilana, who is in her first few days of settling in at the nursery. I see her hop and laugh, and then sneeze. On inspecting more closely, I see that Ilana has a runny nose too, with snot running down just over her upper lip. She walks a bit, hops, and laughs again. I think to myself that I should get the box of tissues in the practical life shelf and assist her in cleaning up. However, before I can act, she uses her right forearm to wipe her nose. I notice that the mucous is now smudged all over her cheeks, on her right hand and arm. I resist the urge to respond in ways I am accustomed to. Instead I stay with the disgust I am feeling. Where will the snot go? What will it stick to next? What does and will the snot do? I intently follow the snot, as Ilana moves through the classroom touching various objects with her sticky snotty hands – tables, chairs, shelves, pouring jugs…she then spots a stuffed teddy bear in the role play area, merrily races towards it, grabs it with her snotty hands, smiles at me, hugs and then kisses it affectionately…I smile back even as I try to hide feelings of revulsion. (Vignette 7.1)

7.1 It matters what s(k)nots s(k)not s(k)nots

As indicated throughout this research study, the philosophical commitments in this research are towards ordinary relationships (Haraway, 2019b), which encompass the everyday and unassuming materialities in Montessori early childhood classrooms. As Haraway (2008)

argues, grappling with the ordinary, rather than generalising, is a crucial step in the art of complex storytelling, towards being worldlier. In consonance with preceding chapters exploring tea and cameras, this chapter continues with the aims of the research study to employ a feminist relational onto-epistemology to investigate how a "gendered workforce" materialises in a Montessori classroom.

As discussed previously, perceptions of gender-neutrality in Montessori classrooms are often promoted by positioning the Montessori approach and practice as concerned with children's "natural development". In the following sections, after critically considering the developmentalist logic that shapes relations and attitudes to snot in Montessori, the chapter attunes to the gendered, racialized and "classed" performativities of snot matter, highlighting the interruptions produced through its status as 'matter out of place' (Douglas, 1984). Following this, the chapter shifts its focus to viruses as 'queer figures', which, similar to snot, upset various inherited binaries of western epistemological traditions, towards a conception and practice of transcorporeality (Alaimo, 2010).

Adopting a transcorporeal sensibility radically transforms the way human-virus relations are understood, especially as the nursery finds itself in a global pandemic. The early childhood workforce, composed principally of underpaid and undervalued women, were disproportionately affected as 'frontline workers' during the covid-19 pandemic. Committed to Haraway's (1988) situated knowledges and partial perspectives, shaped by postcolonial and Dalit "subjectivities", the chapter attunes to the atmospheric forces activated in the nursery through entanglements of matter, discourse, space, place, time, distance, and touch. Continuing with Haraway's SF method, three viral pandemics involving SARS-CoV-2, smallpox and HIV are brought into focus, and read diffractively through one another, to generate insights into the gendered and more-than-gendered forces at work that shape ongoing human-viral relations. Re-attuning to hauntings from the smallpox pandemic expose the dominance of imperialist, militarist and masculinist matterphors of 'war' that configure human-viral pastpresences. Further, by re-membering the marks of HIV pandemic alongside affirmative emergences, absenses and resonances in the nursery, the chapter concludes by embracing Haraway's matterphor '*companis*' (Haraway, 2003), that emphasises a 'becoming-with' (Haraway, 2008). This reorientation away from an anthropocentric logic that so deeply

shapes Montessori philosophy, potentiates gendered im/possibilities by reconfiguring what constitutes a gendered "workforce" in Montessori early childhood settings.

7.2 Snot meets developmentalism

For those acquainted with childhoods, the encounter with snot is quite an unremarkable and mundane scene. Snot constitutes the everyday inescapable materialities of early childhoods. It is often looked upon undesirably, incuriously, with feelings of great repulse and disgust. Something to be disposed of quickly. After trawling through early childhood research literature, it was apparent that the topic 'snot', just like its substance, was an improbable subject for research in early childhood, and most definitely not in relation to gender. The presumed insignificance and the affective stickiness of the encounter grasps me, builds up an energy that becomes impossible to dismiss. As MacLure (2023, p.218) explains: 'If something starts to emerge and it builds up an energy, there's probably something more going on there than we know'.

Before I delve into the affective dimensions of the encounter, I would like to briefly consider the prevailing logic that shapes snot relations in Montessori theory and practice. The presence of a box of tissues and a small mirror in the practical life area at Seedlings Montessori grabs my attention. As someone trained as a Montessori teacher, I am deeply familiar with the significance of this emplacement. 'Nose blowing' in most Montessori training albums are a part of 'care of self' in the practical life area as well as a component in 'Grace and Courtesy' lessons. Montessori's own writings may offer us some insight into the rationale for its inclusion in the Montessori curriculum. For instance, Montessori (1939, p.161) laments about how children are constantly derided and humiliated, and 'always being scolded about blowing their noses'. She continues: 'No one had ever taught them without attacking them directly how they ought to blow their noses' (ibid.). She believed that carefully demonstrating 'nose blowing' was important in preserving their sense of dignity (Montessori, 1939). Beyond this sympathetic view, Montessori viewed practices of personal care and hygiene as an integral part of her educational approach. The inclusion of 'nose blowing' and other personal care

and hygiene related activities in the 'practical life' area, is fundamentally concerned with fostering children's autonomy and development. In fact, Montessori (2007) emphasises their *educational* purpose over the utilitarian. Additionally, when discussing the benefits of personal care and hygiene, she makes connections between the 'independence' attained through them and the development of children's literacy and numeracy skills (Montessori, 2007). In contemporary Montessori practice, these have been cemented further in developmentalist terms through the imposition of EYFS developmental guidelines, in which the elimination of snot is mainly viewed in terms of development of skills linked to personal care and hygiene (DfE, 2014; DfE, 2021a). This further epitomises the developmentalist logic inherent in the inclusion of the box of tissues and mirror in the practical life area.

Further examination of Montessori text offers insight into its inclusion as a 'Grace and Courtesy' lesson. This is made explicit in Montessori's (1949) narration of engaging a group of children through a lively demonstration on how to blow their noses using a handkerchief. In her demonstration, she draws a clear distinction between the 'well-educated' and the uneducated on the basis of the level of sound produced and their ability for refined movement whilst blowing the nose. She explains: '[S]ome ostentatiously unfolding their handkerchief and making a lot of noise, and on the other hand the well-educated person who does so almost hiding the necessary movements and even with the least perceptible noise' (Montessori, 1949, p.342). What is deemed 'well-educated' in this case is not simply concerned with the development of skills to get rid of snot, on the contrary there is an emphasis on the refined and civilised manner with which one accomplishes it. The deliberate integration of 'nose blowing' as part of Montessori curriculum, along with the accompanying traits attached to what constitutes 'well-educated', i.e. the capacity for imperceptible movement and sound, reverberate with troubling affective charges and intensities. In subsequent sections, by re-turning to Vignette 7.1, the performativity of disgust is explored, where marks of gendered, racialised, and "classed" inheritances and emergent possibilities for refusals are traced and accounted for.

7.3 The performativity of disgust

The word 'disgust' in Latin, *disgustus*, has the connotation of 'aversion to the taste of', and is associated with specific facial expressions, characterised generally by wrinkling of the nose, upper lip raised like an inverted 'u', and lower lip raised and slightly protruding. Darwin (1915) theorised disgust as possessing an evolutionary purpose to protect oneself from eating spoiled food that might kill them. More recently, this claim has been extended by others who view disgust as the evolutionary motivation behind the avoidance of infectious disease (Curtis, 2011; Rottman, 2014). However, by uncovering the cultural politics related to disgust, Sara Ahmed (2004) unsettles the framing of disgust as the inherent quality of an object, instead highlights how visceral feelings of disgust are simultaneously intertwined with wider social, political and economic structures and relations. In other words, instead of viewing disgust as internally, individually and intentionally produced, it can be understood as performativities that work transversally across subject/object boundaries.

7.3.1 Attuning to respectability politics

Vignette 7.1 signals the material-affective qualities of the encounter that set in motion certain performativities. The ambivalence in the scene is interesting to note, the movement away works to proliferate and intensify stickiness. As Ahmed (2014a, p.91) writes: 'Stickiness then is about what objects do to other objects – it involves the transference of affect – but it is a relation of "doing"'. Sticky objects have a way of picking up traces of where they have been. Analysing the sticky performativities of disgust for instance opens up ways that Montessori education has been shaped, both historically and in contemporary times, by white middle-class values, interests and sensibilities, where qualities of 'perseverance', 'responsibility', 'self-reliance' and 'dignity' were deemed as markers of respectability.

Although Montessori (1912) seemed to acknowledge the wider systemic relations that produced injustices amongst working-class families in her project in the San Lorenzo district, the underlying assumption of working-class children and families as feckless, filthy and

dangerous savages to be educated 'in matters of hygiene, of morality, of culture' continued to persist in her theorisation (Montessori, 1912, p.52). The traces and marks of working-class respectability are sensed as it works across bodies (human and nonhuman) as a civilising force, wherein 'cleanliness, combed hair, a blown nose and being neatly dressed are imperatives for the working-class child' (Osgood & Mohandas, 2022, p.311). Rollo (2018) argues that these were conceptual and institutional hallmarks of modernity, which worked in conjunction with wider practices of colonial categorisations of indigenous peoples as feral children in need of civilising interventions. Hygiene, domesticity and imperialism converged to produce an image of colonial progress and capitalist civilisation. The vibrant force of snot and its affective charges work powerfully to highlight the pastpresence fueled by class and racial prejudice, in which Blackness, Indigeneity, and working-classness constituted something to escape, to disidentify, be educated out of and eliminated (Fanon, 1963; Skeggs, 1997). Respectability as Collins-White (2019) argues becomes a mode of attaining proximity to whiteness/'humanness'.

Skeggs (1997) further elucidates how deeply intertwined class, race and gender are, as evidenced by the emergence of femininity as a middle-class construct in the 18th century that was defined as a counterpoint to the perceived deviancy of working-class women's bodies. Furthermore, maintaining respectability according to Ross (1985, p.39) was the special charge of working-class mothers, reflected in 'their dress, public conduct, language, housekeeping, child rearing methods, spending habits, and, of course, sexual behaviour'. It is no coincidence that the task of perpetually preparing, cleaning, and maintaining an 'attractive environment' (Montessori, 2012, p.231) as well as supporting children in the development of personal hygiene skills falls squarely on a working-class female workforce. As Attfield (2016, p.48) notes, working-class women were seen as 'possessing the ability to 'civilise' (through child rearing) and their sexuality, childcare approaches and domestic orderliness was scrutinised'. Moreover, the marks of respectability politics can be seen reflected in Montessori's requirements for teachers to be 'dignified as well as attractive' (Montessori, 2012, p.230), a requirement she extends to mothers (Montessori, 2012). In addition, it is interesting to note how the 'teacher' and the 'environment' are merged in the following quote, that point to the collective work they are meant to do:

> 'The teacher, as part of the environment, must herself be attractive, preferably young and beautiful, charmingly dressed, scented with cleanliness, happy and graciously dignified' (Montessori, 1989, p.68)

Traces of this expectation can be seen in Seedlings Montessori's staff policy, which has a small paragraph on 'dress', with specific instructions for staff to be 'tidy and neat'. Vincent & Braun (2011) identify these expectations around clothing and appearance as constrained versions of professionalism that are deeply gendered and classed. The politics of respectability however is not merely confined to clothing and appearance but also related to a wide array of expectations and practices, which innocently materialise in the Montessori classroom in the form of 'Grace and Courtesy' lessons, such as polite manners, walking gracefully, speaking in turn, using 'inside' voices, remaining calm etc. Away from the focus on human intentionality, attuning to the performativity of disgust offers a sense of the subtle gendered, racialised and "classed" processes that shape what constitutes 'Montessori workforce', where the work of refining and forming the 'respectable human' is assigned to the seamless workings of the practitioner-environment dyad.

7.3.2 Dégoût: snot as 'matter out of place'

The historical connotations of the French term *dégoût*, which refers to disgust, brings another dimension to the entanglements of social class and everyday material culture in the Montessori classroom. In the 18th century, French aesthetics considered *goût* or taste to upend aristocratic hierarchies and break with etiquette and normative codifications (Menninghaus, 2003). However, this movement simultaneously resulted in the bourgeois appropriation of aesthetics and art, ultimately leading to new forms of separation between the 'vulgar' tastes of the 'lower' classes and the 'good' tastes of the upper-middle classes. Grayson Perry (2012) in his Channel4 series *All in the Best Possible Taste*, identifies how these discernible but marginally porous boundaries around taste are inextricably woven into Britain's social class system. By scrutinising the material-discursive processes that (re)produce Montessori in Britain, reinforcement of certain classed aesthetics, assumptions and patterns can be observed. What Montessori has come to symbolise is aesthetically appealing to middle-

class tastes and values, that further render it recognisable in the childcare market, 'as a unique selling point, of particular appeal to particular demographic groups' (Osgood et al., forthcoming). For example, the following quotes from two notable proponents of Montessori illustrate the consumer preferences for particular aesthetics and materialities:

> '[A]void things which are cheap and made of plastic… Children respond to the beauty of wood, glass, silver, brass, and similar natural materials' (Seldin, 2006, p.87)
>
> 'Montessori classrooms are supposed to be beautiful. The classroom walls are kept relatively uncluttered (as compared to many conventional classrooms), with only a few works of art on the walls…The furniture (usually shelves, tables, and chairs) is generally made of smooth wood. Teachers often play soothing classical music… Montessorians today often shun plastic as less aesthetically pleasing than natural materials' (Lillard, 2016, p.161)

As mentioned in Chapter 4 (section 4.3.3), this material-aesthetic distinctiveness is apparent in preferences at Seedlings Montessori. Osgood & Mohandas (2019, p.73) identify how Montessori classrooms have a 'recognisable rhythm, flow and uniformity'. This is marked by materialities that are often subdued, uncluttered, muted, precise, discrete and "natural", in contrast to the highly decorated, shiny, sparkly, slimy, and stimulating materialities that make up mainstream early years education (Gascoyne, 2019). When the materialities of snot in Montessori is re-viewed in the light of this material distinctiveness, the workings of class are accentuated, where some matters are unquestionably 'matters out of place' (Douglas, 1984). The overall preference for a muted and understated aesthetics at Seedlings Montessori, contribute to the affective qualities of a certain brand of middle-classness that is marked by restraint, moderation and rationality, in contrast to the unruly, unregulated and irrational qualities that are often ascribed to working-classness. Moreover, the influences of rationalist aesthetics can be seen in the organisation of Montessori classrooms, where objects are deemed valuable only when they meet the demands of reason (Sesemann, 2010). Each pedagogical material has a very specific and clearly determined purpose, 'connected in a series together [to] form a material of development' (Montessori, 2008, p.11). It is reasoned that if they do not contribute to cognitive activity (i.e. concentration), they are an impediment to development, and to be removed from the classroom.

A further consideration of snot as 'matter out of place' uncovers western mathematical logic that undergirds Montessori philosophy (Montessori, 2020). The Montessori materials and their intended work in the classroom emphasises an Aristotelian ontological logic that is marked by neat, exclusive and discrete categories, where it is believed that 'one thing cannot be one and another at the same time' (Reiter, 2020, p.107). The ambiguity of snot materialities, a substance between two states, confounds Aristotelian logic of essences and binaries. Materialities such as that of snot that leak and destabilise boundaries and form 'cannot be included if a pattern is to be maintained' (Douglas, 1984, p.41). This is further reinforced by how practices of categorising, classifying, sorting, grading etc. form a core part of every area of the Montessori curriculum towards purposes of refinement. Which is further substantiated by the proposition that the child possesses a 'mathematical mind', and the relationship between the child and an aesthetic environment is also 'mathematical' (Montessori, 1970, p.98).

Montessori (2012, p.38) viewed these tendencies as an innate force (which she referred to as *horme*[18]*),* that marked the child's movement across 'successive stages, from the unconscious, to the subconscious, and so arrives at clear consciousness'. These views are shaped by a developmentalist logic, 'underpinned by a future oriented hierarchy where conscious and abstracted thought is fetishized' (MacRae, 2020, p.102). Snot as slimy, sticky, ambiguous, excessive, unrestrained and boundary-defying matter does not contribute to Montessori's goals of refinement of bodies, minds, tastes and senses (Montessori, 2012); on the contrary, banishing snot resolves in such refinement.

The aversion to such ambiguous materiality, Estok (2020) explains, is invariably about maintaining the boundary, integrity and exceptionalism of the 'hyper-conscious human'. A point emphasised in evolutionary discourse that locates 'human origin' in the 'primordial

[18] Horme is a word Montessori used to refer to the inner impulsive and unconscious force that drives the process of 'self-construction', development and evolution. She explains 'A vital force is active in the individual and leads it towards its own evolution. This force has been called Horme' (Montessori, 1949, p.122)

slime' (Hurley 2004), i.e. evolution from undifferentiated, unconscious, slimy matter to "higher forms of life" marked by consciousness. In fact, slime-like qualities and materialities, such as that of snot matter, have been associated with the death of consciousness and purposive nature (Sartre, 1984), expressed in gendered terms as 'feminine' (ibid.). The gendered connections with myxophobia (aversion to slime), as noted by feminist scholars, are enmeshed in sexism and misogyny (See Kristeva, 1982; Creed, 1993). The development and production of the 'hyper-conscious' human or the 'rational human', is concurrently entangled with efforts to distance from and eliminate the 'feminine'.

This finds further relevance when the ever-increasing workings of rationalisation of early childhood education and care are considered. As reviewed in section 2.6.1, recuperative masculinity interventions' proposed male recruitment moves in public and policy discourse, fundamentally blame a so-called 'over-feminised school system' (Pells, 2016) for failing children. In particular, 'white working-class boys' are portrayed as uniquely in crisis, claimed to be victimised by the undue and unnecessary focus on tackling racism and addressing gender inequalities (House of Commons, 2021). As explained in Chapter 2 (see section 2.6), such claims have been extensively discredited in research as an outcome of misuse of statistical data, and further identified as tactfully employed to divert attention from the ongoing injustices impinged by neoliberalisation of early childhood education (Connolly, 2004; Bragg et al. 2022). As McGregor (2018, p.383) argues, 'the patriarchal structures persist despite (or perhaps because of) the feminine nature of the profession'. The rationalising agenda of neoliberal capitalism is palpable in the endless efforts by governments to 'professionalise' the ECEC workforce (Osgood, 2012; Fairchild, 2017; Osgood et al. 2017), as evidenced in section 5.3 and 6.3 in connection to tea and cameras respectively. The pervasiveness of the rationalising logic was picked up in conversations at Seedlings Nursery, where my research focus of 'investigating gender in the workforce' was welcomed enthusiastically with comments about the unique educational benefits that 'men' bring to children.

When the child-snot encounter in Vignette 7.1 is viewed in relation to the networked enactments of such regulatory power, conjures deep appreciation for the modest, subversive and unruly unfoldings witnessed. Child-snot assemblage sticks, moves, infects, and

contaminates in an unrestrained manner. While Montessori (2012, p.57) considered 'the construction of movement is an important part of a child's development—not just a coordinated movement, but movement with a purpose', child-snot movements are indeterminate, unpredictable, uncontrollable, emergent and move about without a discernible purpose. As MacRae (2020, p.102) explains 'movement is always in relation to the things that move us'. The unanticipated intra-active embrace of the teddy bear, an item that is traditionally not seen or acceptable in a Montessori setting further bewilders the scene. Quite remarkably, the child-snot assemblage is not subjected to being 'fixed', there's no practitioner looming around teaching her how to blow her nose, or on instilling respectability. While the dominant gendered, racialised and "classed" dimensions are felt and sensed forcefully as material-affective-discursive atmospheres, they are also subverted through a refusal to swiftly regulate and manage child-snot relations. Ruptures are produced to well-established work of individualising, rationalising and humanising childhoods (Snaza, 2013) that the Montessori-practitioner- aesthetic-environment has been prepared and relegated to do. An affective attunement to snot as 'matter out of place' disclose the multiple, complex, sticky, and lively performativities that stretch and expand what constitutes a "gendered workforce".

7.4 Activating viral ontologies

Continuing on in the practice of string figuring, the force of *what else* draws me to further probe the sticky substance of disgust (Manning, 2016). While the production of snot can be attributed to many different factors, from allergic rhinitis and the consumption of spicy food to infections, in Vignette 7.1, the manifestations point to a viral infection, which by gauging the 'symptoms' is very likely a common cold. In this section, I draw attention to viral matterings in the vignette, to think of and think-with viruses as queer figures and as matterphoric (Gandorfer & Ayub, 2021), where their ontological queerness and indeterminacy works to challenge and break apart long-standing divides shaped by Aristotelian logics (Giffney & Hird, 2008).

7.4.1 Viruses as queer figures

Viruses are queer in the sense that they transgress boundaries and long-established modes of categorisations. For example, interrogating viral morphology and anatomy produces important interruptions to notions of sexual dimorphism. Uncovering the coloniality of gender, Lugones (2010) argues that sexual dimorphism is the grounding for Western colonial gender system. Colonial scientific traditions have long waged "nature" and the "natural" against queer, trans, intersex, and indigenous peoples (Alaimo, 2010). Sexual dimorphic apparatus and the heterosexual matrix work in consonance to (re)produce evolutionary hierarchies that place cis-heterosexual manhood and cis-heteronormative relations at the pinnacle of civilisational progress (Butler, 1993; Lugones 2010). Hird (2004) documents how queerness in "nature" has been deliberately undermined, ignored and deemed aberrant in order to uphold such normativities and hierarchies. In previous research at Seedlings Nursery (Osgood & Mohandas, 2021), an attunement to the composition, organisation and materialities of Montessori animal family figurines made visible the "innocent" materialisations of sexual dimorphism, heterosexuality, western conjugal family, and monogamy. In response, staff at Seedlings Nursery have since reconstituted "animal families" in more expansive ways, opening up possibilities for other-than-heterosexual modes of relations. However, such instances demonstrate the unassuming ways sexual dimorphism, heteronormativity and ecosexual normativity weave themselves into everyday childhoods through notions of "nature" and "natural".

Further, as explored previously in section 6.6.1, through romanticised conflations of "nature" and "childhoods", children and childhoods are rendered "pure", "innocent", and natural human potential (Castañeda, 2002), even as sexual dimorphic and heteronormative ideals invisibly organise and regulate bodies. The readiness with which young children are categorised as ""male" or "female", or how their bodies are violently and nonconsensually subjected to surgical interventions towards dimorphic goals demonstrate the hegemony of cis-heteronormativity (Butler, 2004; Garland & Slokenberga, 2019). Queer, trans and intersex childhoods in the UK and globally are subjected to ongoing forms of ontological violence and forced erasure. The regulatory operation of this logic is also evident in ECEC workforce gender diversification campaigns, where the inclusion of men (typically presumed to be cis

and heterosexual: See section 2.6.2 where "positive role model" and "absent father" discourses are explored) into a feminised workforce is seen as the end-all. Elsewhere (Mohandas, 2022), I argue how grand narratives such as the male recruitment narrative not only obscure material-discursive processes that privilege cis white heteropatriarchy, but further conceal affirmative moments and gestures that *queer* childhood practice. The viral-child entanglement in Vignette 7.1 is imbued with such transgressive, subversive and generative energies.

Right in the thick of the rapacious workings of sexual dimorphism that relentlessly seek to decode bodies, the viral presence, as "naturally" non-dimorphic, inhabits an ontology of queerness. Thinking-with viruses matterphorically foregrounds themes common to queerness, themes such as risk, transgression, amorphousness, multiplicity and illegibility. They occupy an ontology of excess -- the unsought, untouchable, infectious, contagious, temporal, mutative and dangerous. Galloway and Thacker (2007, p.87) highlight that one of the central aspects of a virus is that it is 'never quite the same', continuously and rapidly mutating through cryptographic processes. They operate through a refusal to cohere, a kind of 'queer opacity' (de Villiers, 2012) or 'queer darkness' (Halberstam, 2011), gesturing towards a resistance to be decoded or to be "figured out". Viruses perplex and elude anthropocentric modes of capture, instead they dramatise 'emergent worlds of desire, action, agency, and interactivity that can never be reduced to a background or resource against which the human defines himself' (Alaimo, 2010, p.67). Attuning to viral entanglements in this manner is not about thinking of viruses as symbolic or as a metaphor for thinking about the gendered 'human subject', on the contrary such attunements demonstrate viruses as integral and constitutive thespians in worldly performances. They are not only inseparable from debates, policies and practices related to 'gender in the workforce', but also actively shape and transform the gendered field of relations merely through their presence.

7.4.2 Transcorporeality: queering human-viral separations

Further, viruses are queer in their capacity to throw into question what constitutes living and nonliving, an aspect that has confounded scientists for as long as viruses have been identified

(Stanley, 1935; Gortner, 1938; Forterre, 2016). Dominant scientific discourse renders them 'nonliving' on account of their lack of ability to reproduce *independently*, i.e. they are framed as requiring a 'host cell' to reproduce, reflected in their description as 'a kind of borrowed life' (van Regenmortel & Mahy, 2004, p.8). However, as Gilbert et al. (2012, p.326) identify, at the heart of this distinction is the western notion of an 'autonomous individual agent' that relies on dichotomies of self/nonself, subject/object, host/parasite etc. From a more-than-human perspective that takes a sympoeitic view (Haraway, 2016), these dichotomies are blurred.

The presence of viral snot in Vignette 7.1 points to the ongoing openness and porosities of bodies - human and viral. As explained elsewhere (Osgood & Mohandas, 2022) a fiction of impermeable boundaries and 'individual bodies' can only be produced through ontological and methodological simplifications. What 'biological individualism' frames as 'human body', according Sagan (1992, p.370), 'is not one self but a fiction of a self built from a mass of interacting selves. A body's capacities are literally the result of what it incorporates; the self is not only corporal but corporate'. This is further complicated by the pivotal role viruses have played in symbiogenesis, particularly in relation to endogenous viruses that have integrated themselves into 'host' genomes. For instance, genome sequencing reveals that 8 percent of the human genome consists of endogenous retroviruses, which extends to roughly half of "human" DNA when retroviral fragments and derivatives are considered (Medstrand et al., 2002). Such knowledge radically unsettles autonomy, possessive individualism, anthropocentrism and human exceptionalism.

Alaimo's (2010) notion of transcorporeality foregrounds such an ontological orientation in which the outline of the humanist "human" is transgressed and transversed by substantial material interchanges. It unequivocally locates 'the master subject' of Western humanism as an inherently white masculinist figure, 'who imagines himself as transcendent, disembodied, and removed from the world he surveys' (Alaimo, 2018, p.435). At this juncture, it is important to note that 'the master subject" is integral and foundational to Montessori's approach to education:

> 'Man is an energy set above nature. He dominates nature, and transforms it by utilising it. He must make use of all that there is in nature, its energies, all the things that are in and around the earth, to make something above nature, superior to it, but which is nature itself' (Montessori, 1998, p.290)

The "human" here is somehow positioned 'outside of the natural milieu that sustains them' (Neimanis & Walker, 2014, p.563). In contrast, a transcorporeal reading renders such separation a myth, further uncovering the privileging of certain narrow formations of gender. When viral-human intra-action in Vignette 7.1 is viewed transcorporeally, it instantly locates the unremarkable scene of *'sniffling, blowing, wiping, dispensing, sneezing…'* in complexly networked relations, that are simultaneously political, economical, ecological, historical and industrial (Alaimo, 2016). For instance, the act of dispensing viral snot immediately embroils the scene in historical and ongoing workings of the tissue paper market and industry, and it's entanglement with practices of mass deforestation, reforestation through monocropping, the erosion of soil, the loss and displacement of indigenous communities, plant and animal life, and with endless unfolding worldly connections.

Thinking-with viral snot complicates understandings of what a "gendered workforce" in Montessori constitutes. In line with the reconceptualisations in this study (See Chapter 3, section 7), a gendered workforce can therefore be reframed as the complex, shifting and contradictory material, discursive and affective forces that work on and through bodies (children, Montessori practitioners, viruses, snot, Montessori materials, space etc). In attuning to these forces, identifying relations of power is indispensable. Which in this case entails locating the affective flows and intensities of power that privilege the formation of a particular kind of human, albeit a 'hyper-conscious man', whose progress is characterised by his increased separation from the nonhuman world (from snot, virus, and at an evolutionary scale, from 'primordial slime'). Concurrently, by attuning to the performativities of seemingly inane matters such as snot and virus, or 'minor gesture' as Manning (2016) would describe it, activates a shift in tone and field, that resists sedimentation long enough to permit seeing gendered worlds in the making. In the rest of the chapter, a transcorporeal sensibility is foregrounded as I delve into how 'humans' and 'nonhumans', 'as embodied beings, are

intermeshed with the dynamic, material world, which crosses through them, transforms them, and is transformed by them' (Alaimo, 2018, p.435) even as Seedlings Montessori is plunged into a viral pandemic.

7.5 Covid-19 in Capitalocene

> 'Ironically, just as many of us are considering the Anthropocene, and theorizing the immense temporal and geographical scale of human impact on "the planet," something miniscule suddenly topples life as we know it' (Alaimo, in Kuznetski and Alaimo, 2020, p.145)

Encounters such as Vignette 7.1 are layered with affective relations and memories inherited from working and grappling with viral snot, wherein challenges related to productivity, insufficient Statutory Sick Pay (SSP), and pressures on staff:child ratios due to absenteeism are not uncommon. However, the sudden emergence of SARS-CoV-2 or covid-19 brought new viral sensibilities to the research process that made it impossible to brush aside transcorporeal worlds. In the following section, I begin by locating Seedlings Montessori in the covid-19 pandemic, and diffractively read them through other accounts to account for the gendered and more-than-gendered forces that work on, across and through bodies, places, spaces and times. As Haraway (in Haraway & Goodeve, 2000, p.106) explains, 'fleshy bodies and the human histories are always and everywhere enmeshed in the tissue of interrelationship where all the relators aren't human'.

7.5.1 'The proletarian lung' of childcare workers

As stated already, the covid-19 pandemic brought a heightened realisation of the inseparability of bodies - human and nonhuman, while simultaneously making explicit the value of care as indispensable for the sustenance of all (Ailwood & Lee, 2020). At the same, it amplified a politics of difference, intensifying unequal relations that already constituted worlds (Oppermann, 2021). As Whitehead et al. (2022) explain, these materialised along the lines of 'differential exposure, both to the infection and to the unintended consequences of social distancing and lockdown'. For instance, shaped by unequal social, economic and

locational relations, Black and South Asian groups in the UK were reported to have 'hit hardest' by covid-19 (Office for National Statistics, 2020). Meanwhile, UK East/South East Asian communities experienced a sharp increase in xenophobic aggressions and attacks (Yeh, 2020; Al-Talib et al., 2023). Further, the pandemic lockdown witnessed an overrepresentation of 'women' in sexual and gender-based violence (SGBV) cases, particularly intimate partner violence (IPV), with a sudden spike in femicide cases (Grierson, 2020; Bradbury-Jones & Isham, 2020; McKinlay et al. 2023). These examples offer a faint sense of the deeply unjust relations that textured the UK pandemic scene, but further accentuated the urgency of care.

Moreover, as Fullagar & Pavlidis (2021) underscore, covid-19 made it impossible to ignore that essential work of the care sector was overwhelmingly upheld by feminised labour. This entailed, women, especially working-class women, experienced increased vulnerability and higher rates of infection in the UK (Blundell et al. 2020). Early childhood practitioners, as a highly gendered and "classed" group of 'essential frontline workers', suffered disproportionately during the pandemic.

While the fieldwork at Seedlings Montessori was enacted before covid-19, as a result of maintaining ongoing connections with the nursery during and after the lockdowns, offered a sense of how covid transformed nursery life. During the preliminary lock down, Seedlings Montessori was forced to close, which was described by the nursery owner as a rather precarious and disorienting time, with worries about financially sustaining the business. It is an aspect identified by Hobbs & Bernard (2021), who highlight how financial struggles during covid had led to not just temporary, but also permanent closures of many early years settings, an outcome of years of austerity and ongoing neglect (Penn et al. 2020; Marmot & Allen, 2020). Shortly after, when childcare was deemed 'essential service', Seedlings Montessori like other early childhood provisions across the country, opened and had to quickly adapt to demands for social distancing, sanitation and hygiene protocols. The marks of covid sanitation protocols and guidelines, for instance, were evident on my return to Seedlings Nursery a year later, with hand sanitising points and instructions to sanitise equipment pasted on nursery walls. Covid-19 dramatically underscored corporeal interconnections with other humans, nonhuman beings, air, door knobs, furniture and everyday nursery objects, all

suddenly being rendered invisibly hazardous, while others (eg: surgical face masks, gloves and hand sanitisers) became performative constituents that seemed to promise some degree of "separation" (Sticky Figure 9) Thinking-with Lewontin and Levin's (2007) depiction of 'pancreas under capitalism' and 'proletarian lung', Alaimo (2010, p.28) spotlights this transcorporeal logic, highlighting how the "worker's body" is 'never a rigidly enclosed, protected entity, but is vulnerable to the substances and flows of its environments'. Osgood (2022, p.55) extends this logic to write about the entanglements of covid and the early childhood worker. She writes: 'The 'proletarian lung' of the early childhood worker exemplifies the means by which external social forces can transform an internal bodily organ, and so further reinforce oppression and exploitation'.

Sticky Figure 9: Covid entanglements

7.5.2 Entangled care: a more-than-human workforce

After being forced to take most of the learning online at first, the nursery resumed face-to-face care from September 2020. I was informed that a collective decision was made at Seedlings Montessori not to wear masks or practise physical distancing during the nursery session. Masks were worn by adults when welcoming children at the gate, but throughout the day no masks were worn, nor were children or staff encouraged to physically distance. The rationale was to give children some sense of normalcy. Further as expressed by staff, physical distancing would simply be impossible considering the nature of work with young children, a sentiment reflected by King (2023, p.212): 'the very nature of play, for all children, made social distancing a difficult proposition'. Notwithstanding these attempts to restore a sense of normalcy, the theme of covid seemed to infiltrate children's play. Initiated by some children who insisted on making masks in the art area, covid-themed play had become commonplace at Seedlings Montessori by the time I re-visited the nursery, as evident in the following vignette:

> *Children are playing in the home corner where a doctor-theme has been set up. On the tabletop, there are two patellar reflex hammers, a real and pretend stethoscope, a notepad, and pen. Beside the table, a small bed with a stuffed grey elephant (which I recognise from John Lewis) tucked under a colourful blanket adds to the theme. Children are in and out of this area. One little girl is sitting beside the stuffed elephant, tending to it. I lean over and inquire about the elephant's condition, and she replies: 'Elephant is very ill with covid'. She then turns to the elephant and soothes it with the promise of 'Mummy's coming'. Meanwhile, a practitioner offers masks for play, helping three boys put them on. As I temporarily step away, I return to find one of the boys holding another at arm's length, instructing him to stay away. 'You have to stand here' he insists, pushing the boy aside. However the pushed boy laughs and continues walking towards him. 'You can't touch me. You have to go stand there', the pusher repeats. After a few more seconds of this, a practitioner is seen walking towards them, whispering something to them, and the boys abandon everything and dart off in another direction* (Vignette 7.2).

This was my first visit back to the nursery, and I recollect feeling a sense of unease with the level of proximity to other bodies. Government protocols on social distancing had clearly left affective marks and tensions on and across bodies, marks that may never fully be erased. As I watched on, the performativity of distance, touch and space in the scene particularly

grasped me. The repeated insistence by one of the boys to stay away and not touch is contrasted by the intimate and caring connection between the little girl and the elephant. What initially caught my attention, which is perhaps a connection made too hastily, was the hegemonic formations of gendered patterns of care, reiterating my earlier point in section 7.5.1 about formal and informal care practices being overwhelmingly enacted by women. This is accentuated in the encounter by the exclusive female staff composition at Seedlings Montessori, and further emphasised by the promise of 'Mummy'. However, by considering *what else* (Manning, 2016) is at work, offers a way to attune to the more-than-human and transcorporeal dimensions in the scene.

I must admit that it did not initially occur to me to consider the scope of more-than-human care in the scene (de la Bellacasa, 2017). However, if care, as Fisher and Tronto (1990, p.40) describes, 'includes everything that we do to maintain, continue, and repair our world so that we can live in it', then it impels us to think beyond the domains of "human" activity. As Aslanian (2020, p.328) beautifully puts it: 'the things that we do care with also do care with us'. The girl-elephant proximities and intimacies of care can indeed be viewed in this manner, as reciprocal, generated intra-actively through ongoing viral entanglements and tainted materialisations of consumer capitalism. The entangled sense of care in vignette 7.2 not only dislodges "care" from being an exclusive human affair, but it further disrupts "pure", "innocent" and "perfect" imaginaries of care. Care is therefore always a making-with, a sympoeisis (Haraway, 2016; Ailwood & Lee, 2020). The entangled nature of care was further illuminated in conversations with a practitioner at Seedlings, who relayed the following:

> 'All the children either came in the car or walked - so I felt fairly safe there. It was the commuting on public transport everyday that was for me…that bothered me. And I had to take two buses to get to the nursery… So, I decided to walk... It took me an hour, more or less. I just couldn't afford to risk myself, my child, my family, especially when we were not prioritised for vaccination like other key workers' (Practitioner at Seedlings Montessori)

Amidst government instructions to 'stay at home and away from others' (UK Government, 2020a), it is clear that possibilities of "care"' and the possibilities to negotiate care did not materialise homogeneously. Yet when care is viewed as a making-with, the more-than-human relations and negotiations that materialise care is made visible. While physically distancing with children was deemed impossible, the practitioners' comments highlight the lively entanglements of nonhuman and other-than-human entities (i.e. cars, roads, buses, space, distance) in the negotiations afforded, and capacities enhanced through their intra-active re-workings to produce care in some ways and not in others. For instance, through walking, distance and space were put to work differently right in the thick of the viral pandemic, as a means to enact care. Moreover, while the low precedence for vaccine administration amongst frontline workers further underscores the early childhood sector's devalued status, i.e. a case of care denied to 'care workers', such a conception of vaccine administration as care is simultaneously complicated by its imbrication in practices of exploitation, where, in the name of care, nonhuman primates have been used as test subjects in vaccine trials (Collard, in Lunstrum et al., 2021). Attuning to the complexity of care, Ailwood & Lee (2020, p.310) argue that care can be much more than the 'practical and material work of maintaining small bodies', instead care can be 'what is not done or said, care can be time, space or distance respected and care can be oppressive'. These demonstrate the entangled and contradictory stories that constitute "childcare workforce", as always already "more-than", always transcorporeal.

7.5.3 Snot, snot pots, distance laws and untouchability

Following the tentacles or 'feelers' in SF practice (Haraway, 2016) involves a refusal to be led by a logic of rationality, instead entails attuning to sticky affects (Ahmed, 2014a) such viral entanglements generate. The workings of touch, distance and space take on different affective qualities when Dalit "subjectivities" and sensibilities are foregrounded (Refer to Chapter 3, section 3.4 and 3.5).

In this section, I re-turn momentarily to the performativity of disgust and the affective bind of snot in vignette 7.1, to add more layers to how the politics and practice of distance is reconstituted when diffracted through Dalit lifeworlds. As described in section 3.5, the

politics of distance, untouchability and enforced labour of sanitation are fundamental to the reproduction of caste hierarchies and injustices. For instance, Dalit sanitation workers and cleaners have historically worn clay pots around their necks; pots that were used to contain snot and sputum in order to prevent them from coming in contact with the ground and thereby polluting the paths designated to the "upper" caste (Geetha, 2010). Dalit poet Arjun Dangle poignantly expresses this in the following poem:

'When we had clay pots around our necks
And tied a broom to our rumps
When we announced our presence to those above us with a 'Johar Maybap'
Then we were friends
And we fought with the crows

For we never even gave them the snot from our noses
When we dragged away the carcasses of their cattle
And shared the meat among us
Keeping it far away from them
Then they found us dear
And we fought with the foxes, dogs and vultures
Because we ate their share'

(Dangle, in Gokhale-Turner, 1981, pp.34-5)

According to Lee (2021) who has explored the connections between disgust and untouchability, to practise untouchability is to practise disgust. This is epitomised by the evocative Dalit expression: *'ve ham se ghṛṇā karte hain'*, which translates as 'they practise disgust on us' (Lee, 2021, p.310). Ahmed (2014a) argues that the 'figurability of disgust' is contingent on the act of substituting the substance of disgust for the "other". Dalitness is therefore ontologically determined as impure, contagious, dangerous, and untouchable, a body of disgust. Distance can then be understood as a performativity that is produced by such corporeal determinations.

With the emergence of covid, snot activated distinct affective economies, especially with 'runny nose' listed as amongst one of the key symptoms (NHS, 2023). Relations with snot

drastically changed in nurseries with more rigorous responses to eliminate them to prevent spread of the virus (Russell, 2023). For the Dalit subject re-encountering snot, practices of sanitation, distance, and untouchability are haunted and saturated with different corporeal-affective registers, where the elimination of snot also constitutes the elimination of 'self'. For instance, with the emergence of Covid-19, varna purity laws, practice of untouchability and related atrocities have been given a veneer of legitimacy in India through the guise of 'science', reinterpreting purity laws and 'untouchability' through the rhetoric of social distancing, sanitation and quarantine (Harikrishnan, 2020; Mondal & Karmakar, 2021). As Bharadwaj (2021, p.139) notes, 'social distancing' as a 'safety measure simply bled into established upper caste prejudice and the practice of "untouchability" in both subtle and egregious ways'. As stated in section 6.6.2, while manual scavenging and caste-associated work have been legally banned in India, Dalit people, overwhelmingly Dalit women, continue to be forced to work and live as manual scavengers, sewer cleaners and carcass disposers (Pariyar et al., 2022; Jiwani et al. 2020; Shetty, 2018). Even though a rather large number of migrant workers (mostly Dalit) within India were suddenly rendered redundant during the pandemic and forced to walk long distances (hundreds of miles) to return home (Dhillon, 2022; Jesline et al., 2021), Srivastav et al. (2021) notes that Dalit workers principally constituted the 'essential workforce' in relation to hygiene and sanitation work in hospitals, however without the provision of adequate protective measures or safety gear (Das, 2020). These forces vibrate with resonant frequencies in Seedlings nursery, where sanitation work became the mandate of early childhood practitioners, with no extra funding from the government to cover costs for cleaning, safety and protective gear. Additionally, the confinement of Dalit communities into small pockets on the outskirts of villages had resulted in limited access to essentials like food and medicine; a condition further exacerbated by overcrowding, which forced Dalit communities to live in close quarters, physically impossible to practise distancing. The traversal entanglements that a pandemic made visible, generate more sticky knots that prompt questions around the workings of distance, space, snot and viruses: Who is afforded the possibility to practise distancing? Who gets to negotiate the politics of distance and touch? How are they negotiated, and at what cost?

In contrast to these deeply unjust emergences, government responses to covid have included central banks injecting billions in fiscal and monetary measures, with much of this stimulus having gone into financial markets, and in turn into the networks of the ultra-rich (Fanelli & Whiteside, 2020). Further, private companies and corporations have generated an increasing portion of the global corporate profits and benefited from the health emergency (van Schalkwyk et al., 2021). For instance, Indian biotech firms such as Serum Institute of Technology (world's largest covid vaccine manufacturer) and Bharat Biotech have amassed substantial profits, making them billionaires overnight (Gopalan, 2021). Serum Institute, for example, manufactured and supplied almost half of the world's AstraZeneca shots (Neate, 2021). The entangled sense of global capitalist inequalities are further reinforced when rich countries like the UK were seen to hoard millions of vaccines, amidst vaccine shortages in poorer countries like India (Allegretti, 2021). A matter that generates more layers, knots and tensions to earlier comments about childcare workers 'not prioritised for vaccination'. India's role as a vaccine manufacturing hub of the world (Sharun & Dhama, 2021), is reflective of the Modi administration's investment mobilisation through a tight set of businesses, and the greater political goal, shaped by a 'growth and development' model, to orient India as a major player in the global market (Khair, 2015; Chatterjee, 2023). As Williams & Satgar (2021, xvi) identify, the 'success' of Modi's politics 'is not a departure from neoliberalism, but fuses market-based development with a coercive majoritarianism that resonates across caste and class divides among the country's Hindu majority'. Neoliberal capitalism with its distinctive worldview and signature, as Mirowski (2013, p.28) contends, has 'sunk its roots deep into everyday life', the workings of which are never a monolith, but 'complex, mediated and heterogeneous' (ibid., p.52). The maximum exploitation of 'human capital' is fundamental for formation of a more productive, more competitive, and more flexible future workforce that ensures their readiness to the ever-changing demands of the market.

7.5.4 'Our children's future…'

> 'We cannot let this virus damage our children's futures even more than it has already' (PM Boris Johnson, in UK Government, 2020b)

In the UK early years sector, neoliberal logic with its emphasis on producing 'future human capital', that has driven the education sector since New Labour, became particularly apparent in government responses during the covid pandemic (Sims et al., 2022). While early years practitioners at Seedlings Montessori were prioritised as the frontline of essential workers, risking their own health and well-being at a time when very little was known about the virus or how it affected children, the lack of government support highlighted the low priority assigned to childcare workers. Seedlings Montessori was given no access to tests or vaccines, nor was support extended for additional costs incurred, i.e. sanitation costs and Personal Protective Equipment (PPE) expenses. The privileging of neoliberal market logic was seen in the emphasis on the 'power and necessity of individualism', wherein social problems were understood in terms of personal responsibilities and/or failings.

The pandemic was thus framed in economically rationalised neoliberalist terms, emphasising the impact of the virus on 'children's future' thereby reducing the role of practitioner and childcare as functioning 'for the market' (Pilotta, 2016, p.47), distracting from the workers' conditions to profit margins. Further, driven by intentions to enable parents to go back to work, 'this marginalised and devalued workforce becomes complexly implicated in the preservation of capitalism but at an extraordinarily high cost to personal health and well-being' (Osgood, 2022, p.9). According to a comprehensive survey carried out by the Early Years Alliance (2021), about 80 percent of the workforce had felt stressed about work due to covid, and a fifth were considering leaving the sector due to the high levels of stress and mental health concerns. The challenges to recruit and retain early childhood practitioners have been further highlighted by Hobbs & Bernard (2021). This was reflected in conversations with staff at Seedlings Montessori, as indicated in the following comments:

> 'I did feel quite demotivated. It was the first example for me as an early years practitioner of how poorly we are thought of. It made me feel very unimportant, in terms of the structure of the country. They want the economy back up and running, they want parents to be able to work, but with no awareness of what it was for those of us on the ground as key workers' (Practitioner at Seedlings Nursery)

In section 7.5, I have attempted to demonstrate what a transcorporeal sensibility can do in reconceptualising a "gendered workforce". I highlight how what constitutes 'childcare' and "workforce" are constituted and reconstituted by situated and partial entanglements of Montessori practitioners, children, researcher, nonhuman components (cars, stuffed toys, buses, nonhuman primates, snot, viruses) as well as other-than-human constituents (distance, space, temporality), that are not separate from gendered relations and materialisations in shadow places. Therefore, gendered performativities are not a matter of 'discovery', i.e. as though these relations have always already existed, waiting to be discovered. Alternatively, they are fresh, ongoing, generative and un/anticipated connections that iteratively get produced through more-than-human relations and "subjectivities". The circulating affective forces of covid therefore viscerally signal the moral depravity of the imperial mode of living and global capitalism marked by an economisation, in which an economic rationality reconfigures everything (Brown, 2016), perpetuating unimaginable levels of distress and suffering upon a vast majority of the world, amplifying and exacerbating already pervasive gendered, racialised, classed, and caste-based injustices. Such attunements demonstrate how atmospheres are 'the direct materialities of shared experiences' (Stewart, 2010, p.3) that compose worlds in the Capitalocene, where all those entangled in childcare work (human, nonhuman and other-than-human), are understood as 'economic custodians' ensuring investments made in childcare do not go to waste (Gibson et al., 2015).

7.6 Un/doing viruses as metaphors of war and struggle

Amidst these ravages of neoliberal capitalism, it is interesting to note the invocation of wartime rhetoric by governments. For instance, former UK Prime Minister Boris Johnson, in statements made at covid press conferences invoked a metaphor of war, where the virus was framed as a 'deadly enemy' while reassuring the British public of 'beating the… virus' to 'win the fight' (See UK Government, 2020c). As Brives (2018) argues the war metaphor has historically been used to describe viruses and the broader microbial world. She explains: 'Because of the success of germ theory, and through an obliteration of the subtler interpretations of our relationship with microbes, especially those developed by Pasteur himself, it is indeed through the metaphor of struggle that the relations between humans and

microbes are most often not only presented, but also considered and analysed' (ibid., p.115), and thereby limiting them to the role of mortal foes that must be fought, eradicated, and destroyed.

Such militaristic, war narratives as Williams and Greer (2023, p.91) highlight are often used to portray 'politics as a brutal and competitive (masculine) arena … reinforcing patriarchal understandings of bravery and service that glorify hegemonic masculinity'. Feminist scholars (Enloe, 2007; Wibben, 2018) have argued how the normalisation of militarised language in everyday politics is used tactically for the sake of biopower, where frontline workers are positioned as 'heroes' who 'sacrifice' to 'the individualising logic of neoliberalism' (Lohmeyer & Taylor, 2021, p.630). While early childhood practitioners are painted as heroes, as Kristensen (2020, p.7) argues, the hero narrative 'serves to mask the reality that they are in fact more accurately hostages to an economic system that has only further entrenched deep inequalities through its response to Covid-19'.

In the following sections, I diffractively attune to two other global pandemics (smallpox and HIV) of historical and ongoing significance. By attending to hauntings from the smallpox pandemic, section 7.6.1 exposes the dominance of imperialist, militarist and masculinist matterphors of 'war' that configure human-viral pastpresences. While section 7.6.2, the marks of HIV pandemic alongside affirmative emergences, absences and resonances in the nursery are re-membered, to embrace different human-viral modes that emphasise a 'becoming-with' (Haraway, 2008).

7.6.1 Virality of war: Imperialism, childhood innocence, and biopower

Patterning with string figures permits traversing times, spaces, places, and bodies to register interferences (Haraway, 1992). As the Seedlings Montessori community grappled with the immense interruptions due to covid, the force of war matterphor dominated public discourse, which as Yetiskin (2022, p.6) argues 'became inherently a somnambulist exercise of updating colonial, patriarchal, racist, and authoritarian sovereign power'.

This war-inspired formulation of viruses is visible in colonial histories of violence, where viruses were strategically activated for biological warfare and bioterrorism against Indigenous

populations (Fenn, 2000). For example, the British infiltrated small-pox infected blankets to Indigenous people in North America (Finzsch, 2008) and later introduced them to the Aboriginal population in Australia (Campbell, 2002), leading to extermination of thousands of Indigenous people in both locations. In India, colonial-viral relations materialised in a completely different manner, wherein medical interventions were made by the British East India Company, through variolation and vaccination to combat smallpox emergences. Nair (2010, p.8) explains that these were carried out with intentions to protect Europeans in India from the virus, and simultaneously 'protect the health of their primary source of revenue - the Indian population'. This enabled the British to project an image of the colonial state as benevolent, whilst simultaneously promoting the putative superiority of Western 'scientific modernity', further contributing to the narrative of colonial intervention as a 'civilising mission' enacted with the welfare of the 'colonised' in mind.

The method of vaccination practised initially involved arm-to-arm inoculation with human-lymph infected with cowpox. Globally, children served as the primary vectors for transmitting the vaccine, a choice shaped by conceptions of childhood innocence and purity, which was further absorbed into the language of medical and political campaigns where vaccines were referred to as 'innocent preservatives' (Bombay Courier, 1804). While this universal ideal of 'childhood innocence' was fundamental in the promotion of the vaccine, in practice, working-class children, orphans and native children served the role as 'the test subjects and global carriers of both vaccine matter and the ideals of liberal imperialism' (Murdoch, 2015, p.511). Adding a caste-angle to this, Nair (2019) ascertains that these children were almost exclusively 'lower caste' children from the poorest communities. This practice was later replaced with inoculation using bovine calf-lymph. A major portion of the 'upper caste' originally rejected vaccinations on the basis of rigid caste-based dogma. The arm-to-arm inoculation was refused as vaccination represented 'virus obtained from the lower classes of people' (Pillai, 1940, p.782), on the other hand, the calf-lymph vaccine was refused owing to the torture inflicted on cow as a sacred entity. These viral pastpresences unearth the complex interplay of colonialism, childhoods, and caste-based hierarchies, highlighting the point I have raised throughout this thesis about the heterogeneous ways colonial capitalism materialises. They simultaneously disclose how an epidemiological story,

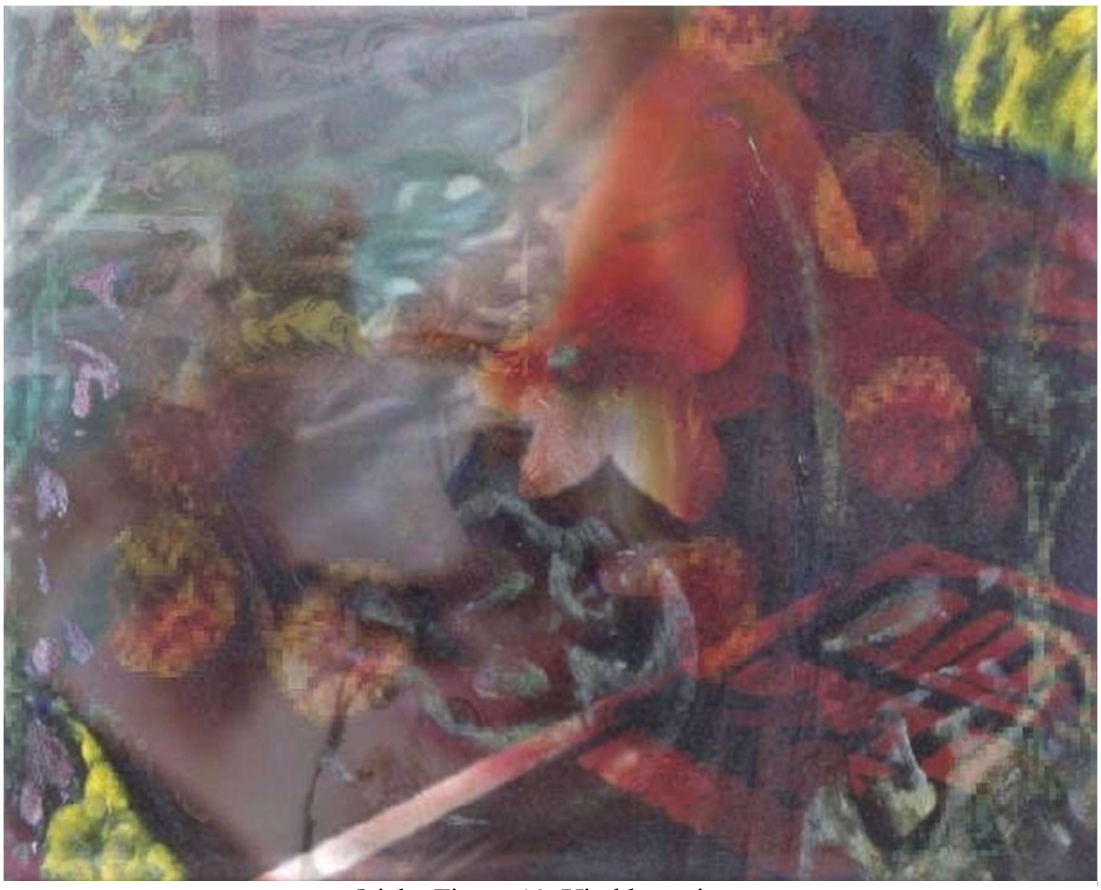
shaped by an 'outbreak narrative' and metaphors of war, were used to construct an image of the virus as the 'foe', while justifying 'colonial rule characterised by kindness and affection rather than greed or force' (Murdoch, 2015, p.521). The 'virus as foe' narrative was strategically put to work to distract from the ongoing extractive violence of colonial capitalism (Yetiskin, 2022).

> 'The 'war on disease' is also a script for conquest. The European version was born exactly at the zenith of colonial ambition and still carries that imperial DNA, as a project for dominion over the territories of the globe, its peoples and its microbes. Its language is male, white, and controlling. It promises mastery over nature, setting our bounds wider still and wider, making our mighty technologies mightier yet. This is perhaps its most insidious implication: a victory over a disease is a validation of a benevolent (for us) Anthropocene' (de Waal, 2021, p.17)

The war-based narrative of militaristic capitalism is premised on western representations of "nature" as separate from "human", something to be subdued and mastered, and a resource for 'economic development'. As explained in 7.4.2, it is a representation that is fundamental to Montessori's notion of 'supra-nature' that follows the logic of extraction and development, albeit a humanist conception of 'development'. Her vision of a "new" humanity places an enormous weight on human potential to recuperate and bring peace and harmony. These are influenced by and work in consonance with Western scientific, transhumanist recuperative models that are founded on a techno-optimism, confiding in the 'high-tech economy of cognitive capitalism that caused the problems in the first place' (Braidotti, 2022, p.4). Haraway (2019a) refers to these interventions as "techno-fixes", that are reliant on and possible only through more extractivist practices and ongoing disengagement from communities of practice. Moreover, the 'solutions' proposed to counter the devastations wrought by colonial capitalism and human exceptionalism, continue to be deeply invested in retaining bounded and individualised conceptions of "human". The perception of an autonomous, self-interested, and self-reliant is therefore maintained by fabricating ontological separations between human and nonhuman, which in this case is founded upon antagonising the "human" and the 'virus'. The covid pandemic therefore profoundly destabilises fabricated separations between "human" and the 'other', it interrupts

Montessori's (1967) assumptions of children developing through processes of 'self-construction' instead highlights porosity of human-nonhuman boundaries (Tuana, 2008). This necessitates as Wynter (in Wynter & McKittrick, 2015) argues, a re-storying of "human" as 'praxis' to generate other stories of "human", that interrupt the unremitting production of the 'rational economic Man'.

7.6.2 Viruses as 'companis': embracing a more-than-human sensibility



Sticky Figure 10: Viral hauntings

Continuing on with the practice of string figuring, I pick up on sticky affects and tangles (See Sticky Figure 10), and turn attention to another virus associated with a historical and ongoing global pandemic: The Human Immuno-deficiency Virus (HIV). I think-with the HIV pandemic, alongside affirmative emergences, absences and resonances in the nursery, for possibilities to re-story, to attune to different modes of human-viral relationalities that are

not premised on the metaphor of war. The pastpresence of the HIV epidemic exudes colonial, capitalist, racist, anti-immigrant, queerphobic, and transphobic flows and intensities. Unlike the relatively immediate government responses seen to covid, the HIV epidemic was at first met with deafening silence, marked by a political apathy and lack of government interventions for a number of years. While military metaphors were routine, de Waal (2021, p.140) recounts how politicians shied from using them, as a 'disease afflicting stigmatised minorities didn't warrant putting the nation on a war footing'. The campaigns that followed, including the *'AIDS: Don't die of ignorance'* campaign by Margaret Thatcher's government, were used to signal moral danger, the effects of which continue to be felt in the persistence of stigma and prejudice (Burgess, 2017). Concomitantly, these moves were reinforced by section 28 of the Local Government Act 1988 that made it illegal for local authorities to promote homosexuality or promote teaching 'acceptability of homosexuality as a pretended family relationship'. For instance, Jill Knight, a Conservative member of the House of Commons at the time, claimed, for example, that what children were learning in schools 'would undoubtedly lead to a great spread of AIDS' (House of Commons, 1987). The contrasts and resonances in the responses to these major viral pandemics is interesting to note. The moral panic and continued silence linked to HIV is accentuated further by a felt absence and policy vacuum in nurseries and schools, that signal to the ongoing stigma and prejudice that haunts HIV-human relations, which render some bodies unquestionably as 'bodies out of place'.

Remarkably, what stands out in HIV/AIDs pastpresences, is both the tenacity with which queer and trans people who have lived and died with HIV, have insistently campaigned for and pushed to transform the healthcare system, as well as in forging forms of caregiving kinships amid such state violence (Fink, 2021). More than 105,000 people currently live with HIV in the UK. 94 percent of which, including 285 children, receive HIV care through antiretroviral (ARV) treatment (NAT, 2021). ARV does not eradicate HIV, instead it modifies the body environment to make it unfavourable for viral reproduction. The regular intake of ARV can lead to undetectable levels of virus in the blood, which has been firmly established through clinical evidence as "untransmittable", as popularised in the "U=U" or "Undetectable = Untransmittable" campaign (Eisinger et al., 2019). Stories from HIV communities demonstrate the possibilities of a 'symbiotic dance', as described by Sam, a poz

respondent in Langdridge & Flowers' (2013) research. The move within poz communities to affirmatively integrate HIV into how they see themselves or refer to themselves offers insight into possibilities of living well with the virus (Baumgartner & David, 2009). These illuminate possibilities for re-storying what constitutes "human", away from human-viral binaries. Following Haraway (2008), Brives (2018) proposes the notion of 'becoming-with' that removes the passivity that is ascribed to the virus, and highlights the intra-active agencies and possibilities to reconfigure human-viral relations through a transcorporeal sensibility (Alaimo, 2010).

Thinking in terms of 'becoming-with' viruses as Brives (2018, p.124) argues is 'no way a means of neglecting or denying the sufferings that they can inflict but rather offers a way to recall that they reveal, and not create, inequalities and violence'. Covid-19 pandemic made explicit the unrelenting goal of nation states to prioritise capitalist economic growth, but at an extraordinarily high cost of personal health and wellbeing of frontline workers. Re-visiting the relations that emerged at Seedlings Montessori with SARS-CoV-2 seemed to embody a becoming-with that did not succumb to the dominant narratives of 'war' or views that positioned the virus as the 'enemy'. While the initial period during the pandemic as mentioned in section 7.5 was marked by difficulties, anxieties and vulnerabilities, the attitudes and relations to the virus seemed to have shifted by the time the nursery had re-opened in September 2020. These were reflected in the collective response to not wear masks or physically distance from children, and further evident in their refusal to draft a nursery policy for covid, which was reasoned as pointless because of how they 'run amiss'. The ongoing relations with SARS-CoV-2 were described in emergent terms, as becoming-with the virus was seen as a dynamic, fluctuating, and unpredictable endeavour. Some days this meant taking the play outdoors, other days this entailed limiting the number of materials made available, and yet other days walks were planned into nearby forests. Human-viral tensions were further relieved after the entire nursery acquired covid by January 2021. This is not to say that their responses were careless, inattentive or negligent. Rather as Greenhough (2012, p.281) contends, instead of 'seeing viruses as an external threat to be eradicated, we might recognize how we have learned and are learning to live endemically with our viral companions.' This entails moving away from war metaphors and working against industrial capitalist logic of

killing and eradicating viruses, all of which rely on oversimplified categories of 'good' and 'bad'. As Haraway (2021) argues, the notion and practice of *companis* is not specifically marked by niceness, but the 'inescapable contradictory story of relationships' that invites learning to live-with the virus through relations of complexity.

> 'Companion species are relentlessly becoming-with. The category companion species helps me refuse human exceptionalism…[they] play string figure games where who is/are to be in/of the world is constituted in intra-and interaction. The partners do not precede the knotting; species of all kinds are consequent upon worldly subject- and object-shaping entanglements' (Haraway, 2016, p.13)

Amidst masculinist, individualising, rationalising and mastering logic of capitalism, that work transversally to fix boundaries and determine relations, unsettling human-viral relations through Haraway's (2003, 2016) figure of companion species therefore profoundly queers what constitutes a "gendered workforce". Every encounter is vibrant with heterogeneously tangled gendered relations that enfold and unfold into one another, refusing neat categorisations, yet presenting possibilities to reconstitute and be reconstituted, to becoming-gendered Otherwise (Huuki & Renold, 2015).

7.7 Relaying connections that matter

In this chapter I have continued with my investigation into the materialisation of a gendered "workforce" by reconceptualising it as gendered forces that work on, across, and through bodies, spaces, places and times.

By attuning to performativity of disgust set in motion by snot-child the chapter foregrounds the gendered, racialised and "classed" atmospheres produced through and work on and across human (child, Montessori practitioner, researcher), nonhuman (space, design, materials, nursery location) and the discursive (Montessori pedagogical intentions, Aristotlean logic, EYFS framework, nursery dress policy, white middle-class tastes and

values) reinforce the formation of the 'rational, respectable, and hyper-conscious human', whose desirability is determined by his distance from the unconscious 'feminine'. The sticky, excessive, ambiguous, and indeterminate materiality of snot, along with the queer ontologies of viruses present important ruptures to Aristotelian logics of essences and binaries (male/female, human/nonhuman, rational/emotional, living/nonliving) that overwhelmingly shape the organisation of Montessori philosophy and practice. Attuning to human-viral relational complexities therefore highlight a "transcorporeal" sensibility, in which the outline of the humanist "human" is transgressed by substantial material exchanges.

This transcorporeal sensibility was profoundly sensed when the nursery was plunged into a global pandemic. Early years practitioners, as a highly gendered, underpaid and undervalued group of frontline workers, became disproportionately affected in order to sustain and preserve the capitalist economy. The affective attunements of snot, virus, distance, touch, and space bring to focus the differential ways neoliberal capitalism works as atmospheric forces on, across and through bodies (humans and nonhumans), places (Global North and South) and times (pasts and presents). By diffractively reading covid-19 pandemic with two other viral pandemics of historical and ongoing significance, the workings of colonial capitalism are brought to focus. The smallpox pandemic, for instance, attunes to the colonial and imperial hauntings of viruses as war matterphors, a configuration that continues to be a fundamental model in producing rational economic imaginations of "human". While a diffractive engagement that reads affirmative stories of living well with viruses from HIV pandemic pastpresents with the absences and resonances in the nursery, strengthen different modes of human-viral relations. By mobilising Haraway's (2008) notion of 'companion species' that emphasises a 'becoming-with', possibilities for living complexly with viral companions is highlighted, that do not rely on masculinist anthropocentric imaginations of human mastery, development and progress.

Therefore, by interrogating the separations between human and viral snot, this chapter calls into question presumed gender neutrality in Montessori classroom by highlighting how every encounter is imbued with gendered forces that are produced in the relationally specific and contingent ways. In the following chapter, the investigations and explorations in this thesis

are drawn together to examine how this study has responded to the research aims and objectives.

Chapter 8. Promising patterns of ongoingness

> 'My hope is that these knots propose promising patterns for multispecies response-ability inside ongoing trouble' (Haraway, 2016, p.16)

8.1 Re-turning to matters of concern

In the final chapter of this thesis, investigations and explorations are drawn together to examine how this thesis has generated fresh understandings of a gendered workforce in Montessori ECEC and the ways it has created more openings for ongoing grapplings. As outlined throughout this thesis, the aim in this research has been to introduce different ways of thinking and practising gender in the Montessori ECEC workforce, working to trouble presumed notions of 'gender neutrality' by embracing a relational onto-epistemology. These aims are indicated in the matters of concern identified at the beginning of the thesis (See Chapter 1, section 1.3) that guided the research process, particularly in attuning to the halting moments that shaped the multiple tentacular journeys as well as in ensuring that the wayfaring in this research was grounded in how this research mattered to ongoing practices in Montessori ECEC and beyond. To re-cap, the matters of concerns that guide this study are:

- *How is a gendered workforce materialised in Montessori early childhood?*
- *What might a feminist relational engagement do to complicate understandings of a gendered workforce in Montessori early childhood?*
- *In what ways can knowledge gained from such an engagement shift and transform gender relations in the Montessori early childhood workforce?*

These questions emerged from being engaged in extant and ongoing feminist research literature pertaining to gender in the ECEC workforce, that further highlighted the notable absence of critical scholarly engagement with gender in Montessori ECEC. Humanist interventions have principally focused on recruiting more men into ECEC, presented insistently as an unequivocal solution to recuperate a 'failing education system' (Plowden, 1967; DfEE, 1998; DfES 2001; DfES, 2005; DfE & DoH, 2011; DfE 2017). Research shaped

by feminist poststructuralisms has critiqued this move and offered critical insights and contributed to important shifts in how a gendered workforce can be re-thought as discursively produced (Skelton, 2012; Martino, 2012; Burn & Pratt-Adams, 2015; Adriany, 2016; Warin et al., 2020). They have highlighted that simply adding more men may not inherently guarantee transformative outcomes (Burn & Pratt-Adams, 2015; Warin, 2018). By paying attention to the discursive, feminist poststructuralist scholars highlight how day-to-day encounters in the nursery are shaped by prevailing gendered discourses that dictate narrow, gendered conceptions of 'professionalism' and notions of 'competence' (Osgood, 2004). However, they also illuminate possibilities for practitioners to exert agencies, as they negotiate, subvert, resist and transform hegemonic gendered expectations (Osgood, 2006; Osgood, 2012). Building upon and with the influence of these feminist poststructuralist readings, my research endeavours to expand the focus beyond the discursive realm and extend investigations beyond the confines of the "human". In the following sections I will explore insights gained from this study that I consider key to its reorientations and fundamental to the work that this thesis does. These sections will therefore consider how gender comes to matter in the Montessori ECEC workforce.

8.2 Gender Matters: how a gendered workforce comes to matter in Montessori ECEC

8.2.1 Maintaining the "political edge"

As stated in Chapter 4, at the beginning of this study I had naively considered putting various Deleuzian concepts to work using critical discourse analysis (CDA). However, as I proceeded to familiarise myself with posthuman and "new" materialist philosophy through the guidance of my supervisors, it became apparent that a purely discursive framework would not align with these concepts nor with the emerging research focus. The emergence and indeterminacy that a feminist "new" materialist engagement invites was a key motive to pursue approaches that were more capacious. Additionally, I decided to move away from a Deleuzian framework as I felt a deep sense of unease with the erasures that they seemed to produce, which appeared to veer towards being apolitical. Further, while I appreciated Latour's (2004) thinking around the insufficiency of critique, I was not willing to abandon critique entirely. Braidotti's (in van der Tuin & Dolphijn, 2012) proposition to combine critique with creativity

seemed like a more promising approach for the work I hoped this thesis would do. The works of feminist scholars such as Donna Haraway, Karen Barad, Sara Ahmed, Eve Tuck, Anna Tsing, Zoe Todd, Stacy Alaimo, amongst others, exemplified how it was possible to maintain the 'political edge' without being mired in deficit narratives. This study is therefore deeply political, in its drive to produce interruptions to entrenched power relations, and to make a tangible difference in everyday Montessori ECEC practice by opening possibilities for becoming gendered Otherwise (Huuki & Renold, 2015; Renold, 2018).

8.2.2 Arts of attuning to the ordinary

The philosophical commitments in this study are towards ordinary relations in the nursery, which encompass everyday materialities in the Montessori classroom such as snot, a hot mug of tea, cameras, notepads, or fences, things that one would not typically pause to consider or associate with gender. In the current political landscape that is fixated with progress and 'looking ahead', this study takes Tsing's (2015) invitation to slow down and 'look around', to be drawn in by the affective pull of things. A key aspect to this reorientation lies in unsettling the inertness of things (Bennett 2010a,b). "Objects" and "entities" that are normatively regarded as inert or passive within humanist research frameworks - such as Montessori materials, research devices, beverages, food, waste, body fluids, furniture, places, spaces, and temporal dimensions - are all re-cast as performative constituents in this study. Therefore, each relata chapter emerged from fleeting moments right in the thick of everyday practice at Seedlings Montessori Nursery, through attunements to the affective frisson or stickiness an 'object' or encounter generated (MacLure, 2010; Ahmed, 2014a). For example, in Chapter 5, the kind gesture of being offered a mug of steaming hot tea around child bodies set in motion a range of affects, but most significant were the haunted memories of hot drink policies from a previous nursery, the regulatory workings of new managerialist policy reforms and the masculinist gender formations they privileged. Similarly, in Chapter 7, an encounter with a snotty child activates feelings of disgust, prompting an examination of what the performativity of disgust can tell us about gender. Chapter 6 in contrast unfolded through iterative affective layerings that figured iPad cameras as "matters of risk", led to a set of attunements that made visible gendered relations that constituted their materialisation. The study therefore presents the possibilities opened up when looking differently, i.e. looking

around to make the familiar strange and the strange familiar, so as to 'stretch our imaginations to grasp its contours' (Tsing, 2015, p.3).

8.2.3 Reconceptualising a "gendered workforce"

Feminist relational onto-epistemology represents a significant departure from how gender is traditionally understood in Montessori. Shaped largely by western humanism, Montessori embraces a view that frames humans and nonhumans as water-tight categories, shaped by knowledge practices that prioritise methodological individualism and anthropocentrism (Haraway, 2016). This is seen in how the approach fixates on individualising 'the child' by following their 'individual development' (Montessori, 1997), individualising 'the practitioner' by emphasising reflective 'spiritual preparation' (Montessori, 1967) or by individualising materials through principles of 'isolation of quality' (Montessori, 2012; See Chapter 2, section 8). Consequently, gender is seen as a quality inherent within the human body or ascribed to specific objects (eg: conventionally gendered objects such as dolls, blocks or tea sets). In contrast, a feminist relational onto-epistemology views gender as constitutively relational, produced in multiple, shifting, contradictory and in/determinate ways, across human-nonhuman boundaries. In order to account for this shift, in this thesis the notion of a "gendered workforce" is reconceptualised as *gendered forces* that *work* on, traverse and permeate through bodies. These forces are atmospheric in nature (Ahmed, 2014b; Stewart, 2011; Anderson, 2009), and are activated through the complex interplay of place, space, matter, temporalities, histories, discourses, and emotions, that throw together worlds in relationally specific ways.

This is exemplified in Chapter 7, that demonstrates how gendered formations materialise through the intra-active relations of the snotty child with material-aesthetics of the space, box of tissues, mirror, pedagogical intentions, developmentalist logic, respectability politics, nursery policies on dress code, wider professionalisation interventions, the specificities of place etc. Particular conceptions of gender, race and class are reproduced that narrowly regulate what constitutes a prepared 'Montessori early childhood practitioner' and 'prepared environment'. At the same time, the particular formations related to the child-snot assemblage emerging intra-actively with jugs, furniture, teddy bear and space, and the absence

of immediate intervention to eliminate snot, reconfigure this densely tangled encounter. In a similar manner, in chapter 6, vibrant animacies of the iPad-camera-flash is enmeshed in pedagogical intentions, developmental camera captures, blocks, lights, shadows, children, adults, neoliberal drives, processes of rationalisation and so forth, that again constitute multiple, contradictory and shifting gendered performativities. This research therefore demonstrates that by mobilising a relational onto-epistemology, through practices of string figuring (Haraway, 2016; See Chapter 4, section 4.5), gendered relations, stories and performativities that would otherwise be lost in 'things' or 'objects' are made visible (Haraway & Goodeve, 2000), even animated, that complicate understandings of gender beyond rigid binaries, at the same time inviting possibilities for becoming gendered Otherwise (Huuki & Renold, 2015; Renold, 2018).

8.2.4 An entangled sense of "human"

While the scope of this research inquiry is focused on the more-than-human, as previously discussed in section 3.2.2, it is crucial to note that the "human" is not entirely excised. This is made apparent throughout the thesis where practitioners, children, parents, supervisors as well as friends and families co-constituted its materialisation in multiple ways, with varying intensities (See Acknowledgement). For instance, the nursery manager, practitioners, and children regularly appear and constitute vignettes from the nursery (See sections 6.3 and 6.5 in Chapter 6; sections 5.2 and 5.3 in Chapter 5, and sections 7.1 and 7.5 in Chapter 7), while also shaping 'methodological' processes, as evident in the tensions related to the incorporation of cameras in the research (See Chapter 4, section 4.4.1). Moreover, the particular style of supervisory relationship and practice, that was characterised by both my supervisors 'getting on the ground' and 'getting their hands dirty' throughout the doctoral journey – that is, through numerous meetings (formal and informal), through practices of string figuring (See Chapter 4, section 4.5.4) and by even joining me once to the nursery – further constituted the materialisation of this thesis. Furthermore, the continued support and kindness of friends and family also left their mark on this thesis, even as the thesis left a mark on them. A more-than-human reorientation therefore does not remove agency from "human" altogether, instead it 'questions the nature of agency and its presumed localisation within individuals' (Barad, 2007, x).

Further, in accordance with a feminist politics of situated knowledges and partial perspectives (Haraway, 1988), it becomes imperative to situate myself as entangled in the research process, where my queer, nonbinary, South Asian, and avarna "subjectivities" immanently reconfigured the study. By considering the specificities of pastpresent (King, 2004) and more-than-human dynamics, the research was therefore steered in distinct directions, leading to the emergence of distinct string patterns. Chapter 3 serves as a clear illustration of this, where I consider how the immanence of situated "subjectivities" morphed and transformed theory in relation to the tensions and problems encountered. In the spirit of wanting to decolonise knowledge and in the spirit of situated knowledges (Haraway, 1989), the monist philosophy Advaita Vedanta from the Indian subcontinent was initially explored. However, a deeper engagement with Advaita, generated a new set of tensions that identified the role Advaita played in contemporary India in sustaining and perpetuating caste hierarchies and violences. The ongoing tentacular entanglements of caste in everyday materialisations in the classroom served as further evidence for the need to reorient (explored in greater detail in section 8.2.6). These tensions and challenges therefore worked to guide the theoretical framework in other directions, leading to the inclusion of Dalit feminisms, and in considering the possibilities potentiated by putting feminist "new" materialisms in conversation with Dalit feminist thought, anticolonial and decolonial concepts. These further consolidate the point that 'affect and researcher 'subjectivity' permeate the research process at every stage' (Ringrose & Renold, 2014, p. 772).

Therefore, SF practice could have taken many different directions and paths, yet following the affective pulls meant that some knots were stickier than others (Ahmed, 2004). For instance, by attending to the intra-active workings of iPad cameras, nursery space, queer-nonbinary researcher, "innocent" child, and "anxious" parent in Chapter 6, led to tracing the entangled pastpresents of cameras and the coloniality of gender (Lugones, 2007). Similarly, the performativity of viral snot in Chapter 7 and the politics of distance and touch during a global pandemic stimulated diffractive accounts entangling Dalit lifeworlds, underscoring the transversal and transcorporeal workings of gendered forces. Moreover, the stories of Dalit plantation workers from Munnar, in Chapter 5, were tentacles that were specifically pursued to point to the embodied and historied relations that entangle places and childhoods. This

however does not mean that this research then amounts to perspectivism, instead they account for intensely embodied and embedded relations (Haraway, 2019a).

8.2.5 Working across and beyond binaries

SF as a relentlessly relational practice lays bare how some cuts, divides and boundaries that are produced through Western rationalist logic of essences and binaries (such as real/pretend, matter/discourse, human/nonhuman, nature/ technology, adult/child, past/present, minor/major, male/female), work to produce reductive and binarised understandings of gender. As per a feminist relational ontology these boundaries enfold and unfold into each other and co-constitute each other as conceived in the term "sympoeisis" (Haraway, 2016). For instance, the preference for "real" in Montessori is linked to assumptions that correlate "real" and "natural development", and therefore an absence of "pretend" play objects is reasoned as contributing towards gender-neutrality. Troubling this real/pretend divide, Chapter 5 highlights how "real" tea is at once naturecultural (Haraway & Goodeve, 2000), and enmeshed in relations past and present that are multiply gendered, including fictional stories of tea origin, tales of 'discovery' in patriarchal voices, as well as taxonomical fabulations (See section 5.7). In Chapter 6, the nature/technology divide is particularly pronounced, where digital technology, in this case an iPad camera, emerges as a risky matter to "natural" and "innocent" childhoods, to be shielded from to facilitate "natural development". However, when stories of child labour in mining sites are brought to attention, the nature/technology divide and notions of 'childhood innocence' collapse, as it highlights how the production of iPad cameras rely on extracting 'natural minerals' that are undertaken at the expense of risking some childhoods (See section 6.6.3). In the same manner, the supposedly neutral status of cameras as 'eminently democratic machines' (Haraway, 1989, p.44) is upheld by divides along material/discursive and human/technology. These are challenged when the material-discursive workings of neoliberalism is brought to attention (explored in greater detail in section 8.2.7). While previous research (Osgood, 2012; Archer, 2022) recognises subversive acts of early childhood practitioners in resisting the masculinist undertones of neoliberalism, this study demonstrates how agencies are always distributed, albeit unevenly, across human-nonhuman divides. This is seen in Chapter 6 in the unplanned interferences of the iPad-camera-flash that overrides human intentionality (See

section 6.3), co-constituting the scene to produce ruptures to entrenched practices of measurement culture and patriarchal gaze. In chapter 7, by drawing attention to the transcorporeality of human-viral relations, the boundaries between human and virus are called into question, particularly when processes of symbiogenesis and integration of endogenous viruses into "human" genomes is taken into account (See section 7.4.2). Additionally, the nursery finding itself in a global pandemic suddenly reinforced the realisation that the human body is 'never a rigidly enclosed, protected entity, but is vulnerable to the substances and flows of its environments' (Alaimo, 2010, p.28). These examples foreground how particular gendered formations, that rely on the separation of "human" from the nonhuman world, epitomised by the rational 'hyper-conscious human', are disrupted through a feminist relational analysis that views that "human" as perpetually more-than (explored in greater detail in section 8.2.7).

8.2.6 Transversal and tentacular workings

A feminist relational approach profoundly reconfigures how place is understood. For example, in Chapter 4, this is demonstrated in the politicised attention to place, and how power and place are always interlaced (Tuck & McKenzie, 2015; Nxumalo & Cedillo, 2017). The historied attunement to place gives insight into how the past inheres and sediments in the present to iteratively shape and reshape gendered, "raced" and "classed" formations in the area, particularly how white middle-classness and rationalist logics are reinscribed, producing exclusions and inclusions (See section 4.3). However, situated knowledges means much more than where one is located (Haraway & Goodeve, 2000), instead it works across place, space and time, which in this thesis entails thinking beyond the divides of Global North/South. The transversality and tentacularity of this research may at first prove disorienting for the reader, as one may suddenly find themselves in spaces, places and times that seem quite alien to the nursery site. For example, an encounter with a mug of hot tea in Chapter 5 is immediately implicated in past and ongoing gendered forces of colonial plantation legacies, and inseparable from the gendered and casteist hierarchies that continue to sustain plantation economies. A transversal orientation underscores 'common worlds', that emphasise a 'radical openness to *composition* of these worlds' (Taylor & Scarlet, 2012, p.110),

while highlighting how these 'commons' are heterogeneously composed. The gendered workings of capitalism in the nursery during a global pandemic (Chapter 7), where childcare practitioners as frontline workers were disproportionately affected, were entangled in the intra-active workings of capitalism and varna ideology in India where Dalit people overwhelmingly constituted essential workforce, particularly in sanitation work. They were both denied the necessary protective measures and were both low on priority when it came to vaccine administration, a matter that gets complicated by how India, as the vaccine manufacturing hub of the world, supplied almost half of UK's AstraZeneca shots. Diffracting these stories through each other illustrates entangled global inequalities in the ongoing sustenance and composition of the Capitalocene. Such diffractive and situated readings therefore emphasise the importance of 'knowledge tuned to resonance' (Haraway and Goodeve, 2000, p.71) rather than dichotomy. Similarly, a knowledge tuned to resonance in Chapter 6, demonstrates the possibilities to gather up energy and move into new spaces and places, through the intra-active entanglements of camera absentpresences, nappy changing rooms, toilet spaces, queerness, Dalitness, surveillance mechanisms, childhoods and childcare workforce, thereby complicating and reconfiguring understandings of gender, risk, and workforce. They account for the 'multiple modes of embedding' (Haraway & Goodeve, 2000, p.71) and the intra-sections of multiple worlds that exceed the bounded individual. Therefore, the kinds of agential cuts made determine what matters and what is excluded from mattering when considering what constitutes a "gendered workforce" in a Montessori classroom (Barad, 2007). This transversality is further accentuated by bringing 'shadow places' to light (Plumwood, 2008). For example, Chapter 6 demonstrates how everyday practices of iPad camera captures and preservation of "natural" and 'innocent childhoods' in the nursery are materialised and haunted by stories of extractivism, child labour, and maimed child bodies in Democratic Repulic of Congo (DRC). In Chapter 5, these are underscored by the feral effects (Coffey et al., 2020), i.e. the undesigned effects produced by plantation infrastructures, such as the fallen elephants in plantation trenches or pastpresence of malaria-related deaths of plantation workers. By paying attention to everyday encounters that in some way or the other constitutes the ongoing materialisation of a London Montessori nursery, presents possibilities to attune to multiple gendered and more-than-gendered relations, stories and worlds, that work across categorical boundaries.

8.2.7 Staying with the gender trouble

The relata chapters each locate how Montessori's developmentalist approach, through its focus of 'making humans' (Snaza, 2013; Osgood & Mohandas, 2022), privileges a particular kind of human, albeit what Wynter (2003) refers to as "Man" or the *homo oeconomicus*. Wynter's conceptualisation helps account for the ongoing workings of colonial capitalism that incorporate 'objects' insofar as their capacities to sustain the masculinising agenda of neoliberal education. For instance, the extent to which iPad cameras are included at Seedlings, is narrowly determined on the basis of their potential to aid 'natural child development'. As seen in chapter 6, when the affective anxieties related to bringing iPad cameras and children in close proximity are examined, prevailing logics of risk to "natural" development or risk to 'childhood innocence' are interpolated to maintain separations. Yet iPad cameras form a core part in capturing, recording, documenting, and communicating developmental progress. By foregrounding the material-discursive, more-than-human entanglements, the gendered forces of neoliberal gaze are made visible, that not only regulate which "capture" is of developmental value, but also determine which practitioner-camera configurations count as professional 'competence'. The masculinist rationale that drives the regulatory gaze of new managerialism works to generate truncated forms of 'professionalism' that work across multiple boundaries to generate neoliberal subjects or the rational economic "Man". These are at once entangled in masculinist forces propelled by past and ongoing colonial extractivist practices, working intra-actively to favour the (re)production of particular worlds that privilege the endless accumulation of 'capital'. Similar masculinising forces are seen at work when viral snot materialities are considered (Chapter 7), where the elimination of snot is layered with gendered, "raced" and "classed" inheritances. The presence of a box of tissues and a small mirror in the practical life area, the pedagogical logics embedded in their inclusion, and the rationalist material-aesthetics of the Montessori classroom accentuate snot as 'matter out of place' (Douglas, 1984), and emphasis the formation of the 'hyper-conscious man' (Estok, 2020) whose progress is characterised by his increased separation from the nonhuman world (from snot, virus, and at an evolutionary scale, from the 'primordial slime'). While these colonial capitalist configurations are critical to highlight, it is equally important to not homogenise its effects. As explained in Chapter 3, by considering the intra-active workings of colonial capitalism and varna caste hierarchies makes it possible to grapple with

heterogeneous and contradictory stories and relations that animate worlds. For example, when a hot mug of tea (Chapter 5) is taken seriously, a range of gendered atmospheric forces are mobilised, from the hauntings of new managerialist hot drink policies, to the ongoing workings of colonial plantation economy, to the feral effects in shadow places, which are simultaneously entangled with the caste-related injustices and exploitations that would otherwise fall out of view in a solely postcolonial critique. Therefore, the attunements to the workings of gendered forces are significant in unsettling the neutrality of Montessori practice, and at the same time calling into question dominant narratives of the so-called 'feminisation of the workforce' and fabricated crises it produces. In contrast, dominant gendered forces through its work of individualising the human, and dissociating "human development" from more-than-human relations that constitute it, sustain multiple forms of injustices - both social and worldly. Therefore, a more-than-human sensibility opens up a new mode of critical consciousness that is attuned to how these macro-political forces emerge and materialise in the everyday mundane encounters in the Montessori nursery, but they are also interlaced with the subtle shifts and affirmative relations that reconstitute them.

Therefore, immanent to these dominant gendered forces and formations, are subversive, creative, and affirmative stories, relations and movements that are potent with possibilities for becoming gendered Otherwise. In this study, I attune to these through Manning's (2016) concept of 'minor gestures', that constitute more-than-human agencies, which are not always readily perceived, but transform the field of gendered relations. Being perceptive of the minor entails being 'sensitised to small moments and small things, which are precarious and fragile as they can so easily be overlooked' (MacRae, 2022, p.356). For instance, when the seemingly insignificant 'routine' of making tea for one another is considered, they can be viewed as minor flows that reconfigure capitalist–imperialist–casteist forces (Chapter 5). Whereas in Chapter 6, a minor gesture like the unexpected interferences of an iPad-camera-flash or the seemingly insignificant response to ignore the "pull" of camera produce subtle shifts amid the relentless masculinist workings of neoliberal capitalism. Furthermore, in Chapter 7, snot-child wanderings, viral ontologies, as well as, the transcorporeal workings and becoming-with SARS-CoV-2, queers and confounds rationalising forces that seek to fix and codify. The delicate interferences of the minor do not work separately to marginalising forces that

regulate everyday childhood practice, rather the minor is singularly connected and immanent to the perilous gendered structures that unceasingly materialise a gendered workforce.

Moreover, these diffractive accounts are charged with the speculative, 'flush with yearning, with innumerable possibilities/ imaginings of what was, could be, might yet have been, all coexisting' (Barad, 2017, p.78). For example, when the modest practice of making tea in Chapter 5 is read through the entangled histories of the suffragette movement, stories of Dalit feminist defiances, hopeful accounts from plantation plots and fictional tales of tea dragons, they activate new modes of perceptions into the vibrant potentialities to becoming gendered Otherwise that exist in lively tension to the ongoing materialisations of the "gendered workforce". Chapter 7 presents similar possibilities when stories of human-viral symbiosis from poz communities are brought alive, that refuse inherited stories of "human" mastery and human exceptionalism to forge new modes of relations concerned with cultivating response-abilities, that are about becoming subject to the 'unsettling obligation of curiosity, which requires knowing more at the end of the day than at the beginning' (Haraway, 2008, p.36).

8.3 Cultivating response-abilities

As identified at the beginning of this thesis, debates, policies and practices in relation to gender in the ECEC workforce have overwhelmingly focused on the recruitment and retention of men, and the 'unique' contributions they bring to the sector. In congruence with previous and ongoing feminist research, this thesis challenges these deterministic assumptions, and invites an engagement that considers the "gendered workforce" as a matter that unfolds and unfurls in multiple, contradictory, in/determinate and contingent ways in each encounter at the nursery. It does not respond to the matters of concern brought to attention at beginning of thesis by prescribing or determining solutions, rather invites cultivating an attunement to how gender is not merely a humanist concern but works across human-nonhuman boundaries to produce some worlds and not others. The in/determinacy of how these gendered forces work demands ongoing practices shaped by an ethics of care and response-ability (Haraway, 2016; de la Bellacasa, 2017). Similar to the sector more broadly, Montessori early childhood practice is deeply shaped by developmentalist

perspectives that separate "human" and "human development" from the more-than-human world. These conceptions have a direct effect on how gender is theorised, understood and practised. By employing a feminist relational onto-epistemology, this thesis offers a way to unsettle these separations towards a conception of a gendered workforce as always more-than a quality inherent within bodies. These attunements are of direct relevance in the face of the ongoing earth violence spearheaded by extractive capitalism, that necessitates generating knowledges about "gender" that go beyond human-centric and human-supremacist accounts of the world. A more-than-human perspective therefore brings a level of indeterminacy to how a "gendered workforce" unfolds, which accentuates the im/possibility of knowing in advance what the outcome of a gender-just practice will look like (Snaza, 2013). The study therefore invites 'looking around' (Tsing, 2015, p.3), to cultivate the art of noticing, and relocating ethics at the level of ordinary everyday practice in the Montessori classroom. No object, entity or encounter in the Montessori classroom 'comes without its world' (Haraway, 1997, p.137), instead they are composed of thick layers and relations that are inherited from other layers, relations, temporalities, scales of time and space. An engagement with such inherited worlds entails adding layers by attempting to 'redescribe something so that it becomes thicker than it first seems' (Haraway & Goodeve, 2000, p.108). Reconfiguring "gender" and a "gendered workforce" in this manner becomes about how we are in this world, and the endless possibilities each encounter in the Montessori classroom presents for becoming gendered Otherwise (Huuki & Renold, 2015).

8.4 Passing the figure of ongoingness

As elucidated in section 4.6, an essential feature of the game of string figuring is that it is a 'figure for ongoingness' (Haraway, 2016, p.3). This thesis is a materialisation of ongoing grapplings and practices of being in relation, in process, and in tension. It signifies a move away from determinisms, towards rethinking a "gendered workforce" as a collective becoming-with (Haraway & Goodeve, 2018), where what constitutes the "workforce" is always more-than, with more and more openings, but quite definite response-abilities (Haraway, 2016). Embracing this notion of collective becoming-with, I was initially interested in taking some of the concepts and insights from this thesis back to Seedlings Montessori Nursery in hopes of facilitating a "tea party" to consider what they might make possible and

how they would come to matter differently in the Montessori classroom. Regrettably, due to various circumstances, particularly the disruptions and challenges resulting from the pandemic, the "tea party" idea failed to materialise. Despite this setback, the manifold unfurlings of this work - through research publications, extensive discussions in online spaces such as *The Male Montessorian* and *Montessori Teachers* forums, webinars organised by *Montessori Musings*, and dialogues at the *Montessori Everywhere* congress - opened up new possibilities to grapple with these insights and ways to put them to work in the classroom. It is worth mentioning that while the idea of the "tea party" did not come to fruition, practitioners from Seedlings Montessori participated in many of the above-mentioned gatherings and communities. More recently, as highlighted in Chapter 7 (See section 7.4.2), in response to the publication on "animal figurines" (Osgood & Mohandas, 2021), where the "innocent" materialisations of cis-heteronormative white family models were brought to attention, staff at Seedlings Montessori reconstituted "animal families" in more expansive ways, opening up possibilities for other-than-heterosexual modes of relations. Additionally, the multiple manifestations of this thesis, particularly the publications, have generated discomforts, ignited raging debates, and attracted angry correspondences. I share these as a means to account for ongoing matterings of this research, in producing ruptures, shifting perspectives and transforming practices. In the spirit of such ongoingness and in the spirit of 'staying with the trouble' as proposed by Haraway (2016), I refuse closure and echo Duhn's (2020, p.147) sentiments that this research will continue to allow 'whoever reads, whoever works with it, whoever has a conversation with it, to do something else with it'.

Appendices

Appendix I: Ethics Approval

Education REC

The Burroughs
Hendon
London NW4 4BT

Main Switchboard: 0208 411 5000

15/05/2019

APPLICATION NUMBER: 7651

Dear Sidharth Mohandas

Re your application title: Researching workforce and gender in Montessori environments

Supervisor: Jayne John Barker Osgood

Co-investigators/collaborators:

Thank you for submitting your application. I can confirm that your application has been given approval from the date of this letter by the Education REC.

Although your application has been approved, the reviewers of your application may have made some useful comments on your application. Please look at your online application again to check whether the reviewers have added any comments for you to look at.

Also, please note the following:

1. Please ensure that you contact your supervisor/research ethics committee (REC) if any changes are made to the research project which could affect your ethics approval. There is an Amendment sub-form on MORE that can be completed and submitted to your REC for further review.

2. You must notify your supervisor/REC if there is a breach in data protection management or any issues that arise that may lead to a health and safety concern or conflict of interests.

3. If you require more time to complete your research, i.e., beyond the date specified in your application, please complete the Extension sub-form on MORE and submit it your REC for review.

4. Please quote the application number in any correspondence.

5. It is important that you retain this document as evidence of research ethics approval, as it may be required for submission to external bodies (e.g., NHS, grant awarding bodies) or as part of your research report, dissemination (e.g., journal articles) and data management plan.

6. Also, please forward any other information that would be helpful in enhancing our application form and procedures - please contact MOREsupport@mdx.ac.uk to provide feedback.

Good luck with your research.

Yours sincerely

Chair Dr Mona Sakr

Education REC

Appendix II: Consent forms

Dear Head of School/Manager,

My name is Sid Mohandas I am currently doing an MPhil/PhD in Education at Middlesex University, London. Prior to pursuing my PhD I have had a long-established history of working with young children as a Montessori educator, and am familiar with the matters relating to ethics and safeguarding.

For my PhD, I intend to research on workforce and gender in the Montessori classroom, which I believe will contribute to making Montessori spaces more inclusive and gender-sensitive. I would greatly appreciate carrying out my research at your setting. Please take time to carefully read through the information sheet below, to decide if you wish for me to do my research at your nursery.

If you have further questions about this study or your rights, or have any concerns, you can contact me, the lead researcher at sm3341@live.mdx.ac or my supervisors Prof. Jayne Osgood j.osgood@mdx.ac.uk and Dr. John Barker J.A.Barker@mdx.ac.uk

Best Wishes,

Sid Mohandas,
Doctoral Researcher
School of Education
Middlesex University

Information Sheet for Gatekeeper

This research project is part of my PhD program at Middlesex University, London. In this information sheet, I would like to share with you important details in connection to my research. Please do read this carefully and take time to decide if you feel comfortable for your nursery to participate in this research. If you do consent, please hand the completed form back to me.

The purpose of this research

I will be researching early childhood workforce and gender in the Montessori environment. This research seeks to move away from traditional stereotypical views of gender, and will consider how gender can be framed differently when the role of the environment in tandem with adults and children is considered.

Who are the participants?

The research will take into consideration the role of early years practitioners, children, and their interaction with different objects and spaces in the Montessori classroom.

What will happen during the research?

If consent is given, I will be at the nursery 2 days a week, for 3 months, and will be hanging out informally in the classroom alongside the adults and children. During my time at the nursery, I will strive to engage and interact respectfully in line with the ethos/policies of the nursery. For this research, I will be using a camera to take photos of moments of interaction that I may find relevant to the research. Furthermore, fieldnotes will be used to record observations that are relevant to my study.

Is anonymity and confidentiality promised?

My research will follow ethical procedures prescribed by the British Educational Research Association (BERA) and further approved by the Middlesex University Ethics Committee. All data will be treated as confidential and will be anonymised prior to analysis. The data used in my thesis, journal articles or conference presentations, the name of participants, the name of the nursery and titles will be changed to a pseudonym to protect identity. This means that the nursery nor the participants will be identifiable. My field notes will be stored securely in a lockable storage space, while the photos will be stored in a password-protected folder on a computer that requires security log in access, all of which will be accessed only by me.

During analysis, data may be viewed by the two members of my supervisory team, but this material will have no names or personal information on at this stage. After the thesis, journal articles and/or conference papers have been written and after a period of 5 years the file containing the research

data will be deleted and destroyed. In order to provide you with an indication of the research findings and recommendations you will be sent an executive summary of the findings

What are the risks of participating in this research?

There are no risks involved as appropriate risk assessments have been conducted and will be followed throughout the research process. If at any point you wish to withdraw your consent for this research, all data pertaining to the nursery and participants will be deleted and no data from the nursery will be used in my research.

What are the benefits of participating in this research?

I believe this research is important as it has the potential to inform and develop gender-sensitive practice in Montessori early childhood spaces.

What will happen to the findings?

The outcome of this research will form part of the PhD thesis. This will then be reviewed by my supervisor, internal and external examiners. On completion, the thesis will be published in book format and made available at the Middlesex University. Furthermore, parts of this research may be published in international academic journals or presented at international academic conferences

Thank you for reading this. Please feel free to approach me if you have any questions or concerns with regard to your nursery's participation in this research.

Consent Form for Sid Mohandas for MPhil leading to a PhD commencing

e-mail: sm3341@live.mdx.ac.uk

PLEASE READ THE FOLLOWING CAREFULLY

Research topic: Researching workforce and gender in Montessori environment

Please read each of the following statements carefully and <u>cross</u> each box to show that you consent to it.

I have read and understand the information sheet for this research project. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily	❑
I understand that I am free to withdraw the nursery's support for the study at any time.	❑
I understand that all participants will be asked to give their own written and informed consent, in order to participate.	❑
I understand that information gathered by the study may be used in reports and presentations by the research team but that the nursery's name will not appear in any of these reports or presentations.	❑
I agree to the above study being undertaken at my nursery	❑

Gatekeeper name (please print) ……

Gatekeeper signature…… Date.....

Thank you for your time

Visual media consent form for Gatekeepers – PhD Research

e-mail: sm3341@live.mdx.ac.uk

PLEASE READ THE FOLLOWING CAREFULLY

Research topic: Researching workforce and gender in Montessori environment

Dear Head of nursery/manager,

Many thanks for giving consent to carry out my research at your nursery.

Further to our conversation, I would like to confirm that I will use the nursery's iPad to capture photos of interactions. As per your nursery policy, these photos will be run past you to ensure anonymity and protection of participant identity. Some of these photos will be used and published in my thesis. Additionally, some of the photos may potentially be used in presentations, reports and publications in journals and books for academics and students. Real names will not be used with the photographs and the setting or location will not be identified. I would be grateful if you could read the enclosed form and decide if you give consent for me to take photos and use them in my research.

Please don't hesitate to contact me in the e-mail provided if you have any questions.

Thanks again for your contribution to the project.

Kind Regards,

Sid Mohandas,
Doctoral Researcher
School of Education
Middlesex University

Visual Media Consent Form PhD Research

This form refers to consenting me to utilise photos taken at the nursery, as part of my PhD research. The photos taken will be securely stored in password-protected folders on a computer that requires security log in access, all of which will be accessed only by me. As mentioned previously, photographs may be shared within the research team (myself and my supervisors) to help with the analysis. I may also use some photographs (in electronic or print form), in reports, presentations, publications and exhibitions arising from the project.

Please cross the boxes below to indicate your understanding and decision:

I understand the photos will be taken using the nursery's iPad and will be strictly run by the manager of the setting to ensure anonymity and confidentiality	❑
I understand that this visual media consent is voluntary and that I am therefore free to withdraw my consent at any stage, without giving a reason.	❑
I understand that photos will not be used along with any identifiable personal information, such as names of participants or the nursery	❑
I understand the photos taken will be securely stored in password-protected folders on a computer that only the researcher has access to.	❑
I give consent for photographs to be reproduced for educational and/ or non-commercial purposes, in reports, presentations, publications, websites and exhibitions connected to the PhD Research.	❑

Name:…….

Signed.....Date.....

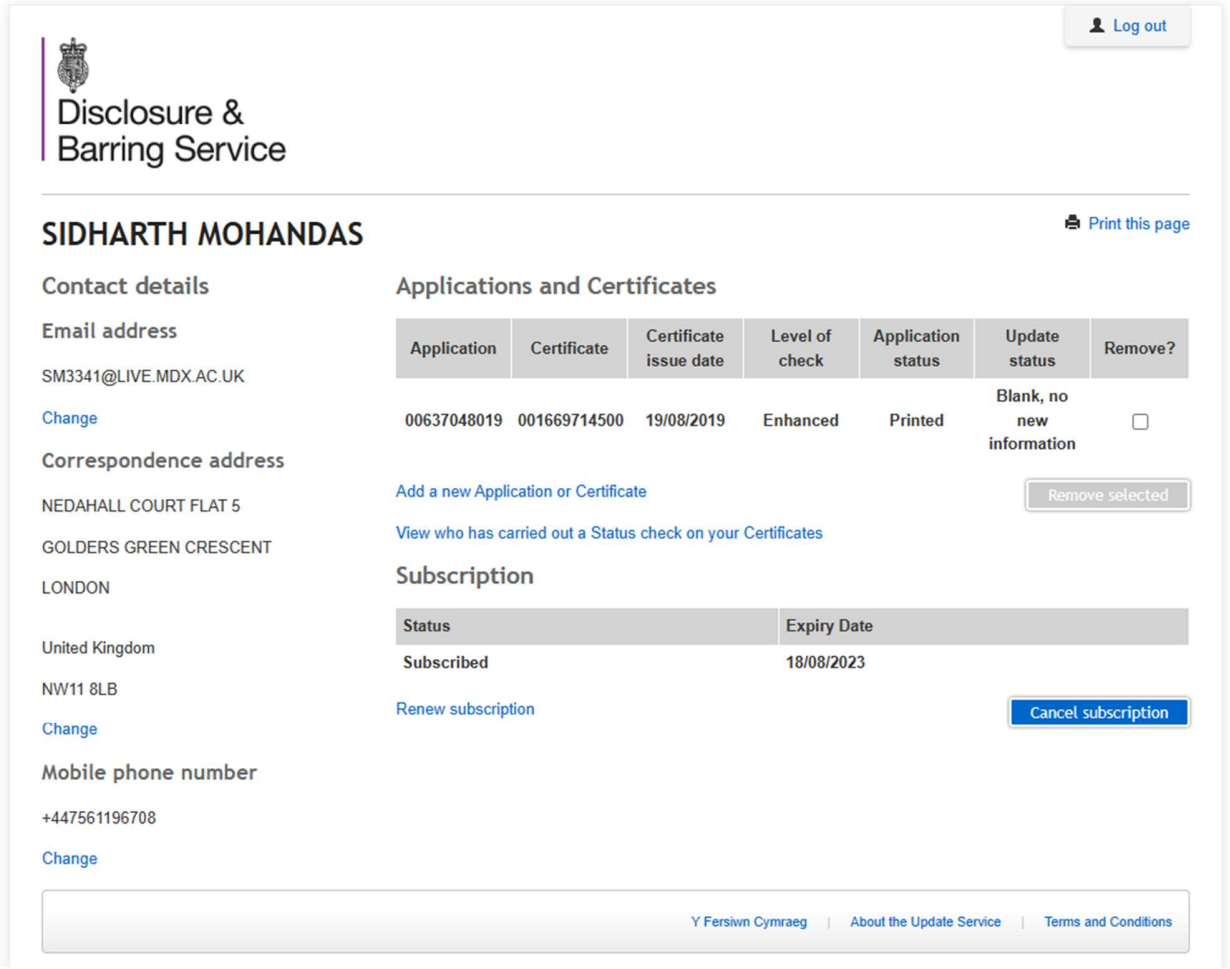
OR

I do not give consent for photos of my nursery to be used in this research ❑

Name: ……..
Signed.....Date.....

Thank you for participating in my project. If you have any queries about this form or about the project or your participation in it, please do not hesitate to contact Sidharth Mohandas E-mail: sm3341@live.mdx.ac.uk

Appendix III: DBS Check



Log out

Disclosure & Barring Service

SIDHARTH MOHANDAS

Print this page

Contact details

Email address

SM3341@LIVE.MDX.AC.UK

Change

Correspondence address

NEDAHALL COURT FLAT 5

GOLDERS GREEN CRESCENT

LONDON

United Kingdom

NW11 8LB

Change

Mobile phone number

+447561196708

Change

Applications and Certificates

Application	Certificate	Certificate issue date	Level of check	Application status	Update status	Remove?
00637048019	001669714500	19/08/2019	Enhanced	Printed	Blank, no new information	☐

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