Holding the Baby: Holding the Educator.

Embodied interactions between

Educators and

0-3-year-olds in early years settings

by

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Ethics Statement

This study was approved by the Bath Spa University Ethics Panel on 29/01/2020. Should you have any concerns regarding ethical matters relating to this study, please contact the Research Support Office at Bath Spa University (researchsupportoffice@bathspa.ac.uk). All participants provided written informed consent prior to enrolment in the study and for any associated datasets to be utilised as presented within this thesis.

Data Statement

This thesis is supported by multiple datasets, elements of which are available on request from the author. The full dataset is not publicly available due to child safeguarding precautions.

Abstract

This research explored the lived experiences of physical interactions between educators and 0–3-year-olds in four early years settings in the UK. There are close connections between the qualities of physical interactions and children's wellbeing, but discussion of physical caregiving has diminished in policy and pedagogical frameworks in the UK. Therefore, this research also explored how educators might be supported in developing positive physical interactions.

This was a qualitative study using a co-operative inquiry approach with collaborative and participatory research methods (Reason and Bradbury 2006). Eight educators participated in a Video Enhanced Reflective Practice (Strathie et al 2011) process. Different perspectives on the bodyself were explored to demonstrate the complexity of physical interactions within a conceptual framework of embodiment (Ellingson 2017) and intersubjectivity (Trevarthen and Aitken 2001).

This research shows that educators and young children are in constant communication using physical cues and touch in subtle ways. The research identified that 'holding the baby' includes a continuum of touch that impact children's experience differently and that relate to educators' intentions and are influenced by environmental factors and discourse, suggesting a matrix of elements that contribute to embodied intersubjective interactions.

The research also found that attuned embodied interactions in physical care-giving practices are effectively supported and facilitated using process-oriented, experiential, strengths-based, video reflexive methods, which 'hold the educator' and give perceptual salience to physical interactions, enhance sensitivity to children's cues and contribute to educator's professional esteem and awareness of the interconnectivity between their own and children's experiences.

This thesis recommends that early childhood policy and pedagogy should seek to incorporate thinking about how children engage in and experience physical interactions with educators and make connections across all aspects of experience, practice and provision.

Key Words: Embodied Intersubjectivity, Babies, Care, Professional development, Video observation, Work Discussion

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Glossary and abbreviations

BERA: British Education Research Association

CPD: Continuing Professional Development

ECCE: Eary Childhood Care and Education. N.B. This is usually presented as ECEC, but I place Care before Education in this term in order to emphasis its importance.

EE: Early Education: Campaigning / professional organisation and training provider UK

EECERA: European Early Childhood Education Research Association

ECSDN: Early Childhood Studies Degree Network UK

EYA: Early years Alliance: Campaigning / professional organisation and training provider UK

EY Academy: Early Years Academy: Training provider UK

EYFS: Early Years Foundation Stage: Statutory framework for the early years foundation stage. Setting the standards for learning, development and care for children from birth to five

DCSF: Department for Children, Schools and Families

DfE: Department for Education

DfES: Department for Education and Skills

NAEYC: National Association for the Education of Young Children: US organisation

NCCE: National College for Care and Education

NDNA: National Day Nurseries Association: Campaigning / professional organisation and training provider, UK

NNEB: National Nursery Nursing Examination Board

NVQ: National Vocational Qualification

NZCER: New Zealand Council for Educational Research

PACEY: Professional Association for Childcare and Early Years: Campaigning / professional organisation and training provider, UK

QCA: Qualifications and Curriculum Authority, UK

Training4EY: Training for Early Years: Training provider, UK

VERP: Video Enhanced reflective Practice

VIG: Video Interactive Guidance

Early years setting: Any individual or group who provide out of home care and education for children aged 0-5 years.

Educator: In this thesis, this refers to a professional working with babies and young children.

Practitioner: In this thesis this refers to someone working in the social professions.

Part 1: Introduction and Context of the Research

Down he goes now, falling, falling!
Up he springs at mother's calling!
Laughs he now in frolic glee, -
Laughs so safely there to be.
Sure, he knows no harm befall him
While his loving mother calls him.
Down he goes now, falling, falling!
Up he springs at mother's calling!
Soul and body thus unfolding
Mother's love is ever moulding
Mother-Play and Nursery Songs by Friedrich Froebel (1878)

"*Infant/ toddler care is not seen as a serious topic…infant/ toddler care is not considered a profession*" (Lally, 1997, p.3)

This part of the thesis sets out the rationale for the research (chapter 1), which is encapsulated by the quotes above. The first from Froebel illustrates the longstanding concern for the unfolding of babies' and young children's well-being, but which is contrasted by Lally's quote 100 years later, which highlights the low professional esteem associated with the care of babies and young children aged 0-3 years. Chapter 2 then reviews the historical and current contexts of policy, research and pedagogy in relation to physical interactions and caregiving practices in early years settings in the UK.

Chapter 1: Introduction to the Research

This chapter introduces the research undertaken for this thesis and explains the motivations that led me to study the topic of physical care interactions. The chapter presents the research questions which I explore throughout the thesis and outlines my theoretical framework, methodology, methods and ethical considerations, as set out in Fig. 1 below.

1.1. Research focus and rationale

This thesis argues that, whereas embodied interactions are vital to 'holding the baby' with sensitivity and care, their importance and meaning are often overlooked in early years research and policy. Much of a baby or young child’s experience in an early years setting is of being physically held and touched by educators as they are lifted, carried, fed, changed, washed and dressed throughout the day. And theories from different disciplines such as developmental psychology, biology, psychoanalysis and neuroscience all draw attention to the close connections between the qualities of physical interactions between caring adults and young children and children’s development, health and learning (Hertenstein and Weiss 2011). However, in early years literature there is little consideration of the child’s experience of the physical actions and interventions of educators, and discussion and guidance on the physical care of young children has diminished in policy documents and frameworks, signalling that the physical care of children is not regarded as significant or important in early years pedagogy, reflecting Tobin’s concern about the ‘disappearing body’ in early childhood care and education (ECCE) (Tobin 1997).

This was the starting point for this research. As an early years professional with a focus on the care and education of 0-3-year-olds for over thirty years, I have been acutely aware of how practices in early childhood settings that pertain to the care of the body have become viewed as of lesser importance than practices designed to develop the mind (Manning-Morton, 2006). In addition, my recent training to become a Pikler pedagogue (Tardos 2007) has increased my sensitivity in relation to babies’ experiences of being held, as reflected in my journal notes: *As I walk through the park, I see babies dangling like limp puppets in their* *slings, lifted by their arms, or carried under adult's arms like parcels, and I can feel the discomfort in my own body and wonder how they are feeling, physically and emotionally.* (RJ 17/06/2019)

Therefore, this research explored the lived physical experiences of babies and young children aged birth to three years in early years settings and the contexts that inform and influence early years educators' approaches to physical interactions in caregiving practices by asking these questions:

RQ1: What elements of embodied interactions might be identified as contributing positively to babies' and young children's experience in early years settings?

RQ2: What factors influence educators' approaches to, and experience of, physical caregiving interactions with young children?

In addition, being an educator of adult learners and an advocate for the wellbeing of the caring early years professional (Manning-Morton 2006) led me to also ask:

RQ3: How might attuned physical caregiving interactions in early years practice be supported and facilitated?

Through asking, and answering, these questions, this research aimed to contribute new thinking about babies' and young children's experience of physical care interactions and to re-frame the significance of physical interactions and care giving events in early years pedagogy.

> *Researcher's journal note: When I was a young practitioner, Elinor Goldschmied (1910-2009) was a pedagogical consultant at my setting. One day, she was observing me preparing the children's beds for sleep-time, and as I was bending and lifting the stacked metal and canvas beds, she gently placed her hand on my lower back and said' 'take care of your back dear'. In that moment, I felt 'seen' and valued, and internalised her message of the importance of self-care in the caring professions, as she planted the seed of the link between the emotional and the physical firmly in my mind.* (RJ 31/01/2020)

The importance of responsive, supportive and caring relationships in early years settings is advocated by many writers and researchers in the early years field (Elfer et al 2011, Norris & Horm 2015, Degotardi & Pearson 2014, Goouch & Powell 2013, Page 2018), however the centrality of physical interactions in these relationships is not addressed in any depth. For example, discussions on the Key Person Approach (Elfer et al 2011) focus on developing attuned emotional relationships in early years settings but do not discuss physical interactions and Page (2018) discusses the idea of 'professional love' and in so doing does address ethics of care but does not explore the meaning of physical interactions during care events. So, understanding how the process quality of physical interactions may impact children's experience in early years settings is largely unexplored (Degotardi 2010, Phillips and Lowenstein 2011). Therefore, this research addresses this gap by investigating the interrelationships between mental and physical processes from an integrated view that sees babies' and young children's social, psychological and physiological experiences as inseparable, and children and adults' actions and relationships as interdependent and reciprocal, and thereby to contribute essential knowledge to the field that will deepen understanding of the importance of children's experiences of physical interactions, and position physical caregiving as central to practice. Hence the term 'holding' in this thesis title refers to the imbricated nature of physical and mental/emotional holding required by babies and young children and also the professional 'holding' that educators need to enable them to effectively 'hold' children in their arms and in their minds.

And the empirical data presented in this thesis reveal that noticing the nuances in embodied child-educator interactions, aided by reflective group processes and video analysis, can shed light on the role of touch, proximity, environment, and time in physical care interactions, and highlight how the vast majority of a young child's experience, which is embodied and crucial to children making sense of the world and people around them, is not usually noticed and, therefore, only partially understood. In this way, the key findings presented in this thesis offer original insights into an important aspect of child-educator interactions which is often neglected in research and policy, with important implications for early years pedagogy.

1.2. Context

This research blows in on the tailwind of a long period of unprecedented political focus on the early years sector, which, since the 1990s, has seen the transfer of provision from social care to education, the introduction of centrally imposed standards and curriculum, the centralisation of regulation and inspection, expansion of funded places for more and younger children, and increased and then decreased funding (Fitzgerald and Kay 2016). But as pedagogical discussions have progressed in the UK, the emphasis has been on the educative aspects of practice for 3–6-year-olds, focussed on future learning outcomes, while the voice of babies, toddlers and 2-year-olds, and the adults who care for them, has been mostly unheard, and guidance on the care of young children has all but disappeared from the Early Years Foundation Stage (EYFS) policy framework (DfE 2024), as discussed further in chapter 2.1.

Another facet of the wider social context of this research is that it took place over the period of the Covid-19 pandemic, which not only impacted the progress of the research, but also tangentially impacted the content and process of this research in relation to the required implementation of social distancing and mask wearing at that time. This influence is addressed in discussions whenever it featured as an issue in relation to the research questions but is not a main focus of this inquiry.

1.3. Values and position

My approach to this research has been influenced by my life-long position as a feminist concerned with issues of social justice; interrogating power in relation to groups and individuals and the intersectionality of oppressions and privileges (Crenshaw 2015). In relation to the research process, this meant engaging with the differences of social identity and experience present in the research group, reflecting on which demographic categories I consider myself to belong to, which socially marginalised identities I claim, what forms of cultural privilege I benefit from and how these manifest in my bodyself/other interactions (Ellingson 2017).

Having lived and worked in multi-ethnic, multi-religious and multi-cultural areas of inner London for most of my life, developing and maintaining a focus on the intersectionality of identities and power within groups and wider society is an integral part of my thinking and approach. However, such awareness is a continual process of life-long learning, which, in this research, required me to be cognisant of my privilege as a white European person with professional status in relation to the research group members. This required that I adopted aspects of reflexive inquiry (Oliver 2018) such as using reflective journaling, which assisted awareness of my own power in relation to the group as a whole and to individual members according to gender, sexual identity, dis/ ability, class, ethnicity and cultural background. I also needed to use my understanding of the wider social issues faced by the communities represented in the research group to acknowledge dynamics that might potentially impact the group in relation to the diverse communities in which the research took place.

However, although such differences of cultural experience are significant and necessary to interrogate, an intersectional perspective (Crenshaw 2015) identifies what is shared as well as what is not and, in the context of this research group, the all-female-identified group and me as a lesbian woman with working class roots, shared some experiences of gender, sexuality and class oppression, and the shared experience of living alongside cultural difference in an urban environment. Also, despite the current differential of professional status, my professional heritage as a nursery nurse, working with 0-3-year-olds, meant that we shared the social experience of being part of a profession with low social status, as highlighted in the epigraph to this part of my thesis, as well as a shared commitment to children's well-being.

In this way, 'goals of social justice' (Ellingson 2017) were integral to this research as political and social contexts were addressed by asking RQ2 and RQ3; 'What factors influence educators' approaches to the physical care of young children? And 'How might attuned physical interactions in early years practice be supported and facilitated? Questions that I hoped might 'afflict the comfortable and comfort the afflicted' (Janesick 2000, cited in Ellingson 2017, p.34). Because examining physical interactions in the context of current pedagogical models in the UK, necessitated considering educator's social and material circumstances as part of the wider political and social context, as discussed in the chapter 2.

1.4. Overview of methodology and methods

This research was rooted in a qualitative paradigm (Silverman 2013) and the methodological approach and methods used arose from both a theoretical stance and from my personal and professional values, principles and experience indicated above. My view of knowledge is that it emerges from embodied, personal experience and in the context of interaction with others and the world, in which I understand participants as having agency and influencing knowledge production, so I always saw this research as a mutual process from which all parties might grow and benefit through an exchange of knowledge and experience. Therefore, this research was designed to research 'with' rather than 'on' people and used a Cooperative Inquiry approach (Heron 1996, Reason and Bradbury 2006) within which the educator-participants became participant-researchers and where the researcher, "looks at themselves – their way of being, their intuitions and imaginings, their beliefs and actions- critically….' (Heron and Reason 2001:183), as it is impossible to get outside of our own human condition; we can only learn through our full embodiment of it. The methods of inquiry were also collaborative and participatory and reflected a praxeological stance (Pascal and Bertram 2012). They were Video Enhanced Reflective Practice (VERP) (Kennedy et al. 2015), incorporating Work Discussion (Rustin and Bradley 2019) centred around video observations undertaken by the educator-participants, and Reflective Journaling (Moon 2013). In this way, my intention throughout was that this research and its process would positively impact practice, through enhancing the relationships between educators and children and supporting the professional well-being of the educator-participants. These values and approach are influenced by my previous research, which explored processes of professional development using observation and children's and educators' well-being (Manning-Morton 2006, 2014).

The local context of this research is that it took place in two multi-ethnic, multi-religious and multi-cultural, inner London boroughs and involved two educators from each of four early years settings. Two of the settings were faith-based (Orthodox Jewish and Muslim) and two generic. One setting was a Children's Centre in the local authority maintained sector, the other three were independent settings; one of which was a voluntary aided community nursery. All offered full-day and part-time care and education for children aged 0-5 years and the Children's Centre also offered 'Stay and Play' and parent support sessions.

1.5. Overview of theoretical framework

In this thesis I move away from the limitations of exploring the topic only through the lens of theories from developmental psychology that are the mainstay of early years pedagogy (Piaget 1952, Vygotsky 1978, Bruner 1986), to consider a range of theoretical ideas, from biological perspectives on children's physical experience, to sociological, psychological and philosophical perspectives on the body and physical interactions (Foucault 1975/1995, Damasio 1994, Trevarthen 2001). In these considerations, I am interested in the interrelatedness of different perspectives, so explore how these perspectives relate to each other and what is revealed at the point of intersection between them. My interest is in ideas that bring together mind, body and emotion as part of a whole integrated human (Manning-Morton 2014) and that counter a mind/body dualist discourse, so, this research is centred on ideas of embodiment and the interconnectedness of experience. An embodiment framework regards all aspects of the body as interconnected, and also sees the body as intrinsically connected to the environment and mutually incorporated with other embodied agents (Fuchs and De Jaegher 2009). I contend that an embodiment frame is particularly relevant to studying babies and young children, because it allows the researcher to better perceive their body states and communications, in a way that values their whole being. An embodiment perspective with a focus on children's actual lived physical experiences, also allows the voice of very young children to be amplified as agentic subjects, which historically, is often unheard in research (Rockel, 2009). However, in order to be truly holistic and interconnected, an embodiment framework must not overlook the role of emotions in experience. Indeed, Scheper-Hughes and Lock (1987) suggest that feelings and emotions may provide the missing link between mind and body and between the individual social body and the body politic. Therefore, an embodiment perspective, must include attention to the embodiment of emotion. In this regard, the combining of embodiment with the theory of intersubjectivity (Trevarthen and Aitken 2001) in this research, expanded the theoretical framework to be a useful and relevant lens through which to explore the research questions.

1.6. Overview of ethical considerations

As discussed in chapter 6.8, research that focuses on physical interactions with children is certain to raise both personal and professional ethical dilemmas and anxieties for the researcher, the educator-participants and also for parents, and possibly, although less certainly, anxieties for child-participants too. Therefore, adopting an ethical approach was not only important from the beginning but also vital to be consciously applied throughout this research. Therefore, not only did the research adhere to the EECERA Ethical Code for Early Childhood Researchers (Bertram et al 2024); the BERA revised ethical guidelines for educational research (2024) and the Bath Spa University Code of Good Practice for Research (see appendix 1.2 Ethics Approval), voluntary informed consent was gained at a range of levels and the educator-participants respectfully attended to children's 'in the moment' verbal and non-verbal communications in order to ascertain children's willingness or unwillingness to participate at any given time. And the adult and child participants and the settings have been de-identified using codes for the settings, and pseudonyms for the educator-participants.

N.B. some of the educator-participant-researchers requested that their faces be blanked for the published version of this thesis.

1.7. Overview of thesis chapters

This thesis is divided into four parts.

Part One includes this introduction and chapter two. In chapter two, I provide an overview of the theoretical and policy contexts of early childhood care and education (ECCE) in the UK, to further illuminate this research's rationale and the relevance of studying physical interactions and caregiving as part of early years pedagogy. I then review the literature in relation to the physical care of babies and young children and highlight gaps in the literature pertaining to physical caregiving interactions. This chapter also addresses related issues regarding the training and professional development of 0-3s educators.

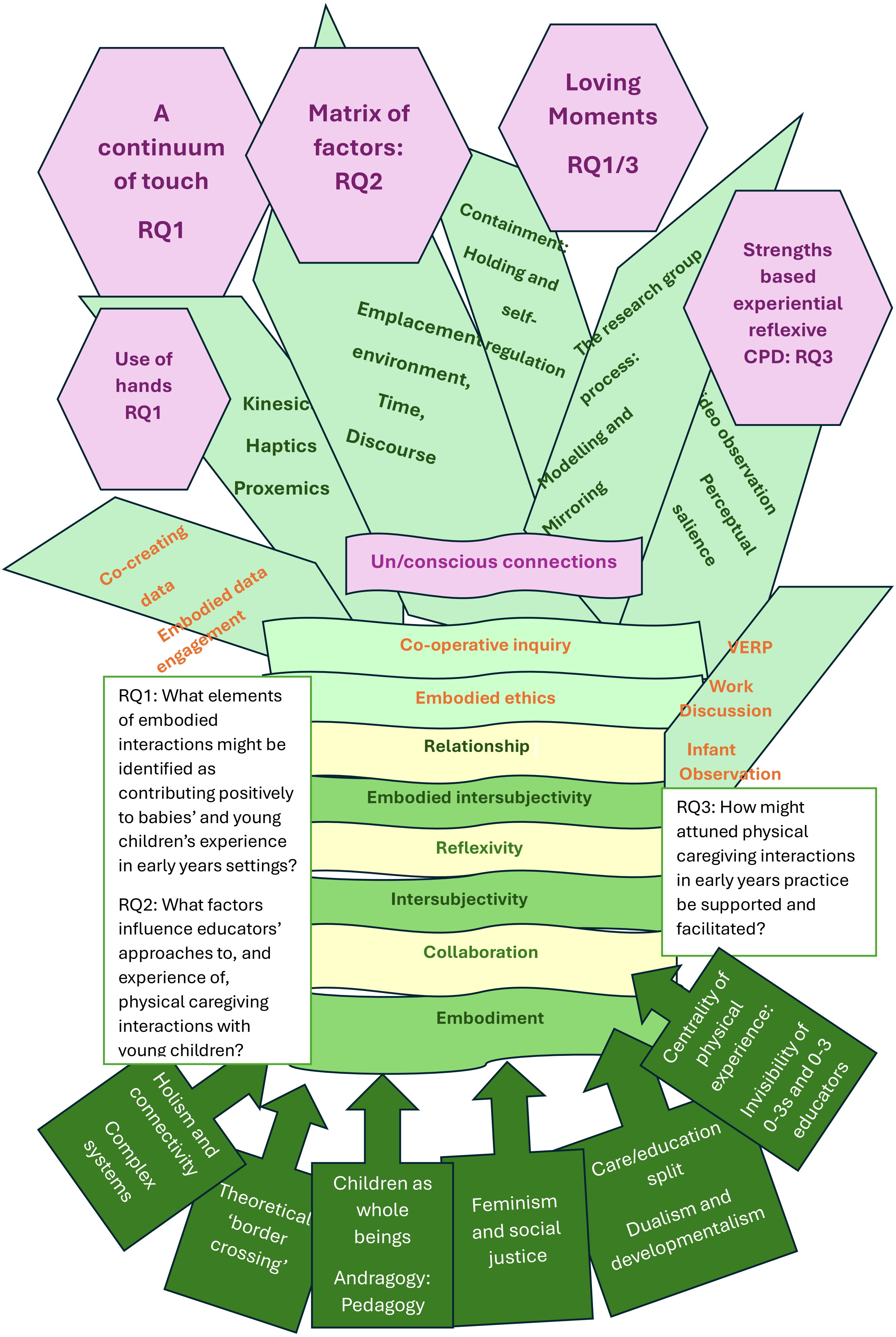
Part Two then presents a review of historical and contextual literature. Chapter three focuses on perspectives on the body, including a discussion on Cartesian dualism and physiological and sociological perspectives, and chapters four and five discuss the ideas of embodiment and intersubjectivity that underpin this research.

Part Three presents the research methodology. Chapter six sets out the theoretical framework for the research, the approach and methods used, and the ethical framework. Chapter seven then sets out the process of the research and the data analysis.

Part Four focuses on empirical explorations. After a general introduction and overview of the research findings, chapters eight, nine and ten address each of the research questions in turn. Chapter eight presents data that arose from the child observations and discusses aspects of embodied intersubjective interactions and their impact on children's experience. Chapter nine then presents data from both the child observations and from the research group process to discuss the factors that influence educators embodied intersubjective interactions with children. Chapter ten focuses on the data from the research group sessions to explore the process of the research in relation to RQ3, and chapter eleven then discusses the interconnections between the research findings.

Chapter 12 then summarises the key findings and concludes the thesis.

Fig.1: An overview of the 'Holding the baby: Holding the Educator' Research showing the theoretical and values at the root of the research tree, the trunk as the theoretical and philosophical framework and the branches as the research approach and methods, the key concepts and the main findings that blossomed from the research.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Chapter 2: A Review of Policy, Research and Pedagogical Contexts of Physical Interactions and Caregiving Practices

2.0. Introduction

This chapter gives an overview of the historical and current contexts of Early Childhood Care and Education (ECCE) in the UK, as a means to further illuminate this research project's rationale and to locate the current relevance of studying physical interactions and caregiving as part of early years pedagogy. As the early years sector has striven to become regarded as a valid part of the education system since the 1990s, there have been huge efforts to emphasise the educative aspects of practice and to distance the profession from the idea of 'just' caring for children (Manning-Morton 2006). As a result, the emphasis in policy and research in the early years sector over the last 30 years has been on children's 'learning', usually of 3–6-year-olds, to the extent that discussion and guidance on the physical care of young children have disappeared from policy documents (DfE 2024), and from training programmes. I contend that this has resulted in a general lack of recognition and consideration of children's experiences of physical interaction and their physical well-being (Cekaite and Bergnehr 2018), which impacts most strongly on 0–3-year-olds as physical interactions are at the centre of their experiences. To support this contention, here I review literature in relation to the physical care of babies and young children and their experiences of physical interactions, and I also discuss the professional development opportunities available to educators in this regard.

Therefore, in reviewing the literature I adopted an integrative approach (Jesson et al 2011) to reviewing current policies and literature that are relevant to the topics of current pedagogical contexts and the professional development of early years educators in relation to the central concerns of care and 0-3-year-olds and educators in this research. This approach included drawing on my existing professional knowledge of policy contexts but also using a scoping approach to reviewing international scholarly articles and books in relation to the key words of 'care', 'babies'/ 'young children' and 'touch' / 'physical interactions', to ascertain the scope of current relevant research and to confirm the relevancy of this research.

As a result of this process, I discuss the historical and current influence of developmental psychology on our views of children and childhood (Burman 1994, Penn 2005), early years policy, services and pedagogy (Fitzgerald and Kay 2016) and the endemic care/education split in early years services in the UK (Moss 2018) that has its roots in a dualist philosophy that values the mind over the body and therefore, cognitive learning over physical experience.

2.1. Developmental psychology

In the Global North, early childhood pedagogical practice is generally underpinned by ideas derived from developmental psychology; the study of how and why humans grow, change, develop and learn over the lifespan (Schaffer 2006). Child development usually covers the ages from pre-birth through to adolescence, with early childhood being focused specifically on the development of children from birth to seven years old. As a field of study, it draws on psychology, biology, neuroscience, anthropology, and sociology, and claims to be the systematic, objective and scientific study of childhood that is needed to underpin skilful and knowledgeable practice (Cole and Cole 2002); a claim that has come under increasing scrutiny from a post-structuralist viewpoint (Burman 1994, Penn 2005). For example, the definition and demarcation of what constitutes childhood, as identified by developmental psychology, are themselves socially constructed within a particular historical, socio-cultural context and the majority of associated theories have been developed within a Global North cultural perspective. However, developmental psychology still presents a range of theories about children's development that are often discussed as universal 'truths'; a metanarrative of children and childhood and therefore of pedagogy also (Dahlberg et al, 2013).

Developmental theory is generally thought of as adhering to either an empiricist, nativist or interactionist perspective (Schaffer 2006), with the latter relating most closely to the holistic, systemic and embodied perspective of this thesis. However, although current thinking in developmental psychology comes mostly from an interactionist perspective, historically, views of children's physical selves have been highly influenced by nativist perspectives that emphasise the maturation and growth of the body. These perspectives on the physical self have their roots in a secular rationality based on a dualistic normal/abnormal distinction developed in the nineteenth century, which, although attempting to replace religious ideas of good and evil, also absorbed the notion that 'normal' equates to 'good' and therefore 'abnormal' relates to 'evil' (Fraser and Greco 2005). This ab/normal distinction is inherent to ideas of development such as in Gesell's maturational theory of developmental 'norms'. Gesell proposed set 'milestones' for 'normal' development, which, although based on a socio-culturally narrow sample of children, has been applied universally and become prescriptive rather than descriptive. As Hacking says, the concept of normality closes the gap between fact and value, between is and ought: 'one can...use the word "normal" to say how things are, but also to say how they ought to be' (1990: 163), so development that falls outside developmental 'norms' is seen as undesirable or abnormal and in need of correction through intervention.

The ab/normal, good/evil distinction can also be detected in views of young children. Historically, there has been a split in philosophical perspectives between those that have seen children as inherently wicked or those that propose that children are naturally good (Hardyment 2007). Babies in particular have been, and still are seen as innocent / good until, as toddlers and 2-year-olds, they begin to assert their self-will and self-determination. They then begin to be seen as in need of training, to become 'civilised' and are often discussed in popular literature as if they are wild animals that need taming (see for example, Green 2011 'Toddler Taming, Duffy 2018 'Terrible Twos'). In this way, very young children are placed outside the 'norm' of human social being and behaviour, as their physical needs and behaviours challenge what Douglas suggests is the 'systematic ordering and classification of matter' in social situations, and so become aligned with her idea of 'dirt' as the symbol of disorder or 'things out of place' (Douglas 1966), as discussed further in chapter 3.3.3.

In addition, Fraser and Greco (2005) suggest that the modern use of the concept of 'normal' is explicitly related to the social regulation or normalisation of the technical processes of education, health and other fields. In this sociological view, the establishment of norms, is a feature of modern society whose purpose is to standardise practice and production across areas. They cite Canguilhem's description of a technological norm as the 'choice and determination of material, the forms and dimensions of an object whose characteristics from then on become necessary for consistent manufacture' (Canguilhem 1989: 246). Although this description refers to 'norms' in industry, these concepts of regulation and normalisation can be seen to permeate the early childhood care and education field also. The developmental milestones identified by Gesell and Ilg (1949) continue to inform writings and policy guidance documents that underpin early years practice in the UK today, and 'milestones' are still used across health and education services to measure if children are making 'normal' progress. In this view, it could be argued that the more there are educational 'norms' or 'standardisation' of content and process, the more the 'forms and dimensions' of the characteristics of the child need to be the same to fit the standardization. So, in pedagogical terms, when educational standardization is developed in relation to older children, as in the EYFS curriculum framework (DfE 2024), then babies, toddlers and 2-year-olds (as well as older children with additional needs) will fall outside what is deemed 'normal'.

According to Penn (2005) developmental psychology is regarded as a useful subject in this regard, because it enables institutions to compartmentalize children and to shape children's behaviour and learning. In addition, there are significant ways in which developmental psychology structures general thinking about children and their development and learning. Firstly, the idea of 'critical periods' when, if a child misses out on certain experiences, the window of opportunity for optimum development in a particular aspect will be missed. This idea, and more recent neurological studies of the rapidity of brain growth in the first years of life, has led to early childhood in general being seen as a critical period for learning (Schaffer 2006). Despite neuroscientists' view that a window of opportunity for a particular area of development is also a period of great vulnerability (Greenfield 2015), the critical period idea has been used to justify the early introduction of formal education to very young children, primarily to ensure that they develop the skills and knowledge necessary to be ‘school (and thereafter workforce) ready’ (Dahlberg et al 2013). The idea of critical periods also underpins the rationale for Government interventionist policies in early childhood (DCSF 2007, Allen 2011). Such policies are driven by an economic imperative that emphasise children as human capital; important primarily for their future contribution to society and the economy (Aked et al 2009). This idea also pervades early years guidance frameworks in the UK; the current structure and emphasis in the EYFS document (DfE 2024), is target driven, goal oriented and outcomes based. For example, ‘The level of development children should be expected to have reached by the end of the EYFS is defined by the early learning goals’ and ‘Each child’s level of development must be assessed against the early learning goals’ (DfE 2024, p.21).

This structure reflects a ‘developmental child’ perspective where children are seen as human ‘becomings’ rather than human ‘beings’ (Moss and Cameron 2007), which positions children as incomplete people, whose ‘deficits’ need to be made up for through adult intervention and guidance (Qvortrup 2009). In contrast, in the Hungarian Pikler pedagogical approach, the emphasis is on the natural pace of motor development (Pikler 1972, 2006). Pikler’s research identifies ‘typical phases’ of physical development rather than milestones, thereby incorporating more divergent patterns of development that may be slower or faster for some children (Pikler 1972, 2006), so, earlier and faster development is not equated with better, it is just a different pattern. The focus of this approach values the child for who they are in the present, which disrupts the current dominant discourse of children as ‘becomings’ (Moss and Cameron 2007) and challenges a goal-focused orthodoxy in early childhood care and education.

The ‘developmental child’ view (Moss and Cameron 2007) is also part of how 0-3-year-olds are viewed, both generally and within the early years field. Although the common view of babies, 1 and 2-year-olds has changed in the last 50 years from bundles of physical needs, who have no sense of who they are and only a blurry sense of others, to more recent ideas of them as little scientists with busy brains (Burman 1994, Hardyment 2007, Manning-Morton 2024), they are still subject to a deficit view, as they are often discussed as just less able 3-5-year-olds, who need to be trained in the physical (toileting) and social (eating and manners) skills deemed appropriate for entry to the nursery or primary classroom. As Haynes and Murris (2019) point out, even the posthuman reconfiguration of what and who counts as fully human, failed to consider age, thereby not including children in the list of 'missing peoples' listed by Braidotti (2018). Consequently, they suggest a view of a posthuman child, that 'blasts away developmentalism' and deficit discourses and asserts a continuum between past and future (Haynes and Murris 2019, p.293).

A further way in which developmental psychology structures our thinking about children, is its division of development into separate domains or areas, distinguishing between perception, action, cognition and affect (Kiverstein 2012), and the presentation of the development of these as a linear process. This has fed into a dualist conception in which perceptual and motor processes are the focus of one set of domains, and cognition, i.e. thought and reason, are the focus of others (Kiverstein 2012) and where the latter is valued over the former. In addition, the application of a linear process of development denies the complexity of the interrelationships and interconnections between all aspects of the body and the mind, and the body/mind as intrinsically connected to the environment and other people. Instead, it reflects a reductionist view, in which knowledge of the components of any system is thought to be sufficient to have knowledge of the whole (Hager and Becket 2019), i.e. knowledge of the components of areas of development equates to knowledge of the whole child and thereby overlooks the interrelationships within the child, and between the child and their socio-cultural contexts and environments. Hager and Becket (2019) suggest that such reductionism can be seen to serve the pragmatic purposes of offering a more manageable version of a whole, perhaps in circumstances where a simplified version is required, if understanding or competence on the part of the receiver is limited. This concept can be applied to the curriculum guidance offered to early years educators in the UK, where 'a thinner version… is preferable to the piece remaining inaccessible' (Hager and Becket 2019). In this way, complex ideas about children's play, development and learning are reduced or simplified to a level deemed appropriate for the competence of the workforce. But in Hager and Becket's analogy of transposing a symphony to a piano piece to make it easier to play, the intention of the reduction is to enable moving towards later engagement with the full-blown complexity of the symphony (2019). But, in the current political and economic context of the early years field in the UK, such opportunities for educators to engage with the full-blown complexity of children's play, development and learning are extremely curtailed.

Separating out and focusing on different areas of development in this way, therefore, leads to a compartmentalization of thinking about children as whole people, disregards the interconnectedness of human development, and inhibits a holistic approach (Manning-Morton 2014, 2024). This compartmentalization is also seen to feed directly into policy guidance and pedagogical practice (Wood & Hedges 2016). In the 1990s, when national regulation and guidance were introduced for nursery education for 3–5-year-olds, 'schoolified' ideas of curriculum were introduced (Ring et al 2020) and areas of development were combined with areas of learning in the then Curriculum Guidance for the Foundation Stage (QCA, 2000), a process that Castro and Kemp (2025) describe as 'messy constructs that exemplify the problems of how theories become inscribed in policy discourses'. In contrast, in 2002, when formulating the Birth to Three Matters guidance (DfES 2002), pedagogues (including myself) adopted a more holistic approach and used ideas of children's characteristics, rights and entitlements. For example, The Birth to Three Matters Framework states,

> 'The Framework takes as its focus the child and steers away from subjects, specific areas of experience and distinct curriculum headings. It identifies four Aspects (A Strong Child, A Skilful Communicator, a Competent Learner and A Healthy Child), which celebrate the skill and competence of babies and young children and highlights the interrelationship between growth, learning, development and the environment in which they are cared for and educated.' (DfES 2002, p.5)

But when these two frameworks were amalgamated into the EYFS framework for England in 2008 (DfE 2008), it was the areas of learning, stepping stones, and learning outcomes that had been devised for older children that took precedence. In addition, the language used in this framework has gradually shifted over the last decade, with ‘learning’ now more frequently mentioned and guidance about ‘care’ gradually diminishing. But perhaps it isn’t surprising that, in a framework that is driven by the managerialism of targets and outcomes, aspects of practice that are less measurable, such as a baby’s experience of how they are being held, are not addressed. But for 0–3-year-olds, for whom physical interactions and bodily care are a significant aspect of their daily experience and a central way in which they come to conceptualise themselves, others and relationships, this omission has potentially negative implications:- If care is deemed unimportant in policy, then it becomes seen as less important in practice and therefore, less thought about, resulting in a lack of adequate concern for the wellbeing of babies, toddlers and 2-year-olds.

This is why I wrote the section on ‘Care’ for Birth to Five Matters, the non-statutory guidance developed by the Early Years Coalition, which initially had omitted a discussion on care as a central pedagogical area (www.birthtofivematters.or.uk pp12-13).

And in that section although I describe care as ‘*having feelings of concern, responsibility and affection for children…*’, I also suggest that care involves physical interactions ‘*engaging in nurturing behaviours, - being watchful, protective and acting with care, concern and regard for children’ ‘ How practitioners touch and physically interact with children and how they organise to meet children’s physical care needs are therefore central to early years pedagogy.*’ (DfE 2023 p.12).

2.2. Caregiving and touch in ECCE: Historical context

The disregard of ‘the art of caregiving’ (Lally 1997) in current policy and practice discussed above, has not always been the case. In the mid-20th century, after the second world war, children’s physical health was a priority, and physical care practices were a central feature of educators’ training and daily practice (Miller and Cable 2008, Baldock et al 2009). At that time, formal childcare provision in the UK generally came under the jurisdiction of Health Departments and regulations focused a lot on health and safety practices (DoH 1948). However, although children’s physical care may have been more of a focus of practice at that time, it was often carried out in ways that reflected the organisational requirements of the setting rather than the needs of the child. Research in the 1970s and 80s (Bain and Barnett 1986, Marshall 1982) discussed the regimentation of care events in early years settings, where children were treated ‘as an extension of the domestic system’ (Bain and Barnett 1986) and there was multiple handling of babies by many different educators during caregiving events. Such practices were part of my own early professional experience, with no consistency or continuity of care being expected from practitioners. Children would be sat on the potty by one person, lifted from the potty by another and yet another would wash, feed, or settle them to sleep. Also, educators would regularly be moved from group to group. Such discontinuous care undermined the possibility of any kind of close relationships between educators and children and caused increased levels of anxiety, aggression or withdrawn behaviour in the children and a lack of engagement by educators (Belsky 1988, Bain and Barnett 1986). But, as awareness of children’s emotional needs in institutions grew and a greater emphasis on children’s social and cognitive learning took hold, policy and pedagogy developed to embrace practices such as the Key Person Approach (Elfer et al 2011) to promote close trusting relationships to meet the emotional needs of the child. However, although a central aspect of this approach was its implementation through consistent caregiving, it was often interpreted more as an administrative or organisational feature where the key person allocation is recorded on paper but not translated into concrete practices and interactions that are meaningful for the child (Elfer et al 2011, Manning-Morton 2011). So, not only did the focus on physical care lessen but many of the impersonal caregiving practices identified previously, continued, and still do so in many settings today (Elfer et al 2011, Manning-Morton 2006, Goouch and Powell 2013).

In addition, in the late 1980s and early 1990s, the HIV epidemic gave rise to a focus on potential infection through bodily fluids. As a result, a raft of new procedures came into force in relation to physical care. Previously, educators would only use disposable gloves if a child had diarrhoea or had vomited, but then, using gloves, aprons and disinfectant alongside the usual attention to hand washing became a required part of everyday practice. And even though it came to be understood that the potential for cross infection of HIV in this context was low, the additional hygiene procedures continued and the use of gloves and aprons when changing children's nappies remains expected practice today. In this way, the wearing of disposable gloves and aprons etc., have become part of 'the walls constructed between our bodies and those of others' (Leavitt and Power 1997) and Piper and Stronach (2008) suggest that these practices serve as a tangible reminder of the discouragement (and unacceptability) of touch, thereby acting as much like a 'moral contraceptive' as a practical prevention of disease.

During this period, there was also a growing awareness of the sexual abuse of children and some high-profile incidents of abuse in settings in the UK led to additional safety precautions being implemented. Although many of these responses have been unquestionably important in safeguarding children, others may be seen to be more reactive than preventative and to negatively impact physical interactions between educators and children, such as "no touch" policies of not hugging children or not allowing children to sit on educators' laps (Piper and Stronach 2008). Indeed, Piper and Stronach (2008) suggest that many of these safeguarding strategies are more concerned with protecting the adult from CSA allegations rather than the child's safety and wellbeing. Practices such as leaving children to deal with their own injuries rather than putting on a plaster, have little to do with safeguarding protocols, for example. Further to this, the recent Covid-19 pandemic of 2020/21 resulted in settings being required to implement myriad additional procedures that inhibit physical interactions, including social distancing and mask wearing. And, although it is reported that some educators continued to physically interact with children positively at that time (The Guardian 10/8/2020), this context may well have compounded existing regimented and disembodied caregiving practices.

In this way, the physiological and psychological benefits of social and affective nurturing touch have been, and continue to be, overridden by what Tobin calls 'disembodied practice' in Global North contexts, in which children's bodies have been repositioned as a site for anxiety and fear (Tobin 1997, Johnson 1997). Leavitt and Power (1997) link this anxiety about children's physicality to educators' subsequent uneasiness with touch and bodily contact and the resulting disembodied practice, which limits physical touch to that which is only used to control and manipulate children's bodies rather than to express affection or comfort. An on-going concern here is that these disembodied practices go hand in hand with psychological dynamics and changing thresholds of shame, disgust and embarrassment (Piper & Stronach 2008). The continued message to infants and young children, specifically in the wearing of disposable gloves and aprons in nappy changing events, is that their body-selves are somehow dangerous. In addition, Tobin (2004) suggests that a reaction to anxiety around children's bodies and physicality in the Global North, can be seen in the pedagogical emphasis on verbal language. And, indeed, the heavy emphasis on language and literacy development in early years policy and pedagogy, and the current research emphasis on care events as language learning opportunities, as discussed below, might also reflect this anxiety, which may both feed into, and provide an escape from, educators anxieties about touch.

In this way, educators' physical interactions set the tone for children's embodied experiences in settings. Bodily well-being depends on the degree of match between the environment and the individual child's bodily and psychological rhythm and needs. So, educators need to balance the need for safety with children's delight in their bodies and emerging body agency, and body-care practices should include developmental and existential attention to children's embodied experience (Leavitt and Power 1997).

2.3. Caregiving and touch in ECCE: Research context

Given the socio-cultural, historical context outlined above, it is perhaps not surprising that research on touch in ECCE is scarce. However, more recently, there have been a handful of studies highlighting the positive aspects of physical contact between educators and children. These have been from Scandinavian researchers, most notably Cekaite and Bergnehr (2018) and Svinth (2018).

In their study in a Swedish pre-school for 1–5-year-olds, Cekaite and Bergnehr (2018) identified different forms and functions of touch, including affectionate touch, which is comforting and co-constitutive of intimacy, compassion, and caring practices, or amicable touch, which showed spontaneous affection. They also identify 'affectionate-controlling' touch, used by educators to mildly control and direct children's bodily conduct and attention. Cekaite and Bergnehr (2018) also discuss whether these types of touch were sustained or temporary and how they denoted the intention of the educator to either monitor the child's bodily conduct or to draw their attention to the adult's guidance. In many ways these ideas chime with the concepts that arose in this research, in terms of different types of touch that are influenced by educators' intentions, as discussed in part 4 of this thesis. However, this research is more focused on younger children (only 2 of Cekaite and Bergnehr's examples are aged under 3 years) and also explores the factors that influence these types of touch. Similar to this research though, is Bergnehr and Cekaite's use of video as a method and their focus on the communicative meaning of touch.

Svinth's study explored nurturing touch practices with toddlers in settings in Denmark (2018). Similar to this research, Svinth's study is grounded in a relationsl ontology and draws on aspects of embodiment and intersubjectivity theory. This study found that when nurturing touch encounters were integrated into the setting's 'cultural repertoire' (p.11), as emotionally attuned interactions, then the intersubjective field between the practitioner and the toddler was enhanced and provided a foundation for relationship formation, socialization and for learning; findings that are congruent with those discussed in this thesis.

However, the diminishing visibility of physical caregiving in policy discussed above, is reflected in the limited amount of academic research on this vital aspect of practice (Degotardi 2010). Instead, much early years research and literature on children's physical selves, focuses either on health or the development of children's physical competencies and skills and their physical activity in the environment, rather than the child's experience of physical interactions with others or the actions and interventions of adults. So, understanding how the process quality of physical interactions may impact children's experience in early years settings is largely unexplored (Degotardi 2010, Phillips & Lowenstein

2011). Yet, the frequency and features of physical interactions in care events in provision for 0-3-year-olds, provide many opportunities for observing the direct responsiveness and consequences of educators' interactions with children (Zaslow et al. 2006), so, more research that contributes information and understanding in this regard is essential.

The dearth of research and literature on physical interactions in care events doesn't mean that 'care' isn't discussed in research, academic and practice-focused writing, it is, but is often addressed in a nebulous way that aims to infer a holistic approach, i.e., by posing care practices as equally important as educative practices through always talking about 'care and education' together. However, I would suggest that this is predominantly a semantic exercise, as in most early childhood writings, educative practices, such as areas of learning or the learning environment, are discussed in detail, while care practices such as nappy changing, washing, dressing and feeding, are not. This became clear in a review I undertook of 20 current texts in English that included 'early years care and education' in their title: Only three specifically discussed 0–3-year-olds (Meggitt et al 2016, Meggitt 2015, Lindon 2011), others discussed physical aspects but from a developmental or health perspective (such as MacLeod-Brudenell 2004, Nutkins et al 2013) and only two discussed the detail of caregiving practices. These were both by the same author, Carolyn Meggitt (2015, 2016) who is a health visitor by profession. In addition, the Infant / Toddler Environment Rating Scale- Revised (ITERs-3), that is widely used to measure the quality of settings providing for 0-3-year-olds, focuses on hygienic and sanitary protocols in Personal Care Routines, with only one item focused on assessing "pleasant staff–child interaction" (Harms et al. 2017). Other than the writings on the Pikler approach discussed below, texts that discuss the changing, feeding, washing and dressing of babies and young children are generally limited to advisory texts for parents, (for example, Edwards 2008, Mulholland 2008, NHS https://www.nhs.uk/start-for-life/baby/baby-basics/caring-for-your-baby).

This scarcity of research that examines educator pedagogical practices during care events is also identified by Degotardi (2010) and is particularly the case as regards nappy changing practices and washing. Research in relation to nappy changing tends to be from a medical perspective discussing health issues, research funded by commercial companies contrasting different products, or practical advice for parents, while for professionals, information is limited to a few practice articles in magazines and government guidance that generally focus on hygienic protocols and disease prevention (Laurin and Goble 2018).

An exception to this is Laurin et al's (2021) research on interactions during diapering (nappy changing), which examines the relationship between caregiver responsiveness and encouragement and the child's well-being and involvement. This study used the Observations Linked to Outcomes (PICCOLO) method which measures four behavioural domains of caregiver interactions with children including affection, responsiveness, encouragement, and teaching (Roggman et al. 2013). Laurin et al's study found that caregiver responsiveness was significantly related to both child involvement and child well-being and so are 'vital proximal processes in the moment-to-moment interactions between a caregiver and child' (p.1). Laurin et al's research (2021) and its findings very much chime with the ethos and perspective of this thesis, promoting diapering as a shared process where the child is actively involved, and emphasising the importance of the educator's ability to read and interpret the child's cues and to respond sensitively. However, the focus in Laurin's research is on social and emotional cues and responses; physical cues, interactions and touch are not included. A further difference is that Laurin's research uses Bronfenbrenner's (2001) Proximal Processes of Person–Process–Context–Time framework and the Leuven Well-being and Involvement scales (Laevers 1994), as measures of adult responsiveness and child experience, rather than intersubjectivity and embodiment, as used in this research.

Sleeping, feeding and mealtimes are researched more frequently. And while most writings on sleeping are advisory texts for parents, in 2016, the Journal of the National Sleep Foundation produced a special issue focusing on 'Sleep Health in Early Care and Education' (Bonuck 2016). This included five articles focusing variously on sleep issues in relation to

ECCE, describing ‘napping’ patterns, parental preferences and attitudes, and sleep scheduling, which all address generally relevant pedagogical concerns but none of which discuss physical interactions. There have also been recent research projects in Australia looking at the practice of nap times, but these focus on practice in relation to children aged 3-5 years, and the relationships between practice, children’s perspectives and curriculum guidance (Staton et al. 2015, Pattinson et al. 2014, Gehret et al. 2021).

In relation to feeding and mealtimes, a scoping report by Willemsen et al. (2023) identifies that research in this area has increased in the last 30 years, primarily in the USA, Northern Europe, and Australasia, and mostly focused on improving nutrition and healthy eating in line with concerns about rising rates of childhood obesity. However, as well as work that focuses on eating behaviours, they also identify many papers that have been written in relation to early years educators’ and children’s experiences, discussing the social and community aspects of mealtimes and situated meal practices, which represent the majority of research papers. It is the case though, that although feeding practices are discussed, this is mostly in relation to older children. Although the scoping report does draw on papers that relate to infants and toddlers, these do not necessarily specifically focus on feeding and mealtimes, and the issue of feeding in relation to infants and toddlers is not analysed as a discreet category in the report, so an overview of the experiences of infants and toddlers during mealtimes is absent.

In addition to the general absence of research on specific aspects of caregiving practice, several papers that do discuss nappy changing, sleep or mealtimes, discuss them in relation to learning opportunities. For example, Degotardi et al. (2016) discuss language support during snack-time, and Johnston and Degotardi (2020) and Palmér et al. (2016) look at mathematical language in mealtimes with infants, and Gheret et al. (2021) describe sleep-rest provision as ‘not well conceptualised as learning opportunities’. In Nordic countries, in relation to mealtimes, this has been referred to as the ‘pedagogical meal’ (e.g. Persson Osowski 2011, Sepp et al. 2006), which implies that the care event only becomes valid when identified learning is taking place. This view is becoming more widespread and, I would suggest, rather than validating caregiving as important in its own right, seeks to subsume care events into an 'education' agenda that is reminiscent of the 'learning through play' emphasis that was promoted in the 1970s and 80s to validate a play-based curriculum (Wood 2010).

2.4 Caregiving interactions: A psychodynamic perspective

It is in the area of emotional relationship where 'care' is given the most attention in academic writing, and rightly so, as it is well-documented that warm, and responsive caregiver interactions have a powerful influence on child outcomes and can mitigate adverse effects of disadvantage for infants and toddlers (NAEYC 2009, Norris & Horm 2015). Drawing principally on attachment theory (for example Raikes et al 1993, Colmer et al. 2011), writings in this area promote the key person approach (Goldschmied and Jackson 2004, Manning-Morton 2006, Elfer et al. 2011) or 'primary caregiving' (Dalli and Kibble / NZCER 2010) and in so doing, bring a psychodynamic perspective to bear on caregiving.

From the perspective of the object relations school of psychoanalytic theory, psychological life is created in and through relationships, with an emphasis on the physical actions and interventions of caregiving adults as central to the child's experience of self and others (Klin and Jones 2007). In this perspective, babies become self-aware through their internal bodily experiences, their muscle and skin sensation, and their bodily boundaries, through the sensations of being held and touched. The adult's non-verbal communications of touch, gesture and body stance provoke feelings that are internalised by the child, creating internal representations of the relationship and of themselves and so become part of their developing personalities (Sansone 2018). So, it is the child's actual lived experiences of being fed, cleaned up and held that influence a child's development because the infant's physical experiences have emotional counterparts. For example, the physical feeling of being securely held relates to the feeling of being safely supported emotionally and 'held in mind' (Bion 1962), while feeding relates to the giving and taking in of love as well as the physical giving and taking in of food (Winnicott 1960, Miller et al. 1989). In this way, an object relations psychodynamic perspective links physical, emotional and personality development closely together, as it is thought that where a child receives sensitive responses to their care needs, they are more likely to develop a positive, coherent sense of self (Winnicott 1965, Bowlby 1979). A responsive and sensitive caregiver provides what Winnicott calls a ‘holding environment', which allows the infant to pass to a state of greater autonomy at their own pace. This perspective is inherent to the Pikler approach to respectful caregiving and the concept of ‘holding’ both physically and psychologically that underpins this research.

2.5. Respectful caregiving

It is in the research and writings that are influenced by the Pikler approach (Tardos 2007), such as Dalli’s (2010) research on peaceful caregiving, that concern for children’s embodied experience and bodily wellbeing can be found in the literature. In the Pikler approach, the core principle of valuing close relationships as fundamental to young children’s wellbeing is made manifest through implementing the key person approach or primary caregiving during physical care events, with the aim of providing consistency and continuity of experience. This is facilitated by what Tardos (2007) calls continuous nursing, where the emphasis is on the flow of each child’s experience from being picked up, through being changed, fed, washed and put down to sleep or play by the same caregiver/ educator.

As a result, caregiving events are a central focus of Piklerian practice and take up a large portion of the day. Each event is given sufficient time so that nothing is done in haste, foregrounding current ideas about ‘slow pedagogy’ (Clark 2023), which emphasises ‘being with’ or ‘accompanying’ a child in a way that gives attention to their rhythm and pace, that listens carefully, notices and pauses. At these times, each child receives focused, consistent attention from their educator who interacts with the child in an attuned, calm and interested manner. In this respect, Pikler developed a choreography of actions for the educators to follow when washing, dressing, changing and feeding the infants, so that the child experiences a high level of consistency and predictability because the educators follow a consistent pattern of movements and interactions (Tardos 2007). This approach aims to allow the child to relax and enjoy the experience, to enable their participation and cooperation in each aspect, and thereby support the development of a consistent and competent sense of self.

In this way, the Pikler approach to care events may at first seem to perpetuate standardized practices that might impose normalisation and require conformity of self on the part of the child. However, at the heart of the choreography is the principle of attuned interactions and responses to the individual child with the aim of building secure trusting relationships in which the child can develop a positive self-concept as an autonomous, competent person. It is the educator’s task to adapt the pace and nature of their movements, gestures, voice tone and facial expressions, according to the personality or current state of the child. A key attitude underpinning this approach is that the educator recognises the child as a free and equal human being, with whom they are working in co-operative partnership. Therefore, the adult does everything 'with' the child rather than 'to' them, so care events become a co-operative dialogue in which the child is an active participant, as they choose whether to be laying down, or standing when being changed or dressing, for example (Gerber 1997).

This attitude of respect is made manifest in physical interactions. In Dalli’s research into ‘peaceful caregiving’ the educators identified a pattern of interaction they call ISE: Invite, i.e. waiting for a response to an invitation to being picked up rather than scooping a child up from behind with no warning. Suggest, i.e. making opportunities for a child to do things for themselves. Engage, pausing before acting and using gentle, unhurried gestures. Carrying this approach out effectively entails being attuned to the child’s physical and vocal responses and cues and using different types of slow-paced gestures, such as gentle touch, affectionate touch and sensitive signalling touch; adjusted to the child’s rhythm and tempo (Dalli and Kibble 2010).

2.6 Care in the training and professional development of birth to three educators

The diminishing visibility of physical caregiving in policy and guidance, the scarcity of research in this regard and the subsequent invisibility of 0–3-year-olds and their educators, as discussed above, are also reflected in, and reinforced by the education and training of early years educators. The focus in training and professional development for educators in recent times has put an emphasis on practices that are thought to meet learning outcomes for children, at the expense of the 'art of caregiving' (Lally 1997) and of understanding and valuing the physical and emotional factors involved in working with young children.

Rockel (2009) draws attention to the importance of knowledge as a basis of professionalism, calling for educators of infants and toddlers to be acknowledged for the specialisation required in this practice area and therefore, for the design and delivery of effective professional development programmes. However, a review I undertook of seven well-established providers of early years professional development training in the UK (EYA, PACEY, EE, EY Academy, Training4EY, NDNA), revealed that out of a total of 147 courses being offered in January 2025, only 7 sessions focused on 0–3-year-olds, and only one of those focused on aspects of care. The remainder focused mainly on trainings on first aid and safeguarding, which are compulsory, and sessions linked to the areas of learning as set out in the EYFS (DfE 2024). This bias in CPD training not only reflects the policy disregard for care giving, it also reinforces both the focus of pedagogical discussions on the education and learning of children aged over three in the UK, and a dualist, reductionist view of children and pedagogy focused on separate areas of learning and development, as discussed in 2.1 above.

In terms of the recognised NVQ level 3 qualification for early years educators, at diploma level, one unit of 23 addresses 'Support for Physical Care Routines for Children' (ncfe.org.uk). For this course, students have to draw on their practice experience to evidence the module criteria. And for this module, this includes, nappy changing, toilet training, mealtimes / feeding and sleep time, and itemises the equipment and process to be used. There is an emphasis on hygiene processes, and items specifically include the use of gloves and aprons, thereby reproducing and reinforcing a discourse in early years professional culture of the limiting of physical touch between adults and children (Piper and Stronach 2008), leading to 'disembodied practice' (Tobin 1997, Johnson 1997), as discussed above. In Foucault's terms such discourses are transmitted through institutions such as education and training organisations to produce ‘docile’ bodies, as discussed further in chapter 3.3 (Schirato et al 2020). The National College for Care and Education (NCCE) (https://www.ncce-learn.co.uk/) also offers a Level 3 Certificate in Baby Care for the Early Years Educator, with a similar emphasis on the instrumental aspects of hygiene practices. In terms of the focus of this thesis, that is, the physical interactions between educator and child, the requirements for this module merely specify that the educator should be ‘Calm, smiling and talking to baby throughout the nappy changing process’, and ‘Give lots of praise, talk to them, sing nursery rhymes or read a story’ while a child is sitting on a potty, but how the trainee educator is taught to physically interact with children in these processes is not addressed, and, as NVQ trainings are practice based, it can be assumed that this learning will usually be passed on by the student’s mentor or colleagues in the setting, rather than included in class-based learning. In addition, whether and how the trainee educator is enabled to reflect on their physical interactions during care events is not addressed in the diploma syllabus at all. In contrast, hands-on class-based learning of how to hold, bathe, change and feed babies was a core subject of the previous qualification training of educators, the NNEB (National Nursery Nursing Board) and is now only a feature of Norland College Nanny training (https://www.norland.ac.uk) and Pikler Pedagogue training (pikler.hu.org).

In addition, it seems that in courses at higher education levels, theoretical discourses perpetuate ideas of children’s minds and bodies as separate spheres of study, where embodied practices are not addressed at all and the play, development and learning of 0–3-year-olds become even less visible (Bussey 2017), despite a rhetoric of a holistic education for educators. In its campaign for an early years graduate workforce, the Early Childhood Studies Degrees Network (ECSDN) developed a set of Early Childhood Graduate Practitioner Competencies (GPCs) (ECSDN, 2019) as benchmarks for providers of early childhood degrees. Competency two states ‘Promote holistic child development’, and competency 3 is, ‘Work directly with young children, families, and colleagues to promote health, well-being, safety, and nurturing care’. Institutions adhering to these competencies are seen to give graduates a ‘well rounded and in depth understanding of early childhood as a whole’ and provide them with ‘the skills and knowledge they need to advocate for children and their families in a holistic manner’ (ECSDN, 2019). However, in their research report on the content of early years degrees in England, Campbell-Barr at al. (2020) found that ‘Degree content and age specialisation are fragmented’, and that ‘there are questions as to whether degrees are covering content that will enable students to go on to work in early years services, such as having age specific child development knowledge’ (p.7). In this regard, the report identifies that the age groups covered range from babies and toddlers to the lifespan of a human, but the report does not identify whether that includes specific modules focused on 0–3-year-olds, either because the course descriptors did not specify such a focus or because this was not a focus for their review. But, as the report points out, the low reference to a topic does not mean that it isn’t covered in a degree, as it might still be within the teaching content. However, I would contend that topics that are valued by the institution and seen as important or highly relevant to the education of the students, would appear in the course descriptors, and topics relating to a pedagogy of care, do not appear. Campbell-Barr et al. (2020) also make the relevant point that degrees are frequently delivered by experts in the field, so prevalent themes, will represent what teaching staff see as important. I would suggest that perhaps those themes also reflect the knowledge base and professional backgrounds of the academics developing and delivering degrees, who are mainly drawn from those with a teaching background with children older than three years. This suggestion is based on my experience as former course leader of an early childhood degree and knowledge of the field and is an area for potential future research. However, as Chu (2016) found in their review of early childhood degree programmes in the USA, the overall insufficient emphasis on a deeper understanding of holistic infant early development, and the ‘uneven and more limited inclusion of infants and toddlers in the course content’ (Austin et al. 2015, p.3), was exacerbated by faculty staff’s own need to address gaps in their knowledge base in relation to infants and toddlers. Consequently, if this situation were to be replicated in the UK, which I believe it might, then despite the often repeated assertion that degree-qualified staff in early years settings contribute positively to the overall quality of services and to children's outcomes (Campbell-Barr et al. 2020, Sylva et al. 2004), this is not necessarily the case for provision for 0-3 year olds. In their review of the graduate leader fund, Mathers et al. (2011) identified that although settings that gained a graduate leader with Early Years Professional Status (a post-graduate qualification) made significant improvements in quality for older children (30 months to five years), there was little evidence of an EYP impact on the quality of provision for younger children (birth to 30 months). Whether this is to do with where an EYP is deployed in a setting, or the quality of content of the EYPS course in relation to younger children is a question to be considered.

I would argue that this bias in discourse in education institutions further marginalises the voices of babies, toddlers and 2-year-olds and the educators who care for them and feeds into the under-representation of 0-3s educators in early childhood research (McDowall Clark and Baylis 2012, Rockel 2009) not only as participants, but also as researchers. So, there is a need for research specifically focused on training in relation to care interactions and to address the lack of specific training on 0–3-year-olds in higher education early childhood degree programmes (Chazan-Cohen et al. 2017, Degotardi and Davis 2008). I also suggest that the current training and academic experience of 0-3s educators, which overlooks their required knowledge and skills, exacerbates any existing low professional esteem and their perceived low professional status (Goouch & Powel, 2013; Osgood 2012), and also feeds into a concept of professionalism in the early years field that values some educators' areas of expertise more than others'. This discourse has its roots in a dualist concept of professionalism which values knowledge over skills, so knowledge about children's learning is seen as superior to the ability to help a child with their toileting, for example (Manning-Morton 2006). Indeed, Taggart (2011, 2016) notes that the discourse of professionalism in England completely excludes the ethical vocabulary of care. So, it seems that if the sector truly aims to develop a holistic professional identity and approach, then developing training and education courses that respect and explore all aspects of practice and areas of knowledge would be developed and would emphasise care as a professional skill not just a personal attribute as encapsulated in the maternalistic discourse of ‘natural carers’ often applied to 0-3s educators (Rockel 2009).

Despite this lack of recognition of the professional skills and knowledge required by 0-3s educators in higher education degrees, one positive aspect noted by Campbell-Barr et al. (2020), is that ‘professional practice and reflection’ was the most frequently cited topic covered, recognising that reflexivity is accepted as a deeply embedded and important skill for working in the early years sector, where it is seen to be a positive way of educators seeking to improve their practice through standing back, thinking and questioning in order to make sense of their experience, deepen understanding and to gain clarity and insight (Manning-Morton 2014, 2024). Researchers such as Degotardi and Sweller (2012) also support professional reflection as a means of enhancing professional identity in 0-3s educators that might also contribute to a reconceptualisation of professionalism in the early years (Dalli et al. 2011, Powell and Goouch 2013). These studies highlight the importance of providing space and time for educators to reflect and construct new possibilities for practice in a supported, professional environment (Degotardi and Sweller 2012, McDowell Clarke and Baylis 2012). My previous research concurs with this view and suggests that developing a professional approach for birth to three educators involves combining personal awareness with theoretical knowledge and practical skill (Manning-Morton 2006, 2014, 2024).

This approach to professional development has its roots in humanistic psychologies that emphasise that people are born with the desire to grow, create and seek meaning, and have the power to direct their own lives (Rogers 1961) and, when applied to education, emphasises self-directed, student-centred learning and a holistic approach (Rogers 1969). These are explicitly identified in Knowles’s (1970) andragogical approach to adults’ learning, whom he characterises as self-directed human beings, who manage their own lives and who have reservoirs of experience that are a resource for learning, and a ‘problem-centred’ orientation to learning arising from a perspective of immediacy of application of learning to real life situations (Knowles 1970). In my professional work and previous research, this has meant working to the principles that personal experience is a source of knowledge, that learning is a combined process of feeling, thinking and doing and that both knowledge and self-knowledge is empowering (Manning-Morton, 2006). In this context, professional reflection is about the examination of practice in a particular political and social structure. So, the emphasis is on reflexivity, that is, the dynamic relationship between reflection and action (Freire 1976). If reflective practice is to be of social use, it needs to challenge assumptions and make changes to practice, as well as develop self-awareness (Moon 2013). As Bolton says, 'Personal reflection needs to happen alongside open discussion with colleagues and reading theory and research in order to become socially as well as psychologically useful' (Bolton 2014).

In this perspective, accepting reflexivity as important to practice means that training courses need to embrace an approach that is not just focused on didactically imparting information but on contexts and processes that are person-centred, process-oriented and facilitate reflection. This approach also reflects Bion's (1962) ideas of the power of small groups of professionals reflecting together, to then act as an external support that performs a containing function, as discussed further in chapters 5.1 and 7.3. But to fulfil this function, this approach should be characterised by a focus on learning through experience and shared reflection within the group, with close attention to the meaning of detailed interactions in group behaviours and the relationship between what is said and how the group behaves (Elfer and Dearnley 2007). According to Tuckman (1965), in a human relations training-group, the task is to help individuals interact with one another in a productive manner, and to be aware of the dynamics underlying such interaction, balancing the necessary focus on the group's task, with the interpersonal stages of group development. This requires trainers and leaders who are themselves trained to sensitively facilitate the dynamic processes of groups.

Adopting an andragogical approach to professional development training also requires using an experiential approach, as when reflection on personal experience and professional dilemmas is combined with thinking about ideas, a deeper understanding of babies' and young children's experience is enabled (Manning-Morton 2006, Elfer and Dearnley 2007) and changes in practice brought about and sustained. Ingold (2000) argues that cultural knowledge and embodied skills develop through engagement with the environment and in situated social relationships. Therefore, learning and skills cannot just be transmitted didactically, learners gain cultural knowledge by being engaged in skilful activities. In addition, emotion affects learning; through observing and imitating in an 'as if' scenario, empathy with and understanding of the 'pretend' situation grows. This is particularly effective when bodily awareness and movement is also engaged, combining empathy, reciprocity of viewpoints and kinaesthetic experiences. However, such experiential group work is now less common in professional development training for early years educators, which is increasingly delivered online in short sessions, with the aim of fulfilling regulatory requirements, rather than expanding educators reflexive understanding. In contrast, in both the content and process of this research, thinking about children's experience was supported by educators engaging in a process of feeling, thinking and doing through experiential exercises.

Conclusion

This chapter has given an overview of the historical and current policy contexts of ECCE in the UK, in relation to physical interactions and caregiving in early years pedagogy. It asserts that there is a need for much more research that specifically focuses on physical interactions in early years settings, particularly during care events, and a greater pedagogical focus and professional development and qualification trainings on physical interactions with infants and young children. Following on from this, the next chapters will broaden the discussion to outside an early childhood care and education perspective to focus on discourses that permeate ideas of the body.

Part 2: Perspectives on the Body: A Theoretical Framework for Embodied interactions

> *"… and your very flesh should be a great poem, and have the richest fluency, not only in its words, but in the silent lines of its lips and face, and in between the lashes of your eyes, and in every motion and joint of your body".*
>
> (Whitman (1855) Preface to Leaves of Grass)

In this part of the thesis, I broaden the discussion to outside an early childhood care and education perspective to focus on discourses that permeate ideas of the body, which thereby inform my theoretical framework for this thesis. In chapter 3, I discuss physiological and sociological perspectives from a baseline of a critique of Cartesian dualism. Chapters four and five then discuss the theoretical perspectives of embodiment and intersubjectivity, which frame my thinking and underpin my research approach and methodology. In so doing I aim to make connections between these different theoretical disciplines and to emphasise the holism and 'fluency' of embodiment and of embodied interactions that highlight the kind of detail of physical meaning exemplified in the Whitman quote above.

Chapter 3: Physiological and Sociological Perspectives on the Body

3.0. Introduction

In this chapter I explore approaches to thinking about the body, as a means to set out relevant theoretical ideas that frame this research and to identify the connections between different perspectives in order to emphasise a holistic view by ‘border crossing’ between disciplines (Moss 2018). Therefore, in section 3.2 of this chapter I discuss physiological theories that pertain to the focus of this research. And, in order to also examine children’s and educators’ lived experience of physical interactions in their social and material circumstances, I discuss relevant sociological theoretical perspectives on the body in section 3.3.I.

To do this I initially drew on my knowledge from previous studies in relation to sociological perspectives on the body, including concepts of embodiment and intersubjectivity, but also then expanded and updated my existing understandings through reviewing both seminal texts and recent writings in these areas. In relation to physiological perspectives on the body, I undertook a semi-systematic review of relevant and related international scholarly articles and books in relation to the key words of ‘touch’ / physical interactions’ in conjunction with ‘babies’ / ‘young children’. This provided an overview of this specific aspect of physiological perspectives and yielded research and writings from both neuro / biological and psychodynamic disciplines, which fitted with my multi-disciplinary approach, and allowed for theoretical connections to be made.

Historically, both the biological and social sciences in the Global North have been shaped by Cartesian dualism (Dika 2020), which, by separating the mind from nature and the body, has engendered a scientific discourse premised on impersonality and objectivity that has underpinned research. In turn, this has highly influenced views of children and childhood, theories of child development (Gabriel 2021) and has contributed to the ‘disappearance’ of the body from early years policy, research and pedagogy as discussed in chapter 2. Therefore, this chapter begins in section 3.1 with an overview of dualism and its implications for children's physical experience and for early years pedagogy.

Physical and sensory experiences are fundamental to infants' and young children's understanding of themselves, others and the world (Herbert and Pollatos 2012). Therefore, an exploration of physical interactions between educators and babies and young children, such as this research, requires an account of ideas about the physiological processes that underlie physical interactions, particularly the physiology of touch, an account that is missing from most discussions of children's experience and pedagogy. Therefore, I assert a biological perspective on the body as a corporeal organism that provides an on-going structure for lived experience, which is, therefore, the basis of our being in the world (Fraser and Greco 2005). However, in my discussions of the physiological processes of the body, I am not attempting to present biological science as holding reductionist fundamental truths (Fraser and Greco 2005) but rather as a fluid perspective that is in conversation with socio-cultural contexts (Williams and Bendelow 1998), where the body is seen as having material malleability, thereby avoiding the conceptual opposites of dualism and instead embracing the holistic and complex systems perspective of embodiment.

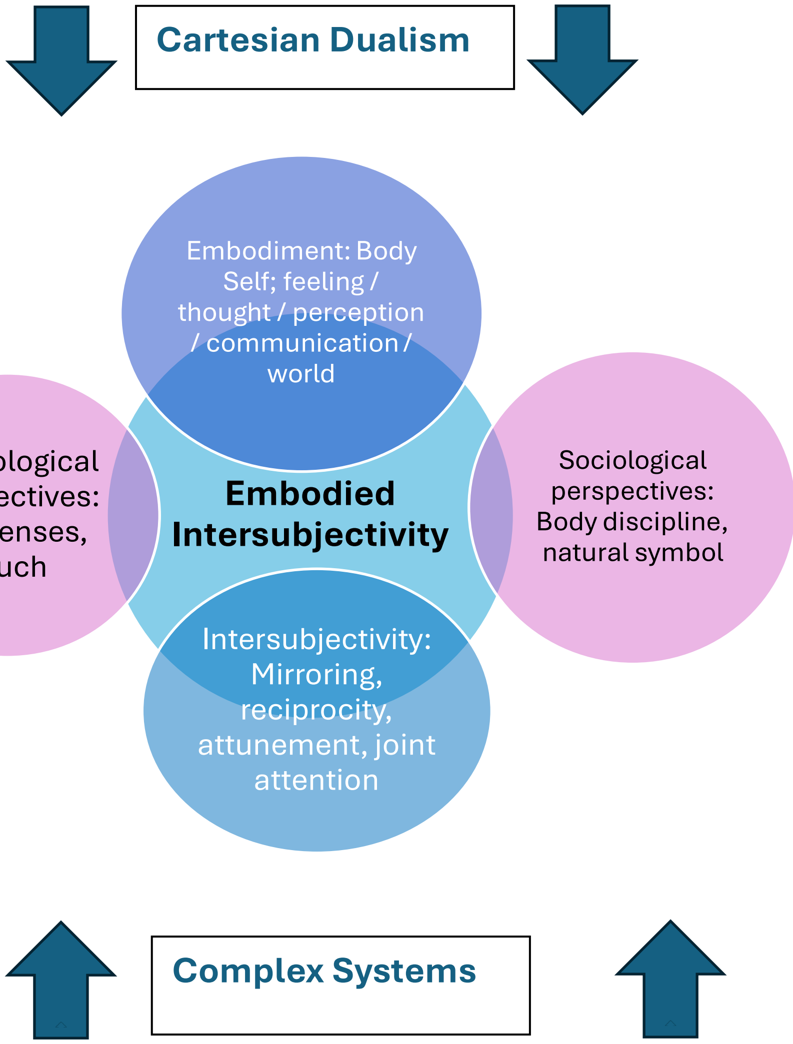
I then go on to discuss the socio-cultural body that is seen as a symbol with which to think about social relationships and culture and whose actions reflect and reproduce the social relations that surround it. In this regard, I explore Foucault's idea of the body as a site for discipline (1975/1995) and Douglas's view of the body as natural symbol (1996). Williams and Bendelow (1998) trace the 'turn to the body' in social theory, suggesting that it is only relatively recently that the body has been considered relevant as a subject for sociological analysis in its own right (Shilling 1993, Turner 2008). They argue that because the social sciences emerged alongside the positivism and biologism of modern medicine, sociology then focused solely on social constructs as mediated by culture (Turner 2008) and so, overlooked the embodiment of actions and practices (Crossley 2007). This 'overlooking' is even more the case in relation to the theorising of bodies in childhood (Williams and Bendelow

1998), although ‘childhood’ has been theorised from different perspectives in the social sciences (see for example, Aries 1996) only recently have sociologists begun to appreciate that children’s bodies are indicative of contemporary social, political and cultural constructions of the child, and to recognise the importance of embodiment to the processes through which children actively participate in social life (Burke and Duncan 2015). More recently, sociology has come to regard the body as highly relevant to the study of socially situated phenomena and to problematise ‘the body’ as a single concept, establishing the idea that there is no given, fixed body but different bodies that are rooted in different embodied experiences (Fraser and Greco 2005). Therefore, the theorisation of the body that has identified processes of feminisation and racialisation in its constructs and thereby highlighted the bias of a dualist perspective and different bodily experiences, can also be applied to how we think about children’s embodied lives.

For each of these perspectives, I also discuss their implications for how we view babies and young children and for approaches to care-giving and physical interactions in early years settings. I consider constructions of the child and of children’s bodies and, by drawing on an embodiment framework, propose an idea of the body that is equally a corporeal organism and a discursive product and symbol of society. Therefore, a central focus of this thesis is the concept of embodiment, as discussed in chapter 4, which sees bodies as both products and active producers of meaning and culture. It disrupts the cognitive/learning emphasis in ECCE as discussed in section 2.1 and at the same time links to the ‘science’ of physiology and neurology, allowing physical interactions to come to the fore and enabling the body to take a more central place in thinking about children’s experience.

This conceptual framework is illustrated in Figure 2 below.

Fig. 2: Conceptual framework



3.1. Cartesian dualism

Rene Descartes (1596–1650) proposed a dualist philosophy that distinguishes between the mind and the body and thereby, culture and nature, and privileged the former over the latter. He suggested that the thinking mind is the real substance of conscious being and is separate from the non-thinking body (Damasio 1994, Phillips et al 2014, Dika, 2020). In this perspective, the mind offers freedom and control through rationality and knowledge, while the body is a constraint because physicality is a reminder of human frailty, mortality and a natural state that undermines reason. So, while corporeal events may impact processes of thinking, the resultant thought and its meaning are valued for being disembodied (Fraser and Greco 2005). In this way, ideas of rationality are established as the dominant discourse (Grosz 1994/2020) and are valued over the physical aspects of our lives. The properly developed mind is seen to be able to subdue bodily excesses and the unpredictability of emotion (Damasio 1994, Phillips et al 2014, Dika, 2020).

Grosz (1994/2020) suggests that in a Cartesian view the body is regarded and studied primarily as an object. This may either be as an object whose 'sensations, activities, and processes are seen as "lower-order" natural or animal phenomena' (Fraser and Greco 2020, p. 210), or as an object that is a passive possession of the mind-self, who makes decisions about how to train, subdue and discipline the body. Or the body may be seen as a vehicle of expression, through which information from the outside is conveyed to and then processed by the mind and via which, the self expresses its interior thoughts, feelings and states to the outside world. Underlying these views is a belief in a passive body that is in service to the mind (Grosz 1994/2020).

As discussed in section 2.1, this view has historically underpinned developmental psychology, early years policy and pedagogical texts that often discuss children's bodies as separate from their minds (Manning-Morton 2006, Burke and Duncan 2015) and subsequently, promotes a dualist view of young children that denies their holistic, integrated mind/body/selves. Grosz (1994/2020) calls this distinction between bodies and minds, in which the body is posed as a 'danger' to rationality, somatophobia. She identifies how mind/body dualism underpins other binary concepts such as gender (Grosz 1994/2020), thereby emphasising how this perspective is pervasive to the construction of ideas of self in the Global North, which have then been applied to oppressively discriminate between humans. For example, women's biological childbearing capacities have been /are thought to make them more intimately connected with their physicality and therefore their selves have been /are seen as closer to nature, while men were /are identified with the thinking mind, rationality and culture. From a feminist perspective, a Cartesian view that values perceived 'masculine' traits of rationality over nature and emotion, thereby accords women and 'femininity' a lower value in society (Langton 2007). Creed asserts that female bodies remind man of his "debt to nature" through the way women's bodies change shape and leak fluids such as breast milk and menstrual blood and thereby 'threatens the boundary between human and animal, civilized and uncivilized' (Creed 1995, p. 87). Similarly, young children's bodies are construed as 'metaphors of disorder' because they change rapidly, and their bodily secretions are not under control (Burke and Duncan 2015). They are then also accorded a lower social value, as their physicality and emotionality are seen to link them more with nature. As Leavitt and Power (1997) suggest, babies and young children are as yet mostly unconstrained by behavioural and body management 'norms', so the child-body is seen as particularly unruly and in need of direction and control (Leavitt and Power 1997, Burke and Duncan 2015).

In addition, Cartesian dualism underpins the ab/normal distinction, which gives rise to the dominant discourse of developmental 'norms', as discussed in section 2.1. It also engenders a mad/sane binary in which madness is defined in opposition to reason and is typified by the in/ability to speak coherently. Therefore, beings without language are seen as being incapable of reason, irrational and possibly mad. In this way, infants (a word whose Latin root means incapable of speech) and young children are positioned as 'other' and not yet fully human in a world in which 'human' is equated with adult, rational, verbal, physically controlled, masculinity, wherein a strong mind is seen as one that is able to control one's body and a disciplined body is evidence of having a strong mind in a nature/ culture binary.

It follows therefore, that in a Cartesian world view, caring for babies and young children is also ascribed a low social value, both because it has been seen as a woman's 'natural' occupation and because it is a job that entails daily immersion in bodily and emotional processes (Manning-Morton 2006). This devaluing of caregiving in society has also resulted in its devaluing in the early years field, as captured in the epigraph to the first part of this thesis. Consequently, in its pursuit of a higher professional status, the early years sector has come to prioritise 'educative' practices and increasingly distanced itself from physical care practices, as seen in the greater value ascribed to cognitive and linguistic development discussed previously in section 2.2. Tobin (2004) highlights how Western / Global North societies emphasise verbal communication more than physical interactive communications in early childhood: The phrase ‘use your words’ (ergo not your body) is commonly heard being said by educators to children who are upset or angry. This, amongst many other things, Tobin suggests, has the effect of subjugating the body and suppressing bodily expression of feeling, which is part of the legacy of Cartesian dualism in early years pedagogy.

3.2. Physiological perspectives

It has long been accepted in developmental psychology that infants and young children encounter, interact with, and make sense of the world by processing sensory information through their developing perceptual, somatic, motor and neurological systems, but usually with an emphasis on how these sensations become thought, rather than the actual physiological processes. This section presents an account of the physiological processes that underlie infants’ and young children’s experiences of physical interactions and how sensory experience is processed in the body, with a particular focus on the senses and the somatosensory system and the interrelationships between touch, emotion, self and relationship.

3.2.1. The senses and somatosensory system

In developmental psychology in the Global North, the senses are usually discussed in terms of the separate aspects of sight, hearing, taste, touch and smell, and perhaps sometimes, the whole-body proprioceptive, kinaesthetic and vestibular senses. However, according to Howes (2009), there are at least ten senses and possibly as many as 33 but, as he points out, this scientific enumeration of the senses is not definitive, as sensory experience is historically and culturally ordered as well as physically defined. Each society constructs and transmits a model of sensory meanings and values, which translate sensory perceptions and concepts into a particular world view. For example, in classical Indian philosophy, eight senses are listed that include ‘prana’ (breath) and ‘mana’ (thought / mind) (Howes 2012). The inclusion of mind as a sense is significant here, as it goes against the entrenched Cartesian dualist construction in Global

North philosophy, in which senses that are linked more to thinking and rationality are given higher value. For example, vision is often privileged culturally and is thought to structure what is real and what is known (Howes and Classen 2013) and so has been studied more. This may also contribute to a deficit view of infants and young children, whose sense of sight is the least well developed at birth and is refined only gradually throughout middle to late childhood. In contrast, infants' senses of smell and touch are well-developed from birth and, as Pallasmaa (2005) suggests, it is touch that integrates our experience of the world with that of ourselves'; we 'see' through our skin (Pallasmaa 2005:11).

In addition, although the senses are generally identified and discussed separately in terms of their development and physiological processing, neurologically the processing of a sense is multi-modal, with senses informing each other and combining to create thought and understanding (Pink 2015), and young children especially can experience synaesthesia in the early stages of perceptual development (Carter 2013). 'Intersensoriality'; the interrelation and/or transmutation of the senses, has been a focus of the 'sensory turn' in sociological and anthropological studies (Howes and Classen 2013). This 'turn' has critiqued the 'visualism' of Western thought and culture and embraced 'embodiment' as a central paradigm, viewing all our senses as equally integral components of our 'sensorium', which coordinates all the body's perceptual and proprioceptive signals (Jones et al 2006, p.8). Intersensoriality is also reflected in other more recent philosophical stances that counter Cartesian dualism, such as that of Merleau-Ponty (1962/2002), who sees sensations as resonating with each other and that 'interpenetrate' in a synaesthetic experience, in which sensation may be experienced as both colour in the visual field or music on the auditory level, for example (Al-Saji 2001). This view is congruent with the complex systems thinking in the embodiment frame of this research.

Sensory information is processed in the body through the somatosensory system. Sensory stimuli from the environment enter through the sense organs and from receptors in the muscles and skin and is translated by the somatosensory cortex in the brain into information about the world (Howes and Classen 2013). But the brain not only modifies the information and creates mental representations, it is also modified by it, as the sensory stimuli cause connections between brain cells to be made (Raju and Tadi 2020). The sensory information that the somatosensory cortex receives from the body's sensory organs, is transmitted through specific receptors and nerve fibres that enter the central nervous system and are carried to the brain via neural pathways to the spinal cord, brainstem, and thalamus. This information is then projected to the somatosensory cortex, which integrates the information and also connects with other brain areas (Howes 2009). Different types of receptors each carry a specific sensation, and different areas of the somatosensory cortex are arranged so that a particular location receives information from a particular part of the body, which allows us to locate the exact location of a sensation. This is known as somatotopy and is used to construct a mapped representation of the body's sensory surface, called the sensory homunculus (Jones et al. 2006). The surface area of the somatosensory cortex dedicated to a particular part of the body correlates with the amount of sensory information received from that area. So, as different areas of the body are more sensitive than others, they are represented on the homunculus map in a proportionate way, i.e., the hands and lips take up large areas as they transmit a lot of sensory information (Flor 2003, Raju and Tadi 2020, Slominski et al. 2012).

3.2.2. The Skin and Touch

The skin is our largest and most sensitive sense organ or exteroceptor, containing an abundance of nerve endings, which register touch, pain, pleasure and proprioception, and changes in temperature and pressure. In embryological development, the skin originates in the same ectoderm layer as the cortex and the area devoted to integrating tactile and kinaesthetic stimulation is metabolically active at birth. Thereafter, the skin provides essential tactile experience that stimulates the growth and development of the cortex (Hertenstein & Weiss 2011, Slominski et al. 2012).

Tactile sensation is discussed in neuro-biological terms as comprising different kinds of nerve fibres that are organised to process different kinds of touch, i.e., ‘discriminative touch’ and ‘social or affective touch’ (Schirmer and McGlone 2022). ‘Discriminative touch’, is seen to transmit spatial, temporal and textural information through fast-conducting nerve fibres called A-beta fibres, which enhance information about objects in the environment. The somatosensory cortex uses sensory information from the receptors fired in this type of touch to initiate movement, to manipulate tools and to perceive the texture, shape, size and function of an object and also, to be able to identify objects without using sight (McGlone et al. 2007, Morrison 2022). The somatosensory system is also believed to be involved in storing and retaining this tactile information in memory (Hertenstein & Weiss 2011). Different areas of the body have a range of specialised receptors, shaping tactile processing and accommodating specific functions. For example, the skin on our palms and soles of feet that are most in contact with the world are densely populated with A-beta receptors that give spatial and temporal information, while other hairier areas have more CT receptors that define our sense of bodily self and how that connects with another. These C-tactile fibres or CT afferents conduct affective touch and transmit pain, pleasure and emotionally relevant touch (McGlone et al. 2007, Morrison 2022). This aspect is relevant for this thesis as the literature suggests that the tactile sense is the most embodied and that affective touch is highly relevant for the social and emotional aspects of self and relationship because the threshold of self, others and the world is crossed through experiences of touch (Zoltowski et al. 2022, Manzotti et al. 2023).

For the newborn, receptivity to touch and the need for touch is high, as it is vital in organising the nervous system (Fotopoulou et al. 2022). This includes self-touch as well as being touched by others. Infants touch themselves about 13 times per minute between 3-13 weeks of age (Boehme and Olausson 2021). This may be as a means to self-sooth, as it can help to regulate high arousal states and thereby reduce stress, or it can also self-activate in low arousal states, but very importantly, self-touch is used in developing self-awareness (Boehme and Olausson 2021). As they explore their physical boundaries, playing with hands and feet and rolling on back and front, infants’ sense of themselves as a whole being is founded. And while being physically held by another, an infant's sense of themselves as a separate being is felt at the self-other boundary of the skin (Laplacette et al. 2023), and so is also, as Manning (2009) suggests, inherently relational. In these processes of touching and being touched, the somatosensory system differentiates between self and non-self touch (Boehme and Olausson 2021). For example, to focus on visual, aural, tactile or other sensations produced by another, the brain predicts the sensory outcome of its own actions and thereby reduces attention on those sensations (Boehme and Olausson 2021). This differentiation is the basis for distinguishing between self and other, which is crucial for both self-awareness and social cognition; it begins prenatally and continues throughout life (Mariani-Wigley et al. 2022).

Touch is thought to be particularly important for how we feel about self and how we relate to others as, although we can hear, see and smell others from a distance, we can only feel them when they touch us, which is when they are very close and therefore, when we are most vulnerable to their behaviours (Doherty-Sneddon 2003, Abra et al. 2024). Equally, for infants and young children for whom isolation from the caregiver is an existential threat, sensory information that denotes proximity, such as touch and holding, carries important messages about safety, security and survival (Cekaite and Bergnehr 2018). This is fulfilled through physical touch and skin-to-skin contact, which then not only promote social attachment but also provide homeostatic and allostatic regulation (Fotopoulou et al. 2022). In skin-to-skin contact, the primary caregiver's body acts like an external womb and has a profound effect on the infant's physiological functions; helping to regulate their heart rate, their breathing and their internal regulation, boosting the production of anti-bodies and thereby the infant's immune system: It is therefore, also associated with a reduction in mortality rates for low birth-weight babies (Schirmer and McGlone 2022, Mariani-Wigley et al. 2022)

Affective touch in particular, has a range of specific tactile and social/emotional consequences (Fairhurst et al. 2022). Gentle physical touch regulates fear, noxious and stress reactivity in the infant, as it releases endorphins and oxytocin which help counteract the threat response (Manzotti et al. 2023). But these benefits depend on the nature or quality of the touch. The pressure, speed, and the areas touched may be either activating or calming, encouraging or comforting. It seems that the receptors in the skin that contain CT fibres, which convey affect and code positive touch, respond to light touch, and a range of stroking speeds of between 1-10 centimetres per second. So, slow gentle stroking, that engages the CT system can buffer stress, and in the longer-term, the cumulative impact seems to be linked to epigenetic changes that remodel the brain circuits that modulate stress responses (Morrison 2022). In this way tactile interactions support infant bio-behavioural regulation in the first months of life and, it seems, provide protective factors that contribute to social and emotional resilience.

Therefore, touch is a significant mode of interaction that has strong, direct consequences on concepts of self and self-other relationships (Fotopoulou et al. 2022). In everyday physical interactions, infants and young children link their interoceptive / internal bodily sensations with external multi-sensory information. For this to succeed as a positive experience, the rate at which a caregiver provides bodily responsiveness and consequent arousal reduction and relaxation, needs to fulfil the infant's interoceptive prediction. The degree of differential will determine whether the infant or young child is able to build generative models regarding their bodily needs. Therefore, touch in everyday caregiving is not just instrumental, it is also hedonic (Fotopoulou et al. 2022). In addition, the frequency of physical interaction in care events means that those repeated multi-sensory, affective experiences form a building block of the infant's awareness of their physical state, their internal and affective state and their link to the outside world (Boehme and Olausson 2021). In addition, touch also includes an embodied transfer of the caregiver's own parasympathetic regulation to the infant. So, the external multi-sensory experience of close body-body holding in care events not only conveys information to the child about their own physiological state but also enables embodied mentalisation of others (Fotopoulou et al. 2022). Therefore, responsive, attuned caregiving touch builds the foundations of co-regulation and establishes positive relationships between infant's and caregivers. In this way these physio-neurological processes can be linked strongly to the psychodynamic perspectives of object relations theory, in which the child's direct experience of caring interactions is seen to be internalised into their developing personality. And how the characteristics of these physical interactions; affectionate touch, body-body contact and sensitive responsive caregiving touch, constitute the physiological aspects of the psychodynamic concepts of attunement and containment, as discussed in section 5.1.

3.2.3. A systems perspective on physiological processes

Although the receptor pathways described above are thought to operate separately as they transmit stimuli, Morrison (2022) suggests that this anatomical segregation does not necessarily extend to a segregation of affective and discriminative touch experience, which indicates a systemic approach to thinking about these physiological processes (Morrison 2022). In a complex systems perspective, processes in the body operate within their own system but they also interact in complex ways with other systems (Thelen and Smith 2007). For example, the brain is its own system but is inextricably linked to the body through the spinal cord, the autonomic nervous system and the neuroendocrine system, which are also discreet systems themselves. Added to these are other systems such as those processing pressure, vibration and pain through the skin and those regulating body temperature, the vestibular and proprioceptive systems. Changes in one system impact or influence another, and body systems also interact with external environmental systems. Therefore, developmental change occurs as a result of the relationships between, as well as within, systems in the body and also between the organism and the external environment. So, changes in one aspect of development are as a result of all aspects of the system working together and are seen to happen simultaneously and interdependently across different levels and aspects, in a web-like process (Pessoa 2022, Newman and Newman 2022).This is different to a standard linear and hierarchical model of the brain and of human development (Semenova and Kotik-Friedgut 2021), which is then linked to standard versions of child development.

This systems perspective, which underpins embodiment, also moves away from a hierarchical view in which certain senses, or the brain / mind are valued more than the body, because it emphasises the multi-directional flow of information. Bodily processes interact with brain structures to produce a radical new anatomy, where all psychological functions, are conceived of as emergent properties of a complex ‘brain-mind-body’ (Carroll 2001). The body then is the perceptual space in which psychological processes take place as the brain’s complex network of mutually regulating systems, which are distributed throughout the body, depend on the three-dimensional dynamic structure of the body to become realised: The brain may give the body instructions for taking action, but the body gives the brain important information about where the body is in time and space, which enables the mind to think (Pessoa 2022). So, mind is not a development beyond the body, it develops in parallel with the increasing complexity of an embodied body-mind-self (Carroll 2001). Together, bodily sensation and brain processing create a feedback loop of representation, from which bodily and emotional self-representation emerges. For example: Muscle is packed with proprioceptors measuring changes in muscle tension, pressure and the position of limbs in space. Facial skin is also well supplied with receptors that are sensitive to the stretching and pressure changes that result from expressive movements, which gives rise to a physical sense of self linked to emotion (Carroll 2001). This awareness of expression happens in response to a felt internal state and at the same time, physical expression gives feedback to and has an effect on feelings. These body-mapping cells emerge in utero and create a constantly updated dynamic and dense map of the body/ self in the mind, pre- and post-nataly (Marshall and Meltzoff 2015). For this reason, Damasio (1999) suggests that the self is a repeatedly reconstructed biological state. And he goes further to suggest that the operations we call mind are derived from endocrine, autonomic, and chemical components as well as from the brain. He says:

> "the body, as represented in the brain, may constitute the indispensable frame of reference for the neural processes we experience as mind…our very organism [the body] is used as the ground reference for the constructions we make of the world around us and for the construction of the ever-present sense of subjectivity that is part and parcel of our experiences" (p. xix).

A complex systems perspective also sees the infant’s physical self as an open system that is mutually co-ordinated with others; initially the primary carer, with whom they become part of a dyadic system in which both individual systems grow and change as separate systems and as a whole system. Therefore, self-awareness is also linked to the expressions of others, connecting the external experience of someone else's expression to an internal state. This takes place cross-modally in the brain, i.e., across visual, aural and proprioceptive areas (Carroll 2001). In addition, Schore (2001) and Trevarthen (2001) suggest that humans' brains are wired to co-ordinate their actions with others. They have identified how, during face-to-face reciprocal interactions, similar areas of the brain respond in both primary carer and baby. Schore calls this 'structural coupling' (Schore 2001), which emphasises the openness of the child's body-self-mind system to the surrounding world and suggests a dialogical, bi-directional, reciprocal relationship between self and world (Mariani-Wighley et al. 2022). Schore (2001) also describes how the interweaving of autonomic, hormonal, sensory and motoric processes that occur in the interactions between subjects, cause structural changes at a cellular level in both participants' brains. In this way, human brains are seen to be adapted for intersubjective growth, as neural pathways that support self-coordination and transactions with objects, operate alongside those that regulate self-other inter-coordination (Trevarthen 2004). This includes the operations of 'mirror neurons' in the frontal cortex that enable infants to imitate, to associate emotion with imitation of other persons' expressions and gestures, and to develop language (Rochat & Passos-Ferreira 2008), and which involve multi-modal sensory processes, (Damasio 1999, Panksepp 1998), as discussed further in chapters 4 and 5.

Overall, in relation to physiological perspectives, we can see how the skin is a social perceptual organ through which tactile information is exchanged between individuals. Social and affective touch contribute to affective regulation through fulfilling embodied predictions about social proximity and attachment. It increases engagement and establishes positive associations with carers thereby promoting and enabling affective and socio-cultural meanings to be shared between child and caregivers. Affective, gentle stroking and care-giving touch also enable homeostatic control and co-regulation of physiological states which support bodily health, emotional resilience, social attachment and an integrated embodied sense of self (Schwimer and McGlone, 2022, Fotopoulou et al 2022, Manzotti et al 2023). Therefore, the qualities of touch in interactions between educators and babies and young children require careful consideration in the context of a caring pedagogy in early years settings, as bodily well-being depends on the degree of synchronicity between the environment and the individual child's physiological rhythm and needs. Haptics or touch in physical interactions are, therefore, central considerations throughout the data analysis in this research.

3.3. Sociological perspectives

Perspectives in sociology discuss the body not in terms of being an individually experienced physico-biological body but as a social symbol and a discursive product of power structures. In this section, I discuss sociological views on the body from the post-structuralist perspectives of Foucault and the body as a site for discipline, with reference to Mauss's ideas of body techniques, and Douglas's view of the body as natural symbol, and the relationship of these to views of infants and young children and to physical interactions in caregiving practices (Foucault 1975/1995, Mauss 1973, Douglas 1996).

3.3.1. Foucault: The body as a site for discipline

To discuss the body in the context of early childhood care and education from a sociological perspective requires consideration of Foucault's view of the body as a discursive product of power and knowledge. Foucault identifies power as a fluid process that includes disciplinary power; - the social processes by which one can not only be governed, but also through which power and control are embodied and people come to police themselves, so that they may not only do what is required, but also operate with the techniques, speed and efficiency deemed necessary (Foucault 1975/1995). He calls this 'bio-power' and describes both the space and time that this occurs in as 'disciplinary space' and links it to the historical structures of monastic and military life; the echoes of which continue in our educational institutions today (Schirato et al 2020). Foucault stresses that the body is the object of techniques and strategies which channel it, train it, mould it and subject it, rendering the body 'docile' for economic, political or military (or educative) purposes (Schirato et al

2020). In this view, the body is made to conform through dominant discourses transmitted through institutions to produce 'docile' bodies that are subjugated and so can be managed (Schirato et al 2020). This is done through 'civilising' processes, which are developed historically and culturally, to control emotions, drives and instincts; processes that are so historically and culturally embedded that bodily functions have become hidden and are bound by unspoken assumptions (Leavitt and Power 1997, Burke and Duncan 2015). Such disciplined, civilised and docile bodies are accorded high status in Global North societies, where dualist concepts of the necessary dominance of the rationale mind hold sway.

These ideas coincide with the metanarrative that early childhood is a crucial time for the socialisation of children's emotional and bodily control, as an essential part of becoming an adult. From birth, the bodies of children are subject to the civilising controls of adults (Elias 2000), which include the rationalisation of the body in space and time and the repression of behaviours and impulses. And when combined with developmentalism and a Cartesian dualism, can be seen to manifest in practices that urge babies to be off the floor, either into an upright position, rather than crawling (like animals) or in containing equipment. These 'civilising' processes serve to emphasise the psychological and physiological distance between adults and children and also to create a division between the conscious thinking self and the unconscious physical self (Elias 1994/2000). Biesta (2010) suggests that education has three aims, 'subjectification', 'qualification' and 'socialisation'. Usually the teaching balance by parents and educators in relation to children's bodies is firmly focused on the 'qualification' (teaching physical skills) and 'socialisation' (fitting in to the social order of accepted physical behaviours) aims, while the third aim, 'subjectification', where a child might grow and move in ways that 'hint at independence from such (existing social) orders' (Biesta 2010 p.21) is usually met with restriction. The main aim of this being the 'civilising' and 'taming' of the body (Leavitt and Power 1997), a process that Foucault identified as a central feature of socialization in the West (MacNaughton 2005). Leavitt and Power (1997) suggest that the requirements for 'body discipline' in society, and as applied to socialisation processes in early childhood settings in the UK, have escalated to the point that civilising routines both minimise attention to the body and its products and limit physical touch between adults and children. This includes the kind of institutionalised caregiving practices identified in section 2.2, where babies and young children's bodies are subordinate to the structures of the organisation. In ECCE settings, 'civilising' processes also take place in 'disciplinary time' (Foucault 1975/1995), wherein control over children's physical needs is routinized for the order and efficiency of the organisation. Leavitt and Power call this body-time; the importance of when children walk, eat, sleep etc., as well as how they do these things and that they learn to do them at ordained times, whatever their physical needs. (e.g. 'you can't be tired, it isn't sleep-time yet'). In sociological terms this is discussed as the primacy of institutional time over lived time. Leavitt and Power (1997) say that the cost of civilizing child-bodies is inattention to and disrespect for children's lived embodied experience and neglect of their embodied selves.

But it is not just the children who are subject to 'disciplinary space'. It also includes the theoretical content of professional training courses and legislative, policy and guidance documents that construct the discourses through which early years educators come to think about children's physicality and physical needs and professional caregiving practices: Discourses that change according to historical and socio-political contexts, as discussed in chapter 2.

In this way, the human body is trained to adopt 'bodily techniques' to function effectively in a particular socio-cultural context (Mauss 1973), so, every kind of action carries the imprint of learning. Therefore, acts such as feeding, washing or dressing are deeply ingrained habits, which both reflect and reproduce surrounding social relations (Lutz and Abu-Lughod 1990), but which are only sociologically noticeable because they change and vary historically and culturally (Fraser and Greco 2005). This unconscious learning also includes holding or using one's body in a certain way, such as through posture or gesture, which seem 'natural' because physical learning is not seen to signify as knowledge. In this way, socio-cultural mores are embodied in physical behaviours and what is 'learned by the body is inconspicuous and involves an 'implicit pedagogy' (Bourdieu 1984). In this regard, infants and young children are expected to learn appropriate 'body-rules' (Leavitt and Power 1997) in early childhood settings, such as 'don't run', 'don't spit out your food', 'sit still', which children learn through direct instruction, benign manipulation, social comparison and systems of reward and punishment. Sansome (2007) identifies the more implicit imposition of body-rules in ECCE settings through 'shaping mechanisms' such as placing babies in prams/ walkers etc. She identifies how these containers often work to deny a child's body sensory experiences and physical contact with other children or adults.' (p.14). Educators also learn these body-rules as they are enshrined in policy guidance and regulatory processes. For example, in Development Matters (DfE 2023) it is identified that by 3 years old children will 'Start eating independently and learning how to use a knife and fork' (p.64), revealing not only developmental 'norms' but also culturally specific ones.

3.3.2. Douglas: The body as natural symbol

In Douglas's view, this focus on bodily action as technique gives the mistaken impression that there is no such thing as natural behaviour (Douglas 1996). She addresses this by arguing that the body is a 'natural symbol' of what is found across cultures in the exchange between the individual physico-biological body and the social body (1996, p.69). She asserts that the physical body is never immediately perceived, but always experienced through the mediation of cultural categories, social preoccupations and concerns. In so doing, she brings our attention to the imbrication of the body and society and culture that foregrounds concepts of embodiment.

Douglas also allows for specific consideration of the control of physiological processes because she addresses society's concerns about bodily apertures and what flows in and out of them. She positions the body as a site of excretion, whose leaking orifices are a metaphor for disorder (Turner 2003). And, in a world where being considered a functioning human / adult requires keeping one's bodily fluids and odours under control (Burke and Duncan 2015, Schirato 2020), the out of control 'leaking bodies' of babies and young children are seen as disorderly and a signifier of them not being fully human in Cartesian terms. In addition, in this perspective, the body comes to carry meanings about purity and pollution in relation to 'dirt' and is thereby a site for purification rituals and practices (Douglas 1966). Douglas's concept of 'dirt' does not relate to an objective category of pathogens or pollutants. Instead, she defines it as 'matter out of place', that is, that which transgresses boundaries of a given social order (1966), and which thereby affirms the validity and purity of that which remains within the boundary. So, Douglas asserts that 'dirt' can only be found where there is 'systematic ordering and classification of matter, as ordering matter involves rejecting inappropriate elements' (1966, p. 35), therefore, 'dirt' is symbolic of disorder or at least, ambiguity. In this view, I suggest, babies and toddlers, whose physical and emotional behaviours are so often seen as 'out of place', are rendered as both actual and symbolic of disorder and dirt. Although Douglas discusses 'dirt' as 'mental' or symbolic phenomena, Burke and Duncan (2015) point out that 'dirty things' are not purely symbolic, they are also embodied and emplaced and deeply experiential. Therefore, behaviours of emitting bodily fluids such as dribbling/ vomiting/ peeing/ pooing repeatedly and/ or in the 'wrong' place, that are typical of babies and young children, generate strong feelings of disgust in adults and take on the meaning of a threat, which needs managing.

For Douglas, the removal of 'dirt' means a positive restoring of order by employing particular systems to manage it either by ignoring the ambiguity it reveals, destroying the cause, avoiding it, or by labelling it as dangerous. In this way, the body becomes a site that may become polluted but can also be purified through particular rituals. But, as the body is a microcosm of society, the social controls that relate to the body will vary according to particular socio-cultural 'pollution rules' in relation to blood, vomit, excreta and food, for example. Therefore, whatever civilising routines of feeding, sleeping and toileting are adopted, they will mirror the dominant social concepts of dirt or purity, which will dictate the 'correct' manner in which to deal with bodily functions, and these will change according to the historical/ socio-cultural context in which they take place (Burke and Duncan 2015). For example, Douglas (1966) argues that a community under threat responds by expanding the number of social controls relating to the body. And so, in the late 1980s and 1990s, when the HIV epidemic gave rise to a focus on potential infection through bodily fluids and children's body products came to represent potential danger in an actual microbiological sense, the pollution rules in early years settings altered and the physical and interpersonal spaces in which educators restored order changed by extending the purification rituals / hygiene procedures, as discussed in section 2.2. Similarly, the recent Covid-19 pandemic of 2020/21 resulted in settings being required to implement additional hygiene procedures. However, this context impacted everyone rather than a small social group as with HIV, so the process of restoring order did not only relate to actual dirt, but it also affirmed social unity through an agreed response. For example, educators would engage children in songs and games together as they required them to wash their hands many more times in the day, which might be seen to be as much about creating group conformity through a purification ritual as about eliminating bacteria.

Conclusion

In conclusion, it is not the aim of these discussions to either valorise the mind or to privilege the body, as this would perpetuate a dualist approach. As Grosz (1994/2000) suggests, such reductionism only inverts the hierarchy and explains away the interaction between the two, and in so doing, fails to account for the complexity of the whole body/self. Rather, in this research, I embrace the body as a corporeal organism that is the basis of our being in the world and a medium of communication and developing emotional relationship, and is also a discursive product, subject to the disciplinary processes of discourse and a natural symbol of society, that is both a physical vehicle for personhood and identity and the basis from which social structures are forged. Therefore, this thesis adopts an embodiment perspective, which lies across the nature / culture divide.

Chapter 4: Embodiment

4.0. Introduction

The previous chapter highlighted that one of the legacies of Cartesian dualism is the diminishing of the body in our thinking generally and in relation to how we think about children's lived, embodied experience in particular. In this chapter, I discuss how concepts of embodiment enable the body to take a more central place in thinking about children's experience by challenging dualistic concepts and embracing the biological and the socio-cultural, seeing bodies as both products and active producers of meaning and culture (Fuchs and Schlimmer 2009). As Perry and Medina say, 'the experiential body is both a representation of self (a "text") as well as a mode of creation in progress (a 'tool'). In addition, embodiment is a state that is contingent upon the environment and the context of the body' (2015, p. 1).

In an embodiment perspective, 'being' is a holistic concept that integrates the physical, cognitive and socio-cultural, and emphasises that our body-selves are in constant interaction with our environments, contexts and other bodies that both impact on and are impacted by our bodies (Ellingson 2017). Further to this, embodied knowledge values all the body's perceptual and proprioceptive signals that are components of our sensorium (Pink 2015) and so, acknowledges the constantly changing states of our bodyselves. In this way, ideas of embodiment change the notion of having bodies to <u>being</u> bodies as they refer to the lived experience of the body or being in the world, in which mind and body play equal parts in the same dynamic system. In this way, embodiment recognizes the body's positioning and construction in different historical and socio-cultural contexts and also has the workings of the body as a central concern, which allows for an integration of social and biological perspectives and an interrogation of them (Ellingson 2017). This is also the case in some views in biological thinking, which embrace more holistic ideas, such as contemporary views in neuroscience that emphasise the bio-sociality of the brain and the embodied mind (Schmiitz and Hoppner 2014). For example, the neuroscientist Antonio Damasio (1999) discusses the indissociable integration of mind, body and emotion in the neurological patterns of the brain and challenges Cartesian dualism by asserting the fundamental importance of bodily experience. He says: ‘being comes first and we think in as much as we are, since thinking is caused by the structures and operations of being’ (Damasio 1994, p.248). While, in the social sciences, the conceptualization of embodiment has been influenced by philosophical thinkers such as Merleau-Ponty (1962/2002), who asserts that there is a close synergy of the body and consciousness, which can only be understood as a whole. For Merleau-Ponty, the body is never either a subject or an object, and knowledge of the world can be accessed only through the body.

Although embodiment came to the fore in sociological study in the 1990’s, it is still new in early childhood research (Sullivan 2018, Kern 2022), but it is reflected in views of child development that see the body and mind as an integrated system (Kiverstein 2012). An embodiment perspective allows a holistic view which encompasses ideas about the reciprocal, mutual and cyclical dynamics of infants and young children’s physical and mental processes and the environmental, socio-cultural contexts of these. Therefore, below, I discuss the usual separate areas of development used in developmental psychology in relation to an embodiment perspective under the terms of ‘bodyself’, ‘bodyfeeling’, ‘bodyself/other’, ‘body/communication’, ‘bodythought’ ‘bodyperception’ and ‘bodyworld’, in order to emphasis the interrelated, holistic and complex system of young children’s development and experience.

4.1. The Construction of Bodyself

Through changing the idea of having bodies to being bodies, embodiment highlights how our bodies are integral to our sense of self. It emphasises that we are whole beings; our bodies are not a separate, partial representation of who we are. For babies and young children whose physicality is a central facet of their sense of self, this is a significant idea (Marshall 2016, Pexman 2019). Damasio (1999) says that the self emerges from bodily self-representation but is then modified by projecting back into itself. He suggests layers of self that are constituted by ongoing bodily reactions are fed back to the brain and integrated into somatic markers as discussed in chapter 3.2: The proprioceptors in our muscles measure changes in muscle tension, pressure on the skin and the position of limbs in space. They send messages to the somato-sensory cortex, which responds to changes at the surface or inside the body and generates a constantly updated dynamic map of the body in the mind. These interoceptive processes create representations of bodily signals and the meta-representation of the state of the body in the brain (Jones et al. 2006), which provide and reinforce the anatomical basis of a sense of self as a sentient entity. In addition, the exteroceptor processing of tactile information through the skin is the earliest way that infants experience what their body is, and where it ends, and the outside world begins (Boehme and Olausson 2021). So, babies initially become self-aware through their internal bodily experiences, their muscle and skin sensation and their bodily boundaries through external sensations of being held and touched. In this way, personality development is rooted in children's embodied experiences, as proposed by the object relations school of psychoanalytic theory (Bion 1962, Winnicott 1965), which suggests that the qualities of those sensations are interpreted and internalised as conceptions of self. Embodied 'Bodyself' then, is fundamental to an individual's self-awareness and self-concept and also plays a crucial role in the maintenance of physical well-being and so, has implications for the haptic dimension of communications between adults and young children.

4.1.1. Bodyfeeling

In the concept of a dualist Cartesian mind-body split, it also occurs that emotion is split off from rational thinking. A legacy of this perspective is that the role of emotions in our experience of being in the world (Csordas 1990) is often overlooked. Yet neurological research suggests that well-deployed emotion is supportive of efficient reasoning, problem-solving and decision-making, and any reduction in emotional processing is prejudicial for rationality (Damasio 1999). For this reason, Scheper-Hughes and Lock (1987) suggest that emotions may provide the missing link between mind and body, so, an embodiment perspective, must include attention to the embodiment of emotion.

Theories of emotion usually define feelings as conscious mental experiences (Moors 2009), but Damasio (2003) differentiates between feelings and emotions. He says that feelings are internal processes that prompt emotions, while emotions are the external actions and expressions that signify inner feelings. His identification of somatic markers as meta-representations of bodily states includes how the homeostatic neural construct for a feeling is the foundation for the encoding of feelings, which are then available to consciousness, so, feelings and emotions are unconscious as well as conscious. Feelings are also physical as well as emotional, as, what we physically feel and experience causes emotional feelings, and at the same time, the neural patterns in our brains that make up a feeling cause biological changes to our physical states, impact our behaviours and thought processes (Damasio, 1999). For example, being tired or hungry causes irritability while feeling embarrassed causes blushing; it is a systemic and reciprocal process. Damasio (1999) and Schore (2001) also suggest that feelings have evolved in humans as a complex way of regulating our body states and that feelings are involved at every level in the body's processes, from blood circulation to muscular contractions and these are impacted by affective touch, as discussed in section 3.2.2.

In addition, LeDoux (1998) asserts that, through the responses of the limbic system and the autonomic nervous system to danger or threat, feelings and emotions are fundamental to survival. The limbic system at the centre of the brain is the area that is mainly responsible for processing unconscious or emergency emotions (LeDoux 1998). When the brain receives sensory information that is potentially threatening to survival, such as loud noises, sudden movements or noxious smells, the sensory information travels to the thalamus first and then straight to the amygdala, which LeDoux calls the 'emotional sentinel' (LeDoux 1998). This triggers chemicals and hormones that stimulate basic emotions and enable immediate action. For example, there is increased blood flow to the hands and large muscles, increased heart rate and a rush of adrenaline that heightens sensory alertness. This is called the 'fight, flight or freeze' response, which, although present throughout life, gradually becomes more regulated as neural connections that are able to send chemical inhibitors to the amygdala, are made in the pre-frontal lobe of the cortex, where conscious feelings are processed (LeDoux 1998, Carter 2013). However, as the neural connections that process conscious feelings are still being made in the cortex of very young children, their emotions are largely being processed in the limbic brain. In addition, their physical vulnerability and dependency on others for survival mean that many new or unusual experiences can feel threatening and provoke anxiety (Gerhardt 2004). This means that they are often in 'fight, flight or freeze' mode. This is most commonly noticed in crying, hiding or clinging behaviours but can also be observed in infants who fling their arms out and extend their legs, clench their fists, become very tense in their bodies or listless and floppy. While older children may run around manically, shout loudly, hit out or become withdrawn. There are many implications of these ideas for the care of babies and very young children in early years settings both in terms of the environment and for physical interactions, which are discussed in part 4 of this thesis. But a key implication is that careful observation of and being attuned to young children's kinetic communications of emotion is vital.

4.1.2. Bodythought

The idea that the body and sensori-motor action constitute the foundation for cognitive processes is integral to theories of child development in developmental psychology. Central to this are the cognitive development theories of Jean Piaget (1896–1980). Piaget believed that sensory and physical movement experiences and actions are the fundamental way in which children learn in the first years of life. He defined the first stage of development (from birth to 18 months of age) as the sensory-motor period in which, babies build on their genetically innate schemas through experience, using bodily activity to enable actions to come under greater control and mental concepts to become organised (Piaget and Inhelder 1969, Goswami 2011). For example, the grasping reflex brings experience that gives an infant information and also motivation to continue to grasp, which leads not only to practicing grasping in increasingly controlled and varied ways, but also to practicing key cognitive processes such as the mental representation of objects, memory, causation, reasoning and problem solving. In this way, Piagetian theory recognises the fundamental role of the body in cognitive development, but it falls short of an embodied approach as it continues to position the body in a supporting role to the mind, as sensori-motor experience is seen as primarily useful for cognitive concepts to develop, and is posed as less relevant as children move through the stages of pre-operational and operational thought to the goal of abstract thought in adulthood.

Kiverstein (2012) suggests that only discussing the body as making causal contributions to cognition or executing motor instructions results in what he calls 'Body-functionalism' (Kiverstein 2012). Instead, he proposes a 'body-enactivist' perspective on the embodiment of cognition, in which the body is a source of meaning and an integral part of cognitive processes. He draws on the concept of 'action-oriented representations' through which we find meaning and solutions to problems through drawing on bodily skills or when we act unconsciously in response to our gut-feelings. This perspective may be seen to be part of a movement in cognitive science that recognises the body as integral to creating <u>and</u> implementing thought through the '4EAs'; Embodied, Embedded, Extended, Enacted and Affective processes that are part of embodied knowing (Kiverstein 2012, p.745). Ellingson (2017) says 'A holistic understanding of embodied knowledge centres on being in the world through our bodies' (p.17), that is; 'The degree to which knowing becomes part of our hands, arms, and chests … in the body – rather than in language and rational thought.' (Hopwood 2013, p.19). Therefore, Clark (1997, 2008) argues that rather than being seen as separate domains, perception, action and cognition work together, and are ''the processing loops that *result in* (my italics) intelligent action'' (Clark 1997, p. xii). However, although this suggests a holistic embodied view, 'result in' still implies a linear process rather than a cyclical one and does not include emotion. Overall though, the perspective that emerges is that the body and sensorimotor action, and intersubjective, socio-emotional interactions are crucial in shaping children's cognitive understanding (Reddy 2008, Trevarthen 2001).

<u>4.1.3. Bodyperception</u>

Embodied responses are elicited by a vast array of sensorial factors (Pink 2009), and babies and young children's senses are very acute to sensory stimulation, which is a central feature of their experience. As discussed in section 3.1, neurobiology identifies how sensory stimuli is processed by the brain to translate it into information about the world. But the brain not only modifies the information and creates mental representations, it is also modified by it, as the sensory stimuli cause connections between brain cells to be made (Raju and Tadi 2020), in this way the physiological processing of perceptual information is fundamental to thinking. In addition, sensory processing is multi-modal; with senses informing each other and combining to create thought and understanding (Pink 2015). In infancy, the connections between sensory areas have not yet become specialised, so synaesthetic experience is not unusual and babies may experience sensations in different ways. Synaesthesia or 'intersensoriality' is also emphasised by Merleau-Ponty (1962/2002), who sees sensations as resonating with each other in a 'whole sensory being' (Al-Saji 2001). His descriptions of synaesthetic experience reflect the connectedness of embodiment and locates the perceptual world in an embodied perspective. For Merleau-Ponty, sensation is a becoming, in which both body and world participate. He suggests that sensation initially requires an openness of the body to the world and that the body plays an active (but barely conscious) part in inviting sensation but also that the activity of the body is put in motion by the world (Merleau-Ponty, 1962/2002). 'The world finds expression, becomes sensible and takes form in sounds and colours. And the body finds the rhythm, the virtual movements or style, that express its own existence while allowing it to sense such a world.' (1962, p. 212). So, sensation is being-in-the-world but at the same time, also becoming in sensation, in an imbricated experience. These sensations do not exist outside of meaning, they are inscribed as 'moment[s] of my individual history' (Merleau-Ponty 2002, p. 215). This reflects a neuro-biological view that perceptual experience of objects or events changes as a result of previous experience and knowledge (Carter 2013). Therefore, in this view, sensation is not instantaneous or isolated but an experience that evolves and changes in a time continuum. In addition, all sensory experience is interconnected within our 'mutually constitutive permeable bodies' (Ellingson 2017, p.103), in our interactions with others in which we 'inhale' each other as we communicate (op. cit., p.104).

4.2. Bodyself/other: The construction of body-self through interaction with others.

Through a Cartesian lens, social cognitive theory has largely seen social interaction as the sending and receiving of communications between two minds that hold internal representations of each other, with the body acting as a transmission device (Fuchs and De Jaegher 2009). This view can be seen in discussions of the functionality of non-verbal communication in which we create meaning in the minds of receivers through using actions, facial expressions and body posture, instead of or alongside, spoken language (Herbert and Pollatos 2012). These non-verbal behaviours are then defined according to aspects such as ‘Control of the interaction’, ‘Display of emotion’ or ‘Indicating relationship’ (Hickson et al. 2004). In contrast, embodied versions of social interaction emphasize the way social cognition is shaped through the reciprocity of embodied agents (Lindblom 2009). An embodiment perspective draws attention to how we make sense of our body-selves in relation to other bodies (Ellingson 2017). We do not experience our bodies in isolation; we are constantly making meaning of our body-selves in relation to shared understandings.

The idea that social cognition emerges from embodied social interaction is termed enactive or embodied intersubjectivity (Violi 2009, Lindblom 2009, Fuchs and De Jaegher 2009). This idea considers the synchronised dynamics within a dyad of embodied agents in which movements and utterances in interactions are unconsciously coordinated, and each participant’s perception–action loops are coupled and interlaced with each other. In this way, participants not only generate their own meaning, but they also coordinate and participate in each other’s sense-making (De Jaegher and Di Paolo 2007). Therefore, social understanding emerges from a dynamical process of interaction and coordination of two embodied subjects coupled to each other. The degree to which these unconscious, embodied interactions are seen as one subjective merged experience, or as still having a degree of separate objectivity, seems to be implied by the language used in discussions. For example, Ellingson (2017) suggests that our experiences of one another are intermingled and <u>enmeshed</u>, which implies more of a merged state than the terms coupled, interlaced or coordinated used by De Jaegher and Di Paolo (2007) above. While, in their study of breastfeeding mothers and babies, Ryan et al (2011) use the term ‘interembodied’ because of the depth of the intersubjective link and the deeply embodied interdependency of feeding and being fed between the mothers and the babies. Merleau-Ponty uses the term intercorporeity and suggests that the relation to others includes more than just the physical body, it also includes time or inter-temporality (Merleau-Ponty 1962/2002). This implies that shared meaning is created through two embodied agents interweaving and synchronising in the present time. However, because synchronization must occur on both sides and, as each bodyself also exists outside this moment, a singular self continues. For this reason, I prefer the term ‘imbricate’ or overlap to describe embodied intersubjectivity, as it acknowledges divergent as well as convergent selves.

4.2.1. Bodycommunication

Through changing the idea of *having* bodies to *being* bodies, embodiment also draws attention to how we learn to ‘do’ our bodies in very specific ways; how we enact our body-selves in everyday life (Ellingson 2017). In this respect embodiment links to the consideration of external expression and communication with others, as in the non-verbal communications of kinesics, proxemics and haptics. But also, an embodied reading of nonverbal communications goes beyond earlier discussions. For example, Goffman’s (1967) discussions on face-to-face interaction, suggest that individuals send or exude information that is either embodied or disembodied, and that ‘embodied’ messages are received with our ‘naked’ senses, which in turn give out embodied information (Goffman 1967). In these discussions, sight is valorised, as being able to see each other in these interactions is seen to commit us to being the agents of our acts (Goffman 1967). However, more current perspectives of embodied intersubjectivity, would suggest that all sent or ‘exuded’ information is embodied, but would agree that our ‘naked’ senses, (our unconscious), both receive and return embodied information (Trevarthen and Aitken, 2001, Violi, 2009). In addition, from the point of view of the sensory experience of the infant and young child, the emphasis placed on the visual sense in face-to-face interactions is misplaced. Although the mutual gaze between infant and carer is a central facet of face-to-face interaction, for infants, all sensory information; smell, sound, touch etc., are conveyors of meaning in communicative interactions (Trevarthen and Delafield-Butt, 2015).

In Trevarthen's view, these repeated intersubjective, embodied interactions form the basis of knowledge and understanding of the world and shared cultural meaning (Trevarthen and Delafield-Butt, 2013), as discussed further in chapter 5. Therefore, social interaction between two bodyselves, creates and communicates meaning, expressing self, emotion and ideas in an imbricated process. So, all aspects of non-verbal and non-linguistic communication must be considered in interactions between babies, young children and others and, when an embodied reading of the external cues of kinesics, proxemics and haptics is combined with a reflective reading of the sensorial and emotional, as in this research, interpretation of intersubjective communications can go beyond the surface.

4.3. Bodyworld: the construction of body-self through intra-action with the more than human world

Integral to ideas of embodiment is the relationship between humans and environment and the more-than-human world (Pink, 2015). The environment is seen to influence how we use our bodies, understand the bodies of others, and experience the world, as we intra-act with the tangible and intangible aspects of our lived spaces (Ellingson 2017). Merleau-Ponty (1962/2002) also refers to this relation between the body and the world. He sees all experiences as related to bodily experiences, which makes the body a prerequisite for consciousness to develop, and consciousness as projecting itself through the body into the environment. He also argues that the body's relation with the world is not that of cause and effect but are rather the result of meanings, which cannot be solely explained by either psychology or physiology (Merleau-Ponty 1962/2002). In terms of embodiment, this implies that the body is not divided off from the world because it is impossible to stand outside of one's body, which is the lens through which we look at the world. Krueger and LeGrand (2009) describe this as the ‘dialogical, bi-directional, reciprocal relationship between self and world’ in which the internal self and the external world inform and shape each other in an inseparable constitutive process. As indicated above, babies and young children in particular have embodied ways of knowing and being in the world, sense- and meaning-making through their sensory, perceptual, emotional, cognitive and motile processing of experiences of objects, places and time. Their bodies are at the centre of their worlds, and the social and concrete worlds also mediate and are part of their bodyselves. In this way, embodiment is contingent upon the environment and contexts of time and place and can be linked to post-human theorizing that understands human life to be embedded in the material world, where people and the more-than-human intra-act *as* part of a network (Barad 2007). Therefore, consideration of spaces, objects and materials, and processes through time are core to thinking about young children’s embodied experiences.

Conclusion

In conclusion, this chapter has discussed the usual separate areas of development used in developmental psychology in relation to an embodiment perspective in a way that highlights the interrelatedness of young children’s development and experience. This is central to this research and underpins the research methodology and data analysis discussed in part 3 of this thesis, as an embodiment framework allows physical interactions to come to the fore and the body to take a more central place in thinking about children’s experience. Also, through identifying how our body-selves are in constant interaction with our environments, contexts and other bodies that both impact on and are impacted by our bodies, this chapter indicates the imbricated nature of embodied intersubjectivity, as discussed further in the next chapter.

Chapter 5: Embodied Intersubjectivity

The interrelationship between mental and physical processes is a focus of this thesis, and young children's embodied knowledge and understanding emerges, to a significant degree, from intersubjective interactions. Therefore, this chapter discusses the concept of intersubjectivity, with a focus on the embodied processes in intersubjective engagement, which are central to this research's process and data analysis. I set out the core ideas in intersubjectivity as put forward by Trevarthen and Aitken (2001), highlighting the biological / bodily and the psychological processes that intertwine during the interactions between a child and their caring adult in embodied intersubjective interactions.

5.0 Background

Colwyn Trevarthen suggests that before 1970, there was little interest in studying the interactive behaviours of infants, other than the theoretical interest of psychoanalytic theory and Bateson's analysis of Margaret Bullowa's films in the 1960's, which first described the exchange of infant and parent utterances as 'proto-conversations' (Bullowa 1979). Subsequent studies highlighted infants' propensity for interpersonal communication and concluded that infants' expressions and behaviours are adapted for intersubjective contact (Brazelton et al.1974; Bullowa 1979, Stern 1977, Trevarthen 1979). From these, and Trevarthen's further studies (2001, 2002), came a view of intersubjectivity as a joint pattern of awareness in which persons are receptive to and adapt themselves to the states and intentions of another (Trevarthen and Aitken 2001).

Other perspectives on social understanding and communication suggest that initially we only have access to our own minds, so self-experience is egocentric and getting to know the minds of others is a task to be learned (Zlatev et al 2008). Such a view can be seen reflected in theories of social cognition such as theory of mind, which emphasizes that to understand others' minds requires developing a 'theory' or 'model' of how people act derived from sharing cognitive representations and meanings based on language and meta-representational abilities (Rochat et al., 2009, Fuchs and De Jaegher, 2009). As a result, discussions on intersubjectivity often focus more on its role in the development of communication and language skills as the foundation not only of interpersonal communication, but also of thinking (Airenti 2009). Such foci are of course relevant and useful but may be seen to feed into a Cartesian valuing of logico-linguistic intelligence, whereas intersubjectivity emphasises the combination of physical, socio-emotional and relational processes, which suggests a more integrative view. In addition, on the basis that humans' brains are biologically wired to co-ordinate their actions with others, Trevarthen asserts that intersubjectivity is innate (2001) and suggests that the premise of an 'inherent, intrinsic, psycho-biological capacity' demands a research agenda that centres on person-perception and communication in cognition (Trevarthen and Aitken 2001). This includes recognizing that intersubjective communication includes many biological processes as fundamental (Zlatev et al 2008), with components such as bodily resonance, coordination of gestures, facial and vocal expression at the centre of intersubjectivity (Trevarthen 2015). So, a reading of child-adult interaction that emphasises the enactive and embodied aspects of intersubjectivity can provide a more holistic perspective on social cognition.

Trevarthen (1979) initially identified two types of intersubjectivity; primary intersubjectivity and secondary intersubjectivity and later also suggested a third aspect; tertiary intersubjectivity (this latter is not discussed here as it is seen to be more relevant to older children) (Trevarthen and Aitken, 2001, Rochat et al 2009).

5.1. Primary Intersubjectivity

Trevarthen suggests that infants are intrinsically motivated to interact with other humans from birth and that neonatal behaviours such as sensitivity to vocal expression, emotions and touch and a readiness for communication, demonstrate some of the cognitive and performative skills of primary intersubjectivity (Trevarthen and Aitken, 2001). For Trevarthen, these early relational behaviours are rooted in the motive (or schematic) formations that develop in the core of the brain before birth and are then evidenced in the new-born infant's inter-modal orientation to stimuli, their preference for human signals and their capacity for imitation. He suggests that these attributes indicate existing individual consciousness and intentionality, which he calls ‘subjectivity’, and which are a prerequisite for intersubjectivity. This raises the question of whether subjectivity, or awareness of the self, is constituted prior to its relation to the intersubjective world or whether the self is constituted as a result of its intersubjective relations with the outside world. Initially, Trevarthen’s emphasis on an innate sense of self seems to indicate the former but he also emphasises that new-born infants’ motivations to communicate with other humans, show a purposeful intersubjectivity, which indicates that human subjectivities are connected from the beginning of life. This implies that knowledge of self and knowledge of others is inextricably intertwined, so intersubjectivity then, is the phenomenon by which we share experiences with one another in a cyclical interrelationality of ‘self’ and ‘other’ that are co-constitutive dimensions (Trevarthen 2004).

5.1.1. Proto-conversations

Bullowa’s empirical studies in the 1970s using film, first showed the mutually regulated interchanges between parents and very young infants, in which each partner took turns in expressing and attending. These studies identified the similarities in timing and expression of the interactions with informal conversations between adults and so were termed proto-conversations (Bateson, 1971, Brazelton et al., 1974; Stern, 1977; Tronick et al., 1978). Further studies showed how the timings and meanings in these interactions are conveyed through different sensory-motor modes. For example, when parents use only touch and gesture to engage with their infants, the interaction is just as successful as when also using vocalisations (Airenti 2009). In addition, the hand movements babies make in proto-conversations are distinguishable from pointing or grasping actions made in orientation to objects, which indicates a distinct process for gestural expression of social feelings in infants (Rönnqvist & von Hofsten, 1994).

Zlatev at al. (2008) propose that the perceptual processing of bodily movements and emotional facial expressions, underlie the beginnings of understanding other’s minds. Babies’ body schema are characterised by a cross-modal openness that allows them to incorporate and imitate others.

As Meltzoff and Moore (1983) and Malloch and Trevarthen (2010) have illustrated, babies are able to transpose the gestures and facial expressions that they see in others, into their own proprioception and movement. Indicating not only that they have a subjective self-awareness but also that they are already predisposed to 'read' and adapt to another (Delafield-Butt and Trevarthen 2020). So, contrary to ideas proposed by early psychologists, infants are not born in a state of confusion, symbiotic fusion or ego individualism in relation to either objects or people (Rochat 2001), rather, infants are born perceptually prepared for shared experience.

Therefore, the primary route to understanding others and to generate shared meaning is through entering a process of embodied interaction. Facial movements, gestures, voice sounds, gaze and touch are the central focus of interactions between infants and their carers, in which physical actions and expressions send and receive information (Fuchs and De Jaegher 2009). This includes actions such as, smiling, frowning, finger pointing, arm and leg movements. Eye contact, where the gaze of both partners enter into a dialogue, is also a key feature. Just like limbs, the gaze acts as an extension of the subjective body and is part of enactive communication (Fuchs and De Jaegher 2009). The gaze not only conveys attention and indicates the other's thought or intention, it also causes bodily sensation according to its direction and intensity; either caressed by a gentle gaze or pierced by a fierce one, for example, and the receiver may gaze back or avert their gaze according to their experience and feelings. This is an example of the mutual coupling of the lived bodies of infant and carer, through which they enter into a dyadic bodily state. This dynamical state creates the potential for expanding self and other body schema and thereby, social understanding (Fuchs and De Jaegher 2009). Such face-to-face interactions are information-rich events for infants (Rochat et al 2009, Delafield-Butt and Trevarthen 2020)

5.1.2. Mirroring and Imitation

Processing these intersubjective interactions depends on 'active inter-modal mapping', the ability of the infant to recognize that 'those acts are like these acts' or 'that looks the way this feels' and to link these together and translate them into an action (Meltzoff and Moore 1983). This allows the infant and young child to match self and others' experience, perceiving others as 'like me' and, in reproducing the behaviour of others, they create a bridge between self and other, thereby engaging in intersubjectivity (Rochat et al. 2009). This self–other correspondence or 'Like-Me' framework (Trevarthen and Aitken 2001) is underpinned by processes of mirroring and imitation (Marshall and Moore 2014). Infant capacities of mirroring and imitation involve the ability to relate to, interact with and re-present other's actions and behaviours and are thought to involve a sub-cortical, multi-modal ''mirror system'' sensitive to human movement and integrated with systems that create images for action and expression (Ramachandran 2004). Mirror neurons not only fire when we perform an action but also when we observe the same action performed by another. The neuron 'mirrors' the behaviour as though the observer were performing the action themselves and, in this way, provides a mechanism for imitation of other people's behaviour. (Ramachandran 2004). Marshall and Meltzoff (2014) distinguish between mirroring and imitation. While imitation is a conscious, typically overt effort to copy another person, mirroring is unconscious and often goes unnoticed. However, although mirroring may not have the intentionality of imitation, they are both part of the embodied processes of linking self and other behaviours.

In the context of ontogeny, imitation is an important part of developing mental representations and so is linked to the capacity to represent, think and learn. It is not just copying; it is a complex set of activities by which children learn in an innovative and creative way because observational and imitative learning is selective and intentional (Marshall and Meltzoff 2014). For example, if an adult strives to accomplish a goal but fails, the infant will not imitate what they actually observed but rather what the adult intended to do, and neurologically, mirror neurons are seen to fire differently according to the goal of the behaviour, not just the behaviour itself. Also, infants distinguish between emphatic actions, which they purposefully imitate, and usual 'everyday' actions. This indicates that babies use imitation as part of learning a new or arbitrary social behaviour (Trevarthen 2005) and that infants and young children choose who, what and when to imitate, and so, go beyond immediate sensory information to begin to think about the meaning of things and people. Thus, much of human infant imitation is not an automatic, uncontrolled impulse but is under intentional control (Marshall and Meltzoff 2014).

As well as a mechanism for social and cultural learning, imitation also serves interpersonal and emotional functions, as it extends interactive communications and can reinforce attachment relationships (Meltzoff and Moore, 1994). Trevarthen suggests that imitation can 'act as affirmations, acceptances, or commentaries' in a communication and that older infants and toddlers imitate to display and reinforce friendship or affiliation (Trevarthen 2005). Reddy (2008) points out that imitative activity happens within the framework of an engaged interaction. She sees imitation as bi-directional and as relevant to the infant because of its role in promoting an interpersonal dialogue. Therefore, although imitation and mirroring are necessary for children to engage intersubjectively, sociality involves more than an automatic simulation of others' behaviours, as suggested by the mirror metaphor of mirror neurons; it requires reciprocation. The anticipation of reactions from the other and mutual willingness to share attention toward each other, and learn from each other in intersubjective interactions, indicates the more dynamic and relational concept of reciprocation (Rochat et al, 2009).

5.1.3. Reciprocity

Trevarthen suggests that reciprocity starts very early and is a condition of successful intersubjective interaction (Trevarthen 1979, 2001). Although adult carers are commonly understood as the principal driver of an interaction, Trevarthen's analysis of filmed interactions between mothers and babies show that babies are also active in initiating interactions from birth, both soliciting interaction from others and patterning these to form intersubjective dialogues (Trevarthen and Delafield-Butt, 2013). So, these communications are two-way, reciprocal and intentional (Rochat and Passos-Ferreira, 2008).

In this regard, primary intersubjectivity is often likened to a communicative 'dance' in which two partners intuitively read and anticipate the rhythmic movements and expressions of one another (Stern, 1998). And from a neurological perspective, this sensory dialogue of gaze, touch and sound during face-to-face reciprocal interactions, triggers processes in similar areas of both the baby's and the parent's/ carer's brains (Schore, 2001, Trevarthen 2001). A baby feels, hears and sees the carer's expressions and responds and the carer feels, hears and sees the baby's expressions and responds, and the two brains connect in a process of 'structural coupling' (Schore, 2001), in which, chemicals are released that reinforce feelings of attachment. Bodily imitation also evokes corresponding feelings, and a mutual affective resonance gradually develops. For Trevarthen, emotions are the essential regulatory factor in intersubjective contact, and rhythmic, reciprocal, communications are at the root of intersubjectivity (Trevarthen and Aitken, 2001, Trevarthen 1979, 1992). Other theorists such as Stern (1998) emphasise this further and see the mutual attunement of emotions as the key aspect of intersubjectivity.

5.1.4. Attunement

Affect attunement (Stern 1998) is the way an adult sensitively reads a child's non-verbal communications and expressions to 'tune in' to how a child is feeling. An attuned adult mirrors a child's feelings with their behaviours and vocalizations in a way that is synchronized with the child's and that resonates with the emotion in the child's behaviours. For example, an infant might wave their hand excitedly and the adult responds with a wide-eyed surprised expression and an 'Oooh' vocalization that reflects the baby's excitement. Stern emphasises the temporal flow and "vitality contours" of these interactions (Stern, 1998, p.57), the inter-modal rhythmic and enactive characteristics of which, enable the infant and caregiver to share their emotional states as an inter-corporeal dialogue rather than just an inner state to be deciphered from outside. An attuned adult also alters the pitch and tone of their voice, their facial expression and the timing and vigour of their actions, in tune with whether the child's emotional level is manageable for the child or not. For example, when a game changes from being exciting to worrying and the child indicates discomfort or disengagement, the attuned carer will de-escalate the intensity of the interaction by pausing the game until the child indicates they want to carry on. Stern describes these adaptations as 'vitality forms' of the ‘tune’ of the interaction in terms such as ‘crescendo’ and ‘decrescendo’ (Stern 2010); musical terms that Malloch and Trevarthen (2010) reflect in their discussions on infant musicality but that most importantly, are contingent responses to the emotional temperature of the infants’ communications (Panksepp 1998).

Bion’s psychoanalytic concept of ‘container-contained’ (Bion, 1962) closely relates to attunement. In this theory, when an infant or young child feels threatened by overwhelming physical or emotional feelings, they try to get rid of them vocally and physically, and by projecting their feelings onto the caring adult, who takes them into their mind and ‘holds’ them; thereby acting as a container for the feelings. But the attuned caring adult doesn’t just absorb the child’s feelings, they also ‘digest’ them; processing the child’s emotions through their own mind and transforming them into something manageable that the child can take back into themselves. The child then feels ‘contained’ and are then increasingly able to turn their raw experience into a manageable awareness of feelings and begin to be able to think about their feelings and experiences (Bion 1962).

In attunement, it is the synchrony of attuned intersubjective interactions between infant and adult that is crucial. Stern underlines the importance of “intermodal fluency” in the establishment of rhythmically coordinated affect attunement (Stern 1998, 2010). In modern day practice, this has become known as the tennis metaphor of ‘serve and return’ of communicative interactions, as also described by Trevarthen in the turn taking of proto-conversations (Trevarthen 1979). From an enactive, mutual incorporation perspective, Fuchs and De Jaegher (2009) extend this tennis metaphor to detail how, in order to return the ‘ball’ properly, the ‘player’ must incorporate its trajectory; seeing where it starts, moving with the ball and feeling its approach and so adjusting their return from the very beginning. They use Merleau-Ponty’s term of “operative intentionality” (Merleau-Ponty 1962, p. 139) to describe this process of incorporation in which the ‘tennis player’s’ body coordinates to the ‘ball’, forming a ‘unified field of sensori-motor coherence’ (Fuchs and De Jaegher 2009, p. 473), thereby extending the ‘serve and return’ metaphor of linguistic-cognitive interactions to the ‘serve-receive-return’ of affective, embodied intersubjective exchanges. Such operative intentionality might also be applied to watching other people, as our perception of others always includes a proprioceptive component that connects their bodies to our own. Fuchs and De Jaegher (2009) use the term prolepses, as the capacity of living beings to anticipate the goal and outcome of actions and to consider the effect of their behaviour on the object or event they are interacting with. In this way, both participants in the interaction experience the whole development of the situation which is co-constituted by their bodily movements. When these interactions are synchronised and matched in emotional tone, the brain releases hormones such as oxytocin that reinforce the relationship by making it pleasurable (Fotopoulou et al. 2022).

However, if one of the ‘players’ in the ‘tennis match’ makes a surprising or feinting move, the coordination breaks, and the synchrony of the exchange is lost. From their earliest days, infants show awareness of interruptions to interactions (Tronick et al. 1978, Murray & Trevarthen 1985). They develop social expectations as to what should happen next while interacting with others, and by 6 months old, are usually very sensitive to the timing of experiences. The impact of synchronous and non-synchronous interactions is most vividly portrayed in the still or blank-face experiments (Tronick et al. 1978, Murray & Trevarthen 1985), which interrupt the communication between an infant and their close carer. In the ‘still-face’ experiment when a parent stops responding and shows a blank face to their child, the baby becomes confused and unsettled within seconds. Then, after using all their abilities to prompt a response from the adult, the child shows distress and frustration, and then physically collapses, losing postural control and becoming withdrawn (Tronick et al. 1978, Tronick, 2010).

An important aspect of the ‘still face’ experiment though, is when the parent returns to interacting with the baby, who is then able to regulate their bodies and emotions again and resume playing. This act of ‘reparation’ is a key process, as it conveys the experience that a miscommunication can be repaired and understanding restored. Indeed, Tronick’s work shows that everyday interactions comprise a series of affective matches and mismatches with quick reparations leading back to synchrony (Tronick and Cohn 1989). In his Mutual Regulation Model (Tronick 2010, 2017), it is the continuous fluctuation between synchronised and desynchronised exchanges that drives the intersubjective process forward. When the mutual incorporation does not match exactly, it leaves space for an autonomous response and opportunity for increased self-other awareness to develop. And, as corrections are improvised, and meaning is co-created in the reparation, the skill of the participants in knowing one another and communicating is increased (Tronick 2010, 2017). In this model, a degree of misattunement is even seen as necessary, as perfect synchrony would lead to an undifferentiated, homogeneous feeling state, rather than a differentiated knowing of self and other. However, if interactions are regularly unsynchronised or mis-attuned, where the adult frequently misses or ignores the child's signals, infants and young children become stressed and their feelings of anxiety increase and become a chronic state.

So, the synchronicity and temporality of embodied interactions are key. When two lived bodies synchronize, there is internal resonance with the other and when an infant and their parent mutually create this attuned coordinated state, they create a dyadic state of awareness (Tronick 2010, 2017), in which behaviours and emotions do not just belong to one or the other but are created between them from the coordinated patterns and rhythms of their interactions. From a dynamic systems perspective, De Jaegher and Di Paolo (2007) suggest that when the infant and parent create a dyadic state of awareness, they become components of a system, which becomes more complex and coherent as they gain mutual skill in co-ordination. They define coordination as "the non-accidental correlation between the behaviours of two or more systems that are in sustained coupling [...] or have been coupled to another, common system" (2007, p. 490). They emphasize that this co-ordination is 'with'; a mutual process that entails co-regulation and is interactionally achieved.

5.2. Secondary intersubjectivity

As discussed above, infants reciprocate with others in increasingly complex ways, and this begins to combine with an interest in objects and doing things with objects. At first an interest in objects competes with their focus on communicating with persons but then becomes integrated into a new form of cooperative intersubjectivity which Trevarthen calls secondary intersubjectivity (Trevarthen & Hubley 1978). In secondary intersubjectivity infants engage in triadic exchanges with people in reference to objects or aspects of the environment; there is joint attention to an object of shared interest that is included in both subjects' perspective and experience (Tomasello et al. 1999). This joint attention leads to increased mutual intention-reading between parent/carer and infant, which in turn enables increased temporal coordination. The increasingly refined coordination of turn-taking and synchrony of interactions, enable infant and caregiver to share how they experience the world and to develop shared meanings, through co-experiencing events and things in the environment (Tomasello et al. 1999, Striano and Rochat 2000).

Although joint attention to objects is usually seen as developing at about 7-9 months old, mothers and infants can be seen to take part in shared attention and engagement with their bodies in play and care events earlier than this, which Negayama (2011) suggests is an earlier form of triadic exchange using the body as the object. This is particularly demonstrated in care events where the body is the focus of attention. Through the visible and felt intentions-in-action, holding, pointing, moving and so on, are inherently meaningful interactions, the patterns of which acquire meaning. So, self-generated action repeated regularly over cycles of activity, forms the basis of knowledge and understanding, generating reliable patterns, or 'schemas,' of sensorimotor knowledge (Piaget, 1952; Trevarthen and Delafield-Butt, 2015). When this is shared in regularly patterned acts of common purpose, the foundation of cultural understanding and meaning is co-created to form the basis of an intersubjective, socially generated and embodied knowledge of a culture (Delafield- Butt and Trevarthen, 2013). In the psychoanalytic perspective of Bion (1962) and Winnicott (1965) this embodied knowledge is personal and emotional as well as cultural/behavioural. Through the repeated cycles of bodily care in which infant and carer communicate through touch, gesture and body stance, muscle and skin sensation and body boundaries, meanings of self, other and relationship are co-created, and children's self-concept develops through the transfer of interpersonal to intra-personal known as internalization.

Conclusion

From the discussions above, it can be seen that intersubjectivity is a much more embodied activity than often discussed. It includes physical and biological processes based on perceptual processes and bodily interaction in which facial movements, voice sounds and touch are the central focus. It is, therefore, embodied subjects who coordinate, so intersubjectivity is shared bodily engagement that also coordinates meaning. In fact, meanings emerge, become aligned and change through the interpersonal co-ordinations of movement, gesture, vocalics and touch. And vice versa, movement, gesture, vocalics and touch also become interpersonally coordinated through attempts at understanding each other. This is a dynamical systems point of view that links to enactive intersubjectivity and Merleau-Ponty's concept of inter-corporality (1962/2002). In this way, embodied intersubjective interactions between caregivers and young children are of central concern in a pedagogy of care in early years settings and underpins the methods and data analysis of this research.

Conclusion to Part Two

The theories and ideas presented in this part of the thesis comprise the framework for my thinking and approach to this research. Adopting a holistic approach that would move beyond Cartesian dualism, required me to 'boundary cross' (Moss 2018) between the disciplines of biological and sociological sciences in order to both extend my understanding of particular theories in each discipline and also to draw out the connections between them, as both inform the research process and the reading of the research data, such as by considering the socio-cultural contexts of the educator and child-participants, exploring the socio-cultural norms of pedagogical practices and thinking about both the physiological and social meaning of interactions, thereby enabling a holistic view which renders children's embodied experiences visible. This is most effectively enabled through using the overarching theoretical framework of embodiment in the research process and in the data analysis, which makes space for babies and young children's whole, integrated mind/body/selves to be recognised. This is further enhanced by combining embodiment and intersubjectivity in the process of the research and data analysis, as the emotional and relational aspects of embodiment are then highlighted, and the physical aspects of intersubjectivity are emphasised. This conceptual framework is therefore continued into the methodological framework, research methods and data analysis discussions in part three of this thesis.

Part 3: Methodology

… by patient listening to the talk of even little children, and watching what they do, with the one purpose of understanding them, we can imaginatively feel their fears and angers, their bewilderments and triumphs; we can wish their wishes, see their pictures and think their thoughts . . . With the infant, however, we have not even the help of halting speech. It needs a far closer and more patient study, and a far greater leap of the imagination, to bring us insight into the world of the wordless babe. Yet we must try to gain it, if we would know how his (sic) growth goes on, what his difficulties may be, and how to help him over them. (Isaacs 1929:15)

This part of the thesis sets out the methodological framework that informed my research and discusses my research approach and methods (chapter six) and then, in chapter seven, sets out the process of the research and data analysis. These are encapsulated in the quote from Susan Isaacs above; my aim being to engage in the 'closer and more patient study' that is required when researching babies and young children, through 'patient listening' and 'watching with the one purpose of understanding';- through the use of video observations of physical interactions and also through reflection on the research group process; using tools that would enable the insights into the children's and educators' worlds that Isaacs identifies.

Chapter 6: Research Methodology, Methods and Ethics

6.0. Introduction

In this chapter I set out my research methodology and provide an account of the development of my methodological position as the research progressed. I also discuss the research approach and methods used, and the ethical considerations that informed the research.

This research was a small-scale qualitative study, couched in an interpretivist perspective and an embodiment framework, that sought to extend understanding of the lived physical experience of children aged birth to three years in early years settings in the UK. The specific focus of the research was to study the physical interactions between educators and children and thereby, to consider how the focus of early years practice might take more account of babies and young children's physical experiences. Therefore, this research explored the following questions:

RQ1: What elements of embodied interactions might be identified as contributing positively to babies' and young children's experience in early years settings?

RQ2: What factors influence educators' approaches to, and experience of, physical caregiving interactions with young children?

RQ3: How might attuned physical caregiving interactions in early years practice be supported and facilitated?

These questions indicate the dual but closely entwined threads of inquiry of this research, whereby video observations of physical interactions between educators and children spun the thread in relation to questions one and two, while videos of the research group process generated data that spun a thread in relation to the third research question. The research process then wove together professional practice and research in a praxeological loom, in which the researcher has a deep involvement in the real world studied and a desire to engage in a process that enables conscientisation and empowerment for all those involved (Pascal and Bertram 2012). This was realised through using a Cooperative Inquiry approach (Heron 1996, Reason and Bradbury 2006), and the collaborative and participatory method of Video Enhanced Reflective Practice method

(VERP) (Kennedy et al. 2015), incorporating Work Discussion (Rustin and Bradley 2019). By linking embodied feelings and experience as a continuum between researcher, educator and child through these methods, I aimed to develop a context within which conscientisation about practice in relation to physical caregiving interactions with children might be enhanced.

6.1. Methodological framework

6.1.1. An interpretivist foundation

The dual threads of this inquiry provided the opportunity for understandings to develop on different levels and from different perspectives. This reflects an interpretivist position (Cohen et al. 2017), in which there is not only one way of understanding the world, but many different interpretations, which are set within a cultural framework of socially constructed and shared meanings (Ellingson 2017). Interpretivists seek to understand the different meanings people make about the world, gather detailed and contextualised data and pay attention to positionality, acknowledging subjectivity and focusing on meaning making as a reflexive complex and continuous process (Manning and Kunkel 2014). Therefore, I was studying the lived experience and meanings of physical interactions between children and educators in early years settings and attempting to interpret those meanings as they emerged through my and the educators' understandings. As regards early childhood research, an interpretivist stance acknowledges that children grow and develop in complex social worlds and considers that research should be undertaken in the context of children's everyday lives, in situations that have emotional significance for them (Pascal and Bertram 2012). So, it was important to my research for diverse experiences of the phenomenon to be included and to create conditions for physical interactions to be seen and thought about from different perspectives (Dahlberg et al. 2008) by studying the organism-in-its-environment (Ingold 2000), and to highlight the taken for granted phenomena that are embedded in the 'lifeworld', and thereby, for practice-relevant knowledge to be generated (Groenewald 2004, Öhlén and Friberg 2023). This position provided the foundational layer of the planned structure and process of the research, in which a cooperative inquiry approach was adopted and collaborative, reflective research methods were chosen.

Central to this research then, was the necessity to notice, describe and discuss physical interactions on a deep level and to further understanding of how children and educators create meanings in and through their physical interactions, including the attitudes, thoughts and intentions involved. This meant that embodiment was a core theoretical concept as discussed in chapter 4. So, this research was rooted in an epistemology that views knowledge as emerging from embodied, personal experience and in the context of interaction with other beings and the environment. Therefore, the concept of embodiment also became the overarching framework for the research methodology.

6.2 An embodiment framework

Ideas of embodiment refer to the lived experience of the body or being in the world. It is a process and a state of being where an individual is consciously self-aware of their body, their mind, their thoughts, feelings, sensations and proprioceptive responses (Leigh and Brown 2021). Embodiment also recognizes the body's positioning and construction in different historical and socio-cultural contexts (Ellingson 2017). In this regard embodiment is congruent with an interpretivist philosophy, fitted with my position and values and was also consistent with my holistic perspective on reality, as it encompasses ideas about the reciprocal, mutual and cyclical dynamics of infants and young children's physical and mental processes, and the environmental contexts of these (Ellingson 2017, Thanem and Knights 2019, Pink 2015). As I have discussed in chapters 3.2.3 and 4.1, embodiment regards all aspects of the body as interconnected, and the body as intrinsically connected to the environment and mutually incorporated with other embodied agents (Fuchs and Jaegher 2009). In this way, embodiment reflects the interconnectedness of complex systems theory (Hager and Becket 2019), which views phenomena holistically, focusing on interrelationships and contextual approaches (Hetherington 2013). In this way, embodiment emphasises non-linearity and relationality and urges the researcher to acknowledge the complexity within the systems they are exploring and to understand research as a relational, not individual activity. Wessels et al (2024) use the term ‘entanglement’ when discussing how we fundamentally exist and develop through relationships and suggest that this entanglement or relationality not only gives rise to different perspectives gained through collaborative engagement but also shapes, and is shaped by, participants / co-researchers. So, in a complex system such as a group of people in a research group, individuals will have their own interests, motivations and experiences, which make a unique contribution to the system’s functioning. And the interpersonal, intersubjective, embodied relationships between these unique individuals, constitute the micro-level from which novel emergent phenomena arise. Therefore, embodied research requires a careful investigation of the interrelationships between entities, and a process that foregrounds embodied self-awareness of all those engaged in the research (Leigh and Brown 2021).

In addition, embodied research is seen to enable us to learn about topics that are otherwise unknowable and opens new possibilities in research. But to do this, embodied questions should ‘shed light on the unspoken, taken for granted aspects of life’ (Ellingson 2017, p.34). In this regard, this research highlighted a commonly overlooked and taken for granted aspect of the ‘lifeworld’ of early years settings, that is physical interactions, and, through focusing on the embodied experience of young children and their educators, brought ‘unmarked’ aspects of pedagogy into focus. Ellingson (2017) also suggests that an embodiment approach to research ‘allows the exploration of liminal states of being and inconstant bodily status’ (p.43). This makes an embodiment frame relevant to studying babies and young children, because for young children whose physicality is a central facet of their lives, bodies are an extant, in the moment, mutable presence. So, using an embodied research approach makes space for their whole, integrated mind/body/selves to be recognised, as it allows the researcher to better perceive the constant flux of their body states and their multi-modal, sensorial way of being in the world, in a way that values children’s whole being and their lived experience. Therefore, I deliberately embodied the research questions, the methods and the assembling of data in this research, through highlighting embodied actions in reviews of observations and including enactive experiments during the research group sessions, for example (see chapter seven).

<u>6.2.1. Historical context</u>

However, research in relation to the body has not always taken an embodied approach. Writers on embodiment and embodied research (see for example, Williams and Bendelow 1998, /2002 2008, Burke and Duncan 2015, Ellingson 2017, Thanem and Knights 2019) note how, historically, anthropological approaches to researching the body typically viewed it as an external object of analysis; interpreting the body as a cultural symbol that just receives and transmits knowledge (Williams and Bendelow 1998, Burke and Duncan 2015). But in the 1970s and '80s this focus began to shift and, with the influence of the works of Bourdieu, which emphasised the social nature of the material body, researchers began to shift their attention (Thanem and Knights 2019) and in the 1990s and 2000s, began to address the actual lived experience of the body, which is the focus of embodiment (Csordas 1999). This is discussed as the methodological turn to the body and the senses, with different foci on the body but with a particular interest in embodied forms of knowledge, drawing on the ideas of Merleau-Ponty (1962/2002), who asserts that knowledge and knowing is a corporeal process of being-with, being-in, being-there, and 'being-in-the world' (Merleau-Ponty 1962/2002). Ellingson suggests that this focus on the being-in-the-world of lived experience is phenomenology's contribution to the study of embodied knowledge (Ellingson 2017).

However, as Thanem and Knights (2019) identify, tendencies towards disembodied methodologies and methods have continued to be common in textbooks on qualitative research. Drawing attention to this marginalization of the body, they cite Leder's (1990) view of bodies as an 'absent presence' in social science research, this, I suggest, is particularly true of children's bodies. For example, although Williams and Bendelow (1998), in their sociological account of embodiment, identify an increase in focus on the socio-cultural construction of childhood (see for example, James et al 1998 and Aries 1996), and applaud the growing appreciation of the importance of embodiment to the processes through which children actively participate in social life, their account still invites Burman's (1994) critique of research on children and childhood as being ‘preoccupied with an evolutionary baseline that provides insight into adult development’ (p.26), when they describe the sociology of childhood as an important ‘site from which to theorise the body, as a biologically and socially unfinished entity (Williams and Bendelow 1998, p.20). A statement that reflects the deficit ‘human becomings’ (Moss and Cameron 2007) perspective in developmental psychology I discussed in chapter 2.1. And Elwick and Green (2019) suggest that in much current research in ECCE, a representational view of the body still dominates, and cognitive processes of thinking and language are valorised, thereby perpetuating a dualist perspective, which this research sought to resist through adopting an embodiment framework across both the research process and content.

6.2.2 Embodiment and the ‘more-than-human’

Using an embodiment framework may be thought to risk a humancentric view by placing the human as the centre of meaning (Burke and Duncan 2015). But an embodiment framework echoes a post-humanist view that repositions the human among nonhuman actants and thereby rejects the normative dominant notion of what humanity is or should be (Fox and Alldred 2019). In this research, these concepts were relevant because they align with an embodiment framework that challenges a dualist concept of self, in which the ‘human’ that is ‘the measure of all things’ (Ash and Gallacher 2015, p. 69), is defined as a properly-developed (i.e. adult/male/rational/linguistic) mind that can subdue the body and emotion (Damasio 1994, Phillips et al 2014). A view in which infants and young children become ‘othered’ as not yet fully human and are seen as living in a different relationship to the world than adults. But who, in an embodiment perspective, are recognised as whole people.

Also, embodied knowledge is incorporated not just by the material body but by a being comprising mind, body <u>and</u> environment (Thanem and Knights 2019). An embodiment perspective then, brings to the fore the idea that bodies are deeply enmeshed in their environment and sensory experiences of place (Pink 2015). In this way, an embodiment framework reflects a post-humanist perspective, which emphasises the materiality of the world and rejects a post-structuralist focus on texts and linguistic discourse (Fox and Alldred 2019). These materialities include human bodies, other animate organisms, material things and spaces, and material forces, including gravity and time, and emphasise the agential nature of material objects. So, although humans exercise agency through our bodies, we also use concrete tools such as computers, and abstract tools such as policies, which are then co-constituting factors in how we act in the world. Therefore, in this perspective, humans and objects do not exist separately, they both come to 'be' through intra-action (Barad 2007), which casts inanimate objects, or the 'more-than-human', as key players in the research process.

So, this research came to incorporate thinking about the relationship between animate and inanimate objects, as I paid attention to the part the more-than-human played in the research process and my reading of the research materials. This included taking account of the influence of the environment and data gathering tools such as the video recorders in the research process, as discussed in chapters seven and ten, and the tangible and intangible aspects of the environment in the child observations, as discussed in chapter 9. This included the sensory aspects of the environment; sound, temperature, texture or odour, and abstract concepts such as time that are also experienced physically. Such components impacted the research as they all elicited embodied responses (Pink 2015) and also opened up different possible areas of meaning.

6.3. Data engagement

In this research, my data engagement began from an interpretivist position, in which I sought to understanding the meanings and experiences of the physical interactions between the children and educators within the social context of their early years settings, through interpreting the research materials. In line with this position, I initially used a framework I had devised comprising the related aspects of embodiment and intersubjectivity (see Figs.2 and 3 below, Appendix 3.1) that inform the theoretical framework and the research methods of this inquiry to code the materials and identify thematic patterns and relationships in the data. According to Silverman (2013), qualitative research methods seek to discover understanding or achieve explanation from data by breaking down material through processes of coding and then creating and developing abstractions from the data. Groenewald (2004, p.49) suggests therefore that ‘analysis has dangerous connotations for phenomenology’ as it means breaking data into parts and thereby losing the context of the whole phenomenon. Hedstrom (2005) also describes analysis as ‘decompos(ing) a complex reality into its constituent elements’, a process of understanding detail by reducing complexity through ‘distinguishing parts from whole’ (p.110), which, as Hager and Becket (2019) point out, can lead to the relations in the whole being ignored or minimised, and to simplified understandings. And, as I engaged further with the research data, I found that coding using the template, although it helped to identify and note significant themes, it couldn’t accommodate the complexity of the interactions that I began to see across the data and I became concerned that it risked an atomistic reading, which was in danger of leading to the kind of reductionism that reflected the dualist Cartesian view I rejected, as discussed in chapter 3.1, and potentially undermine the holistic values that informed my approach.

However, using an embodiment framework helped to maintain and foreground a holistic, connected perspective when engaging with the research materials (Ellingson 2017). Ellingson (2017) suggests that acknowledging that one is engaging in sense making rather than discovering, means being able to use an embodied approach to data that fits with our goals and processes. And, for Ellingson and Sotirin (2020), data do not pre-exist researchers’ interpretive engagement, so researchers make data in embodied, material processes of participants’ and researchers’ bodies and material technologies (Ellingson, 2017). In addition, an embodied approach to research rejects a view of the researcher as someone who may gather sensory data, but who then produces knowledge by rationalizing them in their mind. Instead, the researcher’s whole body-self is engaged in making sense and creating knowledge in interaction with the surrounding social and material world (Perry and Medina 2011). Embodied research also rejects the objectification of research subjects from whom expert researchers have historically extracted data (Ellingson and Sotirin 2019). In contrast, it emphasises interactive data collection that involves embodied intersubjective relationships between researcher and participants / co-researchers, leading to sense-making that is 'imbricated' (Ellingson 2017) or overlapping, which allows for divergent as well as convergent understandings, thereby emphasising participants' perspectives and knowledge that are grounded in their lived experience.

So, for me, analysis became not about dissection and extraction, but about uncovering, looking and feeling deeper to understand better. I saw the data analysis process as a bringing together of things in ways that make them mutually meaningful (Ellingson and Sotirin 2020) and to focus on the relations between them, while keeping the whole in focus. Therefore, my engagement with the research material needed to move between and around the whole and the parts of it, re-turning the data (Barad 2014) to allow them to show me the connections and to also begin to notice the differences and spaces in between.

This then, marked a departure from the main route of my interpretivist methodological journey, to introduce the idea of reading data each through the other, which is a data analytic method used in a diffractive methodology (Barad 2007), of which I made some initial explorations. Haraway (1997) and Barad's (2007) metaphor of 'diffraction' refers to the disruption of wave-based systems as they encounter obstacles and create an observable pattern of interference. It focuses on the way things are produced in interaction, rather than assuming pre-existing essences or fixed boundaries. In relation to research, Barad (2011) suggests that this is a means to make differences and entanglements explicit through reading data through other texts, personal experiences, or other data (p. 445). Fox and Alldred (2021) suggest that a diffractive methodology may either explore 'the ways in which social processes diffract the world as they intra-act and interfere' (p. 94) or is a data analytic method. In this research, I did not set out to explore physical interactions through a diffractive lens, but the dual threads of my inquiry lent themselves to reading the two sets of data through each other, and also through the different theoretical lenses of embodiment and intersubjectivity, as well as through my own and the educator-participants' responses. So diffractive thinking became useful in enhancing my understanding of the entanglements and patterns in the research and resulted in making the connections discussed in chapter 11.

6.4. The research approach: Co-operative inquiry

The approach and methods used in this research arose from both the methodological framework discussed above, and from my personal and professional values, principles and experience, as set out in the introduction to this thesis. Therefore, I adopted co-operative inquiry as a research approach that was collaborative, so as to support shared dialogue.

Reason (1994) identifies co-operative inquiry as an approach that emphasises participative, experiential, and action-oriented approaches to research (Reason & Bradbury 2006), where the emphasis is on knowledge generated through practice, with the democratic aim of benefiting everyone involved (Heron 1996, Reason and Bradbury 2006, Schwandt 2007). It sees all those involved in the research as co-researchers, whose thinking and decision-making contributes to generating ideas, designing and managing a project (Heron and Reason 2001). However, although I embraced these participatory principles, and the educator-participants shared my interest, the context of this research meant that the aims were set by myself as the researcher, rather than co-constructed with the participant-researchers. Such an imbalance of power and influence and how to rectify it is a common dilemma in co-operative inquiry. But, as Heron and Reason (2001) suggest, an inquiry group often starts with the initiator putting forward a proposal and inviting people to a meeting to discuss the formation of the group. This was the case in this research, so, as the instigator and primary shaper of the research, I had to take steps to make this as collaborative a process as possible (Heron and Reason, 2001), such as in the first stages of the research, where recruitment and the introductory group session promoted voluntary participation, as set out in chapter 7.1.

The rest of the research process also embraced central aspects of co-operative inquiry. This included cycles of action and reflection, in which educator-participants were co-subjects in the video review sessions and co-researchers in the observation gathering as they filmed the observations themselves and chose the clips they wanted to review, thereby learning through experience and reflecting on that experience (Heron 1996). Most importantly, this research adopted a process that valued the different kinds of knowing that co-operative inquiry identifies: Experiential knowing that comes from direct encounters with people, places and things and includes feelings of empathy and resonance with others, environments and objects, which chimes with the underpinning theoretical ideas of embodied intersubjectivity used in this research. From this form of knowing comes ‘presentational knowing’ or forms of expression, imagery and representation of thoughts and feelings. Experiential and presentational knowing were supported through the experiential exercises used in sessions, the use of video and still images in discussions and in reflective journaling (Moon, 2013, Bolton, 2014). Most prominent though, was the practical knowing of a skill or competence that came with close observation, and the ideas that we explored in the group discussions, otherwise known as ‘propositional knowing’, i.e. knowing about something (Heron and Reason, 2001). Co-operative inquiry calls this kind of knowing, which reaches beyond the primarily theoretical knowledge that is usually represented in academic work, 'extended epistemology'. Heron and Reason (2001) suggest that an inquiry is more valid if all four ways of knowing are combined and propose that, in this way, co-operative inquiry can be transformative and informative as well as descriptive and exploratory. They say, “if your primary intent is to be…transformative…you will get richer descriptions of the domain than if you pursue descriptions directly” (Heron and Reason 2001:183). In this perspective, meaning is co-constructed and derives from the inside out, rather than being imposed on experience. This requires that the researcher acts as facilitator, collaborator and ‘travel companion’, not as a neutral, expert extractor of information (Reason and Bradbury 2006). These principles underpinning cooperative inquiry, makes this approach congruent with the holism of an embodiment framework, as it allows for the integration of all aspects of self, and of the interaction of our body-selves with the environment and other bodies in the research process

(Ellingson 2017). This is also the case for the methods used in the research group discussed below.

6.5. Research methods: Video Enhanced Reflective Practice (VERP)

VERP is usually used as a professional development tool within the social professions of health, education and social care (Kennedy et al 2011, 2015). It aims to support the interpersonal communications and learning of professionals through reflection and critical analysis and has been seen to improve the relationships between educators and children, to increase educators' confidence, self-esteem and reflexivity, and to positively impact team building and sharing between colleagues (Strathie et al 2011). VERP's purpose is to support participants in moving away from communications in which partners are missing each other's communicative signals, (termed a 'no' cycle) towards an attuned cycle of communication, where both subjects are receiving and encouraging each other's initiatives, (the 'yes' cycle) thereby leading to deeper engagement where differing perspectives can be shared (Kennedy et al, 2011). In the context of this research, the focus was on the physical dimensions of the communication cycles.

VERP was used in this research because its process is effective in gathering detailed observational data and in enabling focused and in-depth analysis and discussion. To date, it is a little used method in an ECCE research context, although recently, Soni (2021) used it in a study to develop a community of practice at a nursery school and Guard (2022), used an adaptation of VERP she calls Video Interaction Dialogue to support educators' reflexive engagement. While other methods of video stimulated reflective dialogue have been used by researchers in the education field for some years (Moyles et al. 2002, Cherrington and Loveridge 2014, Digby 2017). VERP was also used in this research due to its underpinning principles of collaboration, mutual participation and involvement, mutual respect and trust, open communication and negotiation (Kennedy et al. 2015), and also for its strengths-based ethos, both of which are congruent with the values and framework of this research and with co-operative inquiry. In theoretical terms, VERP is based on the work of Trevarthen and Aitken (2001) on intersubjectivity, which proposes that attuned interactions are communications between two equally important subjects who are mutually receptive and sensitively responsive to each other. In this way, using VERP as a research method, introduced intersubjectivity alongside embodiment as part of the theoretical frame for this research, which gave rise to a focus on embodied intersubjectivity.

In addition, the use of video in VERP is seen to promote effective change, which fitted with my intention for this research process to positively impact pedagogy. In VERP, change is seen to happen through processes of self-awareness, self-confrontation and self-modelling (Figueira 2007). The reviewing of the video clips allows elements that might otherwise be overlooked or taken for granted to become significant, as the whole perceptual situation causes us to look for them. This means that participants not only see things in a child or client that they haven't noticed before, but also in themselves, and so, make connections between them, reflecting the imbricated processes of embodied intersubjectivity as discussed in chapters 5.1 and 8.2. So, as the participant is their own model on film, the repertoire of behaviours they observe are seen as within their capacity and experience, so the visual evidence in the video deepens learning. However, being confronted with oneself on video can also create uncomfortable states of cognitive dissonance between the perceived self and the ideal self. Usually, cognitive dissonance results from people seeing their perceived behaviour as negative compared to their ideal beliefs, but in VERP's strengths-based approach it is evidence of positive behaviour that is often seen as incompatible with negative self-beliefs. As a result, being confronted with video evidence of positive interactions can lead to a change in beliefs about practitioners' competencies and potential and thereby enhance self-efficacy (Dowrick 2012, Landor 2015). This is intensified by the deliberate selection of clips that are positively skewed because they are intended to build on what is already working well, showing the participant 'as if successful', which is an underlying concept in the Video Feed-forward method (VFF) (Dowrick 2012). However, in VFF, the video editing aims to create a desired future self, and the relationship emphasised is that between the participant and the video. Whereas in VERP, the aim is to learn from past action by reflecting in the moment and the focus is on the relationship between the Guider, the participant and the video, thereby emphasising relationality and acknowledging the intra-action with objects in the process. In this way, the more-than-human aspects of the process, such as the video clips, also become an integral part of the experience (Digby 2023).

6.5.1. Video observation

Central to VERP of course, is the gathering of video observations, which in more general terms, has been used as a method for researching children ever since the technology has been available, as it has been seen as a reliable method to document objectively what takes place in children's development. This assumption though, that video accurately records actions and represents the 'real' world, has been challenged, and it is now seen as multi-vocal texts and 'reflexive mirrors' rather than objective data (Jewitt 2012, Murris and Menning 2019). So, although using video means that the material can be revisited an infinite number of times, enabling the researcher to question, check and re-view their understanding of the emergent data, it still requires that questions are asked about what is and isn't seen and whose gaze is doing the seeing (Jewitt 2012, Murris and Menning 2019).

This gave rise to the consideration of the power dynamic in the researcher - participant relationship (Jewitt 2012) in this research. This is particularly pertinent in the early years field where observation has become a primary mechanism for the surveillance and assessment of children, parents and educators (Schirato et al. 2020), with power resting in the hands of those who do the observing and evaluating. It might be thought, therefore, that using videography in this research might result in an accentuation of power difference. However, by using VERP, in which observations were not a tool for evaluation but for reflection and meaning making, and where educator-participants directed the camera and chose the clips viewed, the power of the researcher gaze was re-orientated as they became educator-participant-researchers. However, like Wilińska and Bülow (2016), I was still concerned that videoing the review sessions might inhibit the educator-participants, yet it seemed not to be overtly noticed. In fact, it seemed as if the recording lent more significance and value to the educator-participants' contributions. So as Wilińska and Bülow conclude, "Video recording does not need to be viewed as a potential threat but could be an invitation to tell" (2020), an attitude that is promoted when using a strengths-based approach, free of criticism and evaluation, as discussed in chapter 11.

Further to this, in their approach to video data analysis, Fazeli at al. (2023) identify that video data, is of immense help to researchers trying to understand human interactions and relationships, as it encompasses many modalities of engagement such as gaze, gesture and body movements and talk (p.335), which is particularly useful in relation to researching physical interactions, although, from an embodiment perspective video material may still be seen to limit data engagement to the visual and aural zones of experience. Pink (2019) however, sees research materials as sensory texts, suggesting a sensory relationship in the process of viewing film (MacDougall 2006), and Craig et al. (2021) suggest that a multimodal representation of data produces a more holistic analysis than textual analysis alone. This is beneficial in research with young children because video can help to move away from the 'wordism' (Blum 2015) of linear written accounts, wherein an emphasis on verbal language (Flewitt 2006), may render young children's embodied, multi-modal experience unseen and their voices unheard through what Cannella and Viruru (2003) call the adult colonisation of children's tongues. This links to the silencing of other groups in society. For example, in their account of co-constructing meanings of nonverbal and verbal interactions in video data in the context of deaf and hearing bilingual researchers, Hopper and Quinones (2012) identify how focusing on nonverbal communications in their data, highlighted the everyday imposition of spoken English, which positions deaf people as 'on the margins' and creates barriers to participation. Similarly, over-emphasis on spoken language in research with young children, limits their participation and thereby leads to marginalisation. Therefore, using visual methods can better illuminate the complexity of a child-participant's social or physical situation, as in the child observations in this research (Chawla-Duggan et al. 2020).

In the context of an embodied approach, this relies on careful looking at visual images with whole-body sensory attunement to children's whole-body communications, through making physical aspects the primary focus of review. Also, adopting the kind of 'openness' identified by Öhlén and Friberg in relation to interpretation (2023) not only gives perceptual and bodily attention to what we see, but also maintains an awareness of one's own taken-for-granted assumptions. So, for research such as this, video is an effective way of documenting physical interactions and bodily movements, as it provides a level of detail that supports in-depth analysis and reflection and, through simultaneous viewing, as in the VERP group review, discussed in chapters 7 and 10, it enables multiple viewpoints and collaborative interpretation of an observation (Jewitt 2012). In addition, in the embodied approach of this research, in which the video observations also gathered data about the research process through the videoing of the review sessions, the shared multi-sensory bodily action of observer and observed, researcher and participant, were all the focus of meaning making (Jones et al. 2010). In this regard, engagement with the video materials reflected an interpretivist and embodiment perspective overall. But the repeat viewing and re-turning the video material, reading the child observation videos and the group session videos through each other, and the slowing down and freeze-framing of video clips, which disrupted a linear time concept, departed from this perspective to include aspects of diffractive analysis.

6.6. Work Discussion

In VERP. the reviewing of video clips may be either individual or in a group. When undertaken in a group, the process is closely related to the processes of Work Discussion (Rustin and Bradley 2019), which is defined as, "The systematic discussion of experience of work with small and stable groups of professional workers" (Rustin and Bradley 2019, p.4). This approach is rooted in a psychodynamic perspective, based on the works of Micheal Balint (1957 – see Salinsky, 2003), Wilfred Bion (1962) and Esther Bick (1964 – see Rustin 2009) in which peer-to-peer reflection in a small group is seen to provide a safe space for exploring work dilemmas (Rustin and Bradley 2019). It is underpinned by a belief in the central importance of the emotional dynamics of experience and an interest in the relevance of unconscious factors (Rustin and Bradley 2019). Bion's theory of 'container-contained' (1962), as discussed in chapter 5.1, in which a more mature mind is able to hold and process the feelings and experience of the less developed mind (usually the adult and the infant), is central to Work Discussion groups, wherein the group as well as the group leader is able to provide the same 'containing' function for thoughts to be processed and take form. The name 'Work Discussion group' came from Bion's valuing of the working potential of a group that is able to avoid falling into the 'basic assumptions' (1962) of dependence, pairing or fight/flight and instead are able to become a 'work group' that thinks together. Like VERP, the Work Discussion model is centred on bringing together observation and interpersonal responses, with an emphasis on learning about something from experience rather than on acquiring information. The aim is to explore meanings and sharpen perception so that richer understanding of the complexity and nuance of interactions and motivations emerges, often from unconscious thoughts and feelings. This method, therefore, emphasises that in any interaction between an educator and a child, unconscious motivation is as much a part of the educator's contribution as it is part of the child's behaviour. This approach to thinking about interactions enabled significant data to emerge during data engagement as discussed in chapters 8, 9, and 10.

6.6.1. Observational noticing

Central to Work Discussion and VERP, and very influential on my approach in this research, is the work of Esther Bick, who developed the Infant Observation training at the Tavistock Psychotherapy centre in London. This is a very different observational approach to the methods generally used in early years practice today, which tend to be evaluative, narrow in focus, and, in the current context of ECCE in the UK, usually limited to feeding into assessments that measure how children are progressing towards set learning goals. In contrast, Bick's approach to infant observation is a way of entering a child's world through attunement, being attentive and noticing. And this is the '*leap of imagination*' that Isaacs refers to in the opening quote to Part 3, which can, with awareness and caution, bring us '*insight into the world of the wordless babe*'. In this context, 'noticing' is not just about absorbing information at a superficial level, it is about using all the senses, including emotional senses and actively looking below the surface of overt behaviours and actions to think about what the basis might be of what is seen and heard. This includes being prepared to recognize one's own emotional and visceral responses to what is noticed (Manning-Morton 2018), which is congruent with and also enhances embodied data engagement (Pink 2015, Ellingson and Sotirin, 2020), through ensuring that the emotional dimension is noticed. In this way, in Infant Observation, the emotional 'temperature' of a scenario is highlighted in an observation, which can lead to overwhelming feelings for the observer. But attention to these feelings in a supportive group, helps the observer to think about the dis/connections between the feelings raised in themselves and those of the child observed, thereby deepening understanding of the child's experience. Also, the process of focusing on even the smallest detail of the observation and being able to step back and notice internal processes as well as external events, are seen to effectively develop the capacity to notice and to think (Miller et al. 1989), as discussed further in relation to reflexivity below.

6.7. Reflection and reflexivity

The research approach of cooperative inquiry and the research methods of VERP and Work Discussion discussed above, all encompass reflective practice. Co-operative inquiry involves a process of moving between action and reflection and the VERP and Work Discussion processes are inherently reflective, requiring participants to think about their actions and behaviours. And reflective practice is seen to be a central facet of practice in the early years field (See for example, Paige-Smith and Craft 2011). However, as highlighted in chapter 2.6, if reflective practice is to be of social use, it needs to be more than an examination of personal experience, it needs to challenge assumptions and make changes too, thereby emphasising the dynamic relationship between reflection and action, which then becomes reflexivity (Freire 1976, Moon 2013, Bolton

2014). In this way, and in this context, reflexivity is a process that brings assumptions into consciousness, where there is the potential for reframing ideas and thought processes and thereby altering behaviours and actions and going beyond reproducing what is already known, especially in a shared group process, where there are multiple perspectives. This stance reflects Gemignani's view of a critical reflexivity that assumes that positions and subjectivities are constructions, influenced by relevant discourses, not just individual internal responses (Gemignani 2016). So, from a relational and critical perspective, rather than assuming the inherent 'goodness' of reflection on the emotions or relational interactions in research, researchers may instead use them to consider the discourses and power-based contexts that constructed those emotions and whether and how they impacted the inquiry.

So, reflexivity was central to this research but also potentially raised tension between a research study that is focused on the interconnectedness of the phenomena, the researcher and the researched and of the research processes, and a view of reflexivity as a position that emphasises the separateness of the researcher and the object of study. Traditionally reflexivity is seen as considering who a researcher is in relation to their participants, research focus, and research questions, with the aim of interrogating how a researcher's standpoint and positionality have an impact on the relationships and process of the research in order to produce more accurate analyses. Reflexivity is therefore criticized as self-referential (Gemignani 2016) and seen in relation to reflection where there is a distance between the reflection and the self.

This challenge to reflexivity, led me to reconsider the interpretive reflexivity I had initially brought to bear on the research process and the data emerging from it. However, although I could see these tensions and dilemmas, I was immersed in an embodiment frame, where bodily self-observation and reflexivity are part of everyday experience, (Csordas 1990), and internal emotional and somatic feelings are integrally connected with external representations of bodyself (Shusterman 2012). In this context, reflexivity is a process in which the internal becomes external and the external internal in a constant flow and flux, moving between and within liminal spaces and states, of being, able to be both within and without. And it includes noticing one's own thoughts and feelings, becoming aware of how they are produced through external contexts and influences, and how they collide, influence and are impacted by other subjects and their thoughts, feelings and contexts, in interrelationship with each other and the more-than-human world, to form something different. And, in this way, becoming a 'meta-reflexivity' (Serra Undurraga 2023) that interrogates the ways in which we are being reflexive and constantly questions our ways of relating in research and practice and what this way of relating is producing. In this regard, Flint and Wang (2024) offer a reading that is an expansion of reflexivity rather than a critique, where reflexivity is understood as more than reflection or reproduction and seen as an opportunity to think beyond boundaries of the self and other, and to consider our entangled engagement with the world, requiring the researcher to be 'present, attentive, and open' (p.45) to what might emerge. This requires holding in mind the possibilities and potentialities of the research and therefore, the uncertainty and disequilibrium of not knowing, which very much chimes with a psychodynamic approach to infant observation.

As Rustin describes,

'…to be a good observer . . . requires a space in the mind where thoughts can begin to take shape and where confused experiences can be held in an inchoate form until their meaning becomes clearer. This kind of mental functioning requires a capacity to tolerate anxiety, uncertainty, discomfort, helplessness, a sense of bombardment.' (Rustin in Miller et al. 1989: pp. 20–21)

A capacity that became much needed during my engagement with the research data.

Video link: RG-S1: Not knowing

6.8. Ethical issues, actions and behaviours in relation to the research

This research adhered to the EECERA Ethical Code for Early Childhood Researchers (Bertram et al 2025); the BERA revised ethical guidelines for educational research (2024) and the Bath Spa University Code of Good Practice for Research (see appendix 1.2: Ethics approval).

6.8.1. Data security

All data gathered in this research has been stored in line with the UKGDPR and Data Protection Act (The Home Office 2018). This Act includes requirements to put safeguards in place in relation to the processing of personal data in research, such as pseudonymisation of the data and 'rights to rectification, to erasure, to be forgotten, to restriction of processing, to data portability, and to object when processing personal data' (para 156). Therefore, all the personal data contained in this research is safeguarded through access only by university personnel involved in the study process and the video data is controlled through using a dedicated folder, accessed through a secure link, created by the university, only accessible to named people for a time limited period of 60 days and that requires secondary authentication each time the folder is accessed.

The educator-participants used their settings' own video recording equipment as these were already kept securely and subject to the settings' data security procedures. Therefore, the collected data was not able to be uploaded onto the internet or local intranet from the settings. However, when the recorded data was passed to the lead researcher, the setting's data security was no longer in place. Therefore, electronic data has been kept by the researcher in encrypted files and a 5 year 'shelf-life' on the video material put in place. Written data arising from the reflective group discussions and the researcher's and educator-participants' reflective journals have been kept in a locked filing cabinet in the researcher's home, and all digital material is password protected.

6.8.2. Informed consent

There was a range of levels at which voluntary informed consent was sought at the beginning of this research. As the gatekeepers to settings, managers of settings needed to be in agreement with the research and for educators to be involved. Therefore, full information about the research was sent to all interested settings and a written contract with the Heads / Managers of settings was made, which confirmed that they comprehended and agreed with the aims, methods and process of this research (see appendix 3.3).

As well as supplying written information about the research, a series of information sharing meetings took place at the nominated settings, where an open invitation to educators to participate was made. This was a particularly important consideration to ensure that educators' participation was voluntary. There were transparency and clarity in all communications about the research, so that potential participants understood the reasons for the research, their level of involvement and how the research was to be used. Informed consent was then gained from individual educator-participants, including the right to withdraw (see appendix 3.3). Settings and educator-participants were also asked to give consent for research data, including visual images, to be used for external professional / academic events.

This research involved babies and young children and therefore, the parents/ guardians of any child involved were given full information about the research and asked to give their consent for their child to be observed. Parents were given information about the proposed process of gathering data, its use and storage. They were also invited to view any visual data collected that included or referred to their child and given the right to refuse its inclusion in the research or to withdraw their child. Permission to be included in the research was sought from all the parents of all the children in each of the groups, as any of them might appear in the video observation, even if not the focus subject (see appendix 3.2). These permissions were granted for the vast majority of children and families, and where parents refused permission, children were not filmed and if they inadvertently appeared on camera, the educator-participant-researchers deleted the clip. Information for parents was given in writing and verbally by the researcher and/or the educator-participants to ensure full understanding in an area where there are many multi-lingual families. Where settings deemed it useful, I proposed to arrange for information to be translated / interpreters to be present, however, this turned out to be unnecessary, as in the participating settings, educators and parents shared common languages.

In research with babies and young children such as this, the requirement to gain informed consent is usually satisfied through gaining the consent of parents. However, this is not sufficient in a research approach that views children as active subjects with rights. Article 12 of the United Nations Convention on the Rights of the Child (UNCRC) (UNICEF 1989) requires that children should be facilitated to express their willingness to participate. Therefore, the educator-participants and the researcher worked together to identify how to respectfully attend to children's 'in the moment' verbal and non-verbal communications in order to ascertain children's willingness or unwillingness to participate at any given time. This meant using what Skanfors calls 'ethical radar' (2009) to be alert to children's dissent and to gain children's consent in an on-going process. Flewitt (2006) defines this as 'provisional consent' where ethical issues are addressed continuously as they emerge in context. Working collaboratively with educators who knew the children well and who were reflecting on children's non-verbal communications as the focus of the research, facilitated this.

6.4.3. De-identification

In order to protect the identities of the adult and child participants and the settings in this research, they have been de-identified through the use of codes for the settings, and pseudonyms for the educator-participants. These names were chosen by the participants or allocated by the researcher to be congruent with the educator-participants ethnic identity and used throughout all stages of data analysis and publication. However, the child-participants names are sometimes spoken on the video clips, so these have not been changed.

The use of visual images in the research methods, meant that total anonymity was not possible during the process of the research, neither was the obscuring of faces, as the focus of the research required observing and identifying the minutiae of expression in the faces and bodies of the participants. So, consent for data use was gained on multiple levels and permission sought and gained on an on-going basis during and post-research. In addition, to address any risk to children, on publication of the research, children's faces and the faces of the educators who requested it, were obscured and at the end of its 'shelf-life' of 5 years, all video data will be either returned to the educator-participant, parents of child-participants or destroyed.

Although the researcher de-identified settings, they also retained the right to waive anonymity in the future, if they wished to make public that they had participated in this research in any publications or presentations. Settings have agreed to inform the researcher in writing if this is the case.

6.8.4. Embodied ethics

Ellingson (2017) asserts that in research that focuses on embodied issues, the research purpose is ethically connected to consideration of how participants' material worlds are affected by the research process and how the research outcomes are used in the world. She also suggests that in an embodied approach, the body should be central to the ethical principles used, but that observing and writing about bodily practices in research, can render bodies vulnerable, which clearly has implications for the educators and children in this research. So 'doing no harm' in this research has meant taking great care to respect the dignity and wellbeing of participants and negotiating the ever-shifting ethical boundaries of privacy (Saldaña 2014). To address this, Ellingson (2017) also suggests that researcher behaviours that are in the participants' best interests are more likely if researchers are engaged and immersed and have close relational and embodied encounters with participants who they come to know well. I believe that the collaborative research approach and methods used in this research engendered those close respectful relationships. The focus on 'care' in this research required that I paid attention to how the group cared for itself and each other and also how I used self-care throughout the research process, both as ethically vital to the research and also as pedagogically congruent to the topic. La Jevic and Springgay (2008) suggest that ethics of 'being with' requires a high-level responsibility on the part of the researcher, who also needs to be culturally competent and knowledgeable about vulnerable groups, as how we behave has consequences. Therefore, as a researcher in a position of power in relation to participants, I took all possible steps to address my competence and knowledge through the research approach and to take responsibility for how I acted in each situation as it arose, not just as a general principle (Ellingson 2017). For example, during the research process, session 3 had to be cancelled due to Covid infections in the host setting. At the time, the educator-participants were trying to find ways in which we could carry on the session, but in recognition of the obvious stress in the situation, I suggested that we cancel and just meet again on our next scheduled date, adding an additional date on for the last review session. This was an example of implementing my ethical statement of not adding stress or pressure to the educators, children, parents or settings involved in the research.

Research that focuses on physical interactions with children is certain to raise ethical dilemmas and anxieties for everyone involved. Therefore, adopting an ethical approach was not only important from the beginning but also vital to be consciously applied throughout this research. For example, engaging in reflection that involves participants in examining their practice in depth, is not always comfortable. In addition, reflecting on professional practice with infants and very young children with a focus on embodied intersubjectivity, is almost certainly challenging, as it can lead participants to engage with potentiality difficult issues in their personal as well as their professional lives (Manning-Morton 2006). This raised ethical considerations in relation to the research process, so, to make this research group a safe environment for reflection, clear boundaries of the aims and parameters of the group were set from the beginning, and the purpose of reflective engagement was closely attached to the research task and was always rooted in theory and related to practice. Most importantly from an ethical standpoint, a group facilitator in these circumstances needs to be sure of their own skills and abilities in managing discomfort or distress and must also be aware of their own limitations. The requirement for a VERP guider, is that they should be trained in the principles of VIG and accredited by the Association for VIG UK (AVIG, 2025) For myself, I have undergone basic training on VIG/VERP, and I am trained as a trainer in group process and dynamics and have extensive experience of running and participating in training and counselling groups. This means that I was clear about my own skills and limitations and the importance of maintaining the parameters of the research focus of the group and keeping a balance between reflection, ideas, practice and well-being.

Conclusion

This chapter has presented the methodological framework for this research and set out my methodological journey from an interpretivist foundation and an embodiment framework to a tentative engagement with a diffractive analysis. I have described the approach and methods used in this research and discussed their connectivity through observation and reflexivity. How my research philosophy and methods were manifest in the research and data analysis process is now discussed in the following chapter.

Chapter 7: The Research and Data Analysis Process

7.0 Introduction

This chapter sets out the process of the research group and of assembling and engaging with the data, in relation to the methodological framework and the research approach and methods discussed in chapter six. This chapter relates closely to chapter 10 in which data arising from the group process is discussed in relation to RQ3.

7.1. The research process: Recruitment

7.1.1. Recruitment of educator-participants

My original plan was to carry out this research in the London local authority where I live, with the intention of 'giving back' to my community and continuing the involvement I have had with the early years service in the area over many years. So, recruitment to the research began in 2020 in partnership with the local authority, however, the Covid19 pandemic restrictions meant that the recruitment process was halted. When restrictions were lifted, the extreme pressure that settings were working under during that period meant that I agreed with the local authority not to pursue recruitment directly through them. Consequently, I issued an open invitation to all my early years email contacts nationally, which resulted in four settings committing to the research (identified as (Group Setting) GS-1,2,3 and 4 hereafter). This fulfilled my aim of recruiting 8 educators, 2 from each group setting. Heron and Reason (2001) suggest that for co-operative inquiry, groups of up to twelve persons work well but below six is a little too small and may lack variety of experience. The rationale of having two educators from each setting was based on my previous research, which suggested that pedagogical change is more likely to become embedded where more than one educator from a setting attends, particularly if one is a senior educator (Manning-Morton, 2006). This is a view common to an action research approach that believes that 'little can be achieved if only one person is involved in changing his (sic) ideas and practices' (Cohen et al., 2017, p. 444). Also, a group of this size is congruent with the typical composition of a Work Discussion group, comprising participants from different settings (Rustin and Bradley, 2019) and therefore a good fit with my research methods.

Serendipitously, the four participating settings were all within a two-mile radius of my home and each other. Also, each of these settings had had previous direct or indirect contact with me professionally, either on university courses, local professional training courses or at conferences. I believe this pre-existing relationship was key to the settings' support for the research and made it accessible to them.

The educator-participants were:

GS1: Leiya and Popi.

GS2: Tovah and Chaya.

GS3: Munehra and Shahida.

GS4: Remi and Sarita.

See appendix 1.1 For detailed information relating to the participating educators' professional and personal profiles.

<u>7.1.2. Recruitment of child-participants</u>

The recruitment of child-participants was both specific and general. In line with the value of prioritising key person-child relationships, the educator-participants primarily focused their observations on their key children but, as the observations took place in the children's groups, there was potential for other children to be included in the video clips and therefore, for them to become the focus of the observation and discussion. Therefore, permissions were sought from parents of all the children in the group and in session one, the group also discussed strategies for ensuring that any children whose families had not agreed for them to be observed, would not be included in selected videos and how to gain on-going 'in the moment' consent from each child being observed, using what Skanfors calls 'ethical radar' (2009) in order to be alert to children's un/willingness to participate.

The principal children involved in the video clips that were discussed in the group sessions were:

GS1: Otto, Cleo, Perse, Alfred.

GS2: Menashe, Ella.

GS3: Alena, Aliyah, Rahima.

GS4: Layla, Cleo, Rocco, Theo.

The children were aged between 5 and 30 months at the time of recording, with the majority being between 12 and 24 months old. They represent a range of ethnic and linguistic backgrounds.

7.2 The Research process

7.2.1 Information sessions

My aim in holding information sessions prior to starting the research, was not only to provide information so that potential participants could make informed choices, but also to ensure that nominated educators had a choice as to whether they participated, and to establish a connection that might engender confidence in participating. Heron and Reason (2001) suggest that a significant amount of time should be allowed at this point in co-operative inquiry, to ensure that all potential participants can gain a good understanding of the inquiry's aims and ethos. They also emphasise the importance of having people who have enthusiasm for the idea to be explored and who voluntarily join the research. As it turned out, this was the case in two settings but in the other two, the setting leader made the decision as to who would participate. But it was clear that even where an educator-participant had been nominated rather than volunteered, the educators soon transformed this into a positive benefit for themselves. As Remi said,

'I'd had no information, … I was just told 'oh by the way, you've been put forward for a project'... So, I was really anxious… today, I'm looking forward to meeting new people from other settings, exchanging experiences. I'm interested in learning more on how I'll be able to contribute to the research and also learn and gain new information.' (RG-S1)

In contrast, for Popi, having all the information, choice and autonomy in joining the group, allowed for more interest and excitement rather than anxiety*:*

'I actually had a different experience, when you came to visit, I felt comfortable because I had had a conversation with my manager so knew what was happening, in fact I was the first one to read your letter and I

said (excited voice and waves arms) 'oh my god, here's a project who wants to do it!'. So, I was a bit excited.' (RG-S1)

Comments made by the educator-participants in sessions 1 and 6 confirm that in terms of enabling confidence in joining the research group, these initial visits were an effective approach. For example:

Leiya*: So, I wasn't given the full thing of what it was going to be about… (after the visit) it was a lot easier to understand the project and what it was going to be about. (RG-S1)*

Shaheda*: Our manager said how she'd met you before, so it kinda made me feel ok… and I kind of knew when you were going to come as well. So, the training did make us feel a bit better. (RG-S1)*

Shaheda's comment also supports my view that my pre-existing relationship with the local early years services had a positive effect on recruitment to the research.

<u>7.2.2 Group sessions.</u>

The group sessions took place monthly over a course of 6 sessions: One introductory session, four VERP group discussion sessions and one review session; each session lasted 2 hours. The number of sessions was influenced by ideas about group process that suggest that the frequency and number of meetings should be determined by a group's purpose and needs in relation to depth of reflection and type of relationships expected (Benson and Benson 2018). So, the number of sessions reflected the typical model of a VERP programme, which usually consists of an introductory session followed by between two and four review discussion sessions (Kennedy et al. 2011).

<u>7.2.3 Becoming a group: Session 1</u>

The first phase of cooperative inquiry is concerned with a group coming together and agreeing their focus and process of exploration (Heron and Reason 2001). In this research, this process continued from the introductory visits into group session one, which not only focused on organisational issues, but also introduced the process of reflexivity through the group reflecting on being there, why they were interested and what they wanted to get out of participating. This gave rise to a lot of discussion about mixed emotions of excitement and anxiety and also of interest and curiosity, which were linked to a shared desire to learn from each other, to share knowledge and experience, and to refresh practice. As Munehra said,

'*I was intrigued to see what as a group we can find out and what we can do to improve our practice. So that's the main thing I'm looking forward to, how we can improve our practice and contribute to the research as well.' (RG-S1)*

Heron and Reason (2001) suggest that this 'contracting' stage of the research process is possibly the most important in terms of establishing the group and should include as much opportunity as possible for participants to shape the agenda and process of the group, as this is likely to impact their engagement and sense of ownership of the research. Similarly, the VERP process usually begins with practitioners identifying an aspect of their practice that they want to work on. In this research though, the overarching research question of physical interactions was already set, but within those parameters, the educator-participant-researchers chose which situations they observed, and there was negotiated agreement between all the educator-participants regarding the timing, location and process of the sessions, which seemed to promote group cohesion and initiate group norms (Benson and Benson 2018), as discussed in chapter 11.

<u>7.2.4 Being a group: sessions 2-5</u>

Heron and Reason (2001) suggest that in phase II of cooperative inquiry co-researchers engage in agreed actions, which in this research entailed gathering the observations and attending the group reviews, and thereby become 'co-subjects', who can notice their practice. This, they suggest, is practical knowing, which links to the third stage of task activity in group processes (Tuckman 1965, Egolf et al. 2013, Furman et al. 2014), which involves the open exchange of relevant interpretations and may also include discussing oneself and other group members. This was seen most strongly as each educator-participant expressed their anxieties about presenting their observations in sessions two, three and four. Sessions 2-5 also included phase III of co-operative inquiry, in which co-subject-researchers become fully immersed in and engaged with their experience. It is in this phase that understanding can deepen and insights emerge (Heron and Reason 2001).

7.2.5 The VERP process

Sessions 2-5 were the VERP video review and Work Discussion sessions. In the VERP process, practitioners video their practice and then select short clips or stills that represent ‘better than usual’ interactions within the Principles of Attuned Interactions and Guidance (PAIG) framework (See appendix 3.4: Principles of Attuned Interactions and Guidance (PAIG) for professional reflection (Kennedy et al 2015, pp.22-23). In the review session, they then reflect on and analyse the chosen clips alongside the Guider (in this research group, the lead researcher) whose role is to support the practitioner by being alongside, attuned to the participant’s experience and meanings, following the ‘seven steps to attuned interaction’ as set out by Kennedy et al (2015), aiming to model an attuned interaction pattern, as well as deepening discussion.(See appendix 3.5 Seven steps towards effective shared review (Kennedy et al 2015, p.25) and the research Group (RG) Review and Discussion videos). And so it was in this research, where the educator-participant-researcher pairs filmed each other in interaction with one of their key children and then chose which clips to submit based on their view of a successful interaction in relation to the framework for observations (Appendix 3.7). Which clips were then brought to the group for discussion was a shared decision between the educator-participant-researcher and the lead researcher.

In this research the video review sessions took place in the whole group rather than individually. Group shared review is described by Kennedy et al (2015) as a reflective team approach, in which the rest of the team also discuss their thoughts about the clips. The focus of discussion in the review sessions was guided by the framework we were using (Appendix 3.7) but evolved organically within this framework according to what the educators raised and/ or what the lead researcher noticed, in accordance with a Work Discussion approach. In this way there is shared learning through the shared perspectives of others in the group (Kennedy et al 2015). However, although the four group video review and discussion sessions followed this reflective team approach, my experience of facilitating groups of educators reflecting on practice, is that there is a tendency to evaluate in more negative, self-critical terms. Therefore, in order to maintain the strengths-based ethos of the method, and to encourage responses that came from self-reflection rather than a judgement of each other's practice, I altered the process slightly to include an additional step between the individual review and the group discussion for the group to make journal notes that focussed on their own responses, feelings and ideas (see appendices 3.6 Group session plan and 3.7 Framework for observations, journaling and group discussion). In addition, in line with the focus of this research, the journaling framework questions also emphasised embodied responses, such as *'Reflections on my physical response'.* This too varies from the usual VERP review, which focuses on the more general aspects of intersubjective communication, as set out in appendix 3.4. In my research plan I had also anticipated that research focusing on physical interactions with children would be likely to raise personal and professional dilemmas. Therefore, the structure I planned for each session allowed time to reflect and journal questions, thoughts, ideas and feelings, at the beginning of each session, following the video observation reviews and group discussions, and at the end of each session. These journal entries were only shared in the group discussions if the educator chose, and the journal extracts shared with me in the research review were self-selected.

The structure of the group review sessions was also influenced by the process used in Work Discussion (Rustin and Bradley 2019). In a Work Discussion group session, one practitioner usually has the whole seminar to present an observation, after which, other group members contribute their insights, and the group leader weaves the discussions together. Every group member is given equal space and attention for their presentation and the observation material is central to the process. It is thought that this creates a sense of camaraderie and interdependence in the group. In this research, each of these aspects were integrated into the group sessions; the length of sessions was based on the time needed for 2 reviews of 30 minutes each and for discussion to take place. In these sessions, I also intended to offer a physically nurturing experience; thereby reflecting an embodied research approach that sees the tangible and intangible aspects of the environment as an integral part of the network of influences on process and behaviour (Ellingson 2017). Also, in consideration of the fact that the educator-participants would have been caring for others all week, it was important to model self-care and ensure physical comfort was catered for. So, hot and cold drinks and snacks were available in the room, and I brought flowers to enhance the environment. Ideally the physical environment would have been a comfortable adult-oriented room with comfortable seating but the group's decision to rotate the venue between their settings meant that this wasn't always possible. Although we were able to use adult spaces with adult-sized furniture for each meeting, the amount of space and arrangements for viewing the videos was not always optimum, which is a common experience in early years settings, particularly for those outside the maintained sector. These considerations of physical space meant that thinking about the impact of these aspects were then threaded throughout the research planning, methods and discussions of data as discussed in chapter 9.

7.2.6 Ending the group: Session 6

The aim of session six was to review and reflect on the work the group had undertaken together. To facilitate this, group members brought their journals, video devices and clips for reference, and I supplied photo stills from each session's video reviews and group discussions to use as prompts, which Ellingson (2017) suggests can 'draw attention to participants' embodied and emplaced experiences through visual representation of bodies' (p.102). The educator-participants spent time completing the review pro-forma (appendix 3.8) and sharing their key points from their experience of the video review sessions and discussing their ideas about what we had been doing in the research group and its impact on their practice and themselves as professionals and any changes that had occurred. The data arising from this session are discussed in chapter 11.

7.3 Data analysis process

In an embodiment framework, data analysis is seen to 'spark lines of flight for sense making' (Ellingson 2017, p.175) as data emerges from an embodied exercise in which data is filtered through the researchers bodily and material 'conversation' with the field and participants. In this research this included combining the lead researcher’s and educator-participant-researcher’s intersubjective interpretations of physical interactions with Ellingson's framework for understanding embodiment; this meant thinking about:

- Body: How intersubjective body actions create meaning
- Others: The construction of body-self through interaction with others and with nonhuman objects
- Lived space: How the environment influences how we act and use our bodies and understand the bodies of others.
- Time: How time is experienced

(Ellingson 2017, p.22)

The materials from which data emerged were:

1. Video observations of physical interactions between educators and children recorded by the educator-participant-researchers and discussed in the research group meetings.
2. Video recordings of each of the six research group meetings.
3. Journal entries made by the lead researcher and the educator-participant-researchers.
4. Review discussions between each pair of educator-participant-researchers and the lead researcher

(See appendix 3.9 Table of data sources).

7.3.1 Assembling and engaging with the data

Ellingson and Sotirin (2020) suggest that using the term ‘data set’ infers a tidy, orderly and fixed view of data, when in reality, materials and data collections are messy, and are in a continual state of flux. Therefore, they offer the idea of ‘assembling data’, which includes the ‘generative messiness’ of bodies, emotions, and movement and in which researchers assemble data through ‘the intra-action of researchers, participants, material objects, and cultural discourses’ (p. 820).

In this research, data emerged; from the video observations of physical interactions between the educator and child-participants, and through the videoing of the VERP review and Work Discussion sessions. These materials were initially assembled separately, in as much as I engaged with the videos of the group sessions and the observation videos at different times, and as separate whole sets. As noted in chapter 6.3, my first systematic engagement with the materials was through a template to code aspects of embodiment and intersubjectivity (see Figs.2 and 3 below). This initial part of my analysis process was reflective of a reductive action in response to the overwhelming complexity of my research material. At this stage, I also transcribed the videos using an A.I. software programme, as a means to manage the amount of information in each one. But the software wasn't able to interpret the participants' voices accurately, seemingly only able to recognise a limited range of English accents and not recognising the children's vocalisations at all. This meant that the children were rendered invisible in the transcribed data, which relates to what Hopper and Quinones (2012) say about working with marginalized populations, that it requires 'research methods that are sensitive to context and which adequately capture their experiences'. So, although I found transcription helpful in identifying some significant details from the video and making me aware of some of the structural aspects of the materials overall, I also found that it privileged the spoken communications over the embodied. Similarly, Thanem and Knights (2019, p.110) identify how usual analysis processes 'tidies up the data that confronts us' and puts things in their place, in a reflection of Douglas's concept of 'matter out of place'; that which can only be found where there is 'systematic ordering and classification of matter, in so far as ordering involves rejecting inappropriate elements' (Douglas1966, p.35) as discussed in chapter 3.3. But in this research, I aimed to allow for intuition, chance happenings and human interactions (McNiff 2017) and the connectedness between them, so, I was careful in my transcriptions to resist the urge to 'clean up' the verbatim texts, leaving the adults' speech and language and children's vocalisations as they were. I then completed the transcriptions by hand, which entailed repeatedly reviewing and stop-starting the videos in short bursts. This had the beneficial effect of both helping my mind to assimilate the content and also, to bring my focus back from the verbal to the physical. In this regard, Fazeli et al. (2023) suggest that video recordings are more evocative than transcriptions, which results in a different relationship between researcher and data, inferring that in the process of transcription, a more distant, intellectual relationship occurs and also that important features of interactions may be lost. So, viewing the videos without sound and amending the transcriptions by adding descriptions of non-verbal communications and contextual information, provided necessary detailed data pertaining to all non-verbal activities, including pauses and silences, (see for example appendix 4.) as discussed in chapter 10, and maintained an emotional and physical connection to the material.

Hopper and Quinones (2012) though, suggest that revealing nonverbal interactions and verbal interactions separately enables one to “see the trees rather than the forest” (p. 559). But my aim was to keep sight of the forest and the trees at the same time by engaging with the non-verbal, whole-body and verbal elements concurrently and inter-concurrently. Therefore, data from the observation videos and transcriptions were subsequently read alongside each other with a focus on the non-verbal embodied communications and interactions, and the intra-action with the more-than-human in both the observation and group session videos. My annotations and memos then, were not only informed by my theoretical understandings, but also reflected my affective and visceral responses to what I saw and heard, and made connections across the materials, as discussed in chapter 11. In this way, the videos were viewed and annotated multiple times in a layered process, in which, I didn’t separate re-viewing, transcribing and annotating. I listened and watched the videos with and without sound as I both transcribed and noted resonant instances of significance to embodiment (Kiverstein 2012, Ellingson 2017) and intersubjectivity (Trevarthen and Aitken 2001), and used freeze-framing to immerse myself in instances of affective and visceral resonance; making reflective notes of my responses and of instances that connected with each other, drawing on my professional skills and experience of infant observation (Miller et al 1987). Ellingson (2017) suggests that ‘hot spots’ in data can spark attention to the researcher’s body and vice versa, so, ‘the hot spot and the researcher's body intra-act and open up space for developing significant insights' (p.153).

In this way, revisiting the video material many times not only enabled me to re-view my understanding of the emergent data but also, the process of slowing down and freezing frames for closer scrutiny revealed the subtlety and complexity of embodied intersubjective communications, and the intensity of emotion in the scenarios. MacRae (2019) argues, that slowing down video, not only draws our attention to movement but also shifts our (adult) perception of time, which may be different to that of children and suggests that the slowing of video materials may open up questions about how a child experiences the duration and intensity of an event, as discussed further in chapters 8, 9 and 10. In addition, I also engaged with both sets of data interactively, as each observation video was also embedded in the group discussion process and I began to see connections between them. In this way, these materials each informed the other and insights were gained through reading them through one another as noted in chapter 6.3.

Fig. 3: First analysis framework for child observations. In this framework the main headings in bold constitute aspects of embodiment and the sub-headings are the aspects of the adult's intersubjective interactions that relate most closely to them.

<table>
<tr><td colspan="2">Kinesics: Non-linguistic / non-verbal communication:
□ Looking interested with friendly posture
□ Being friendly/ playful
□ Returning eye contact, smiles, nodding in response
□ Showing you noticed
□ Enjoying watching the other</td></tr>
<tr><td>Examples</td><td>Notes</td></tr>
<tr><td colspan="2">Haptics: Use of touch
□ Showing emotional warmth
□ Providing help when needed
□ Adjusting the amount of support required</td></tr>
<tr><td>Examples</td><td>Notes</td></tr>
<tr><td colspan="2">Proxemics: Use of interpersonal space
□ Giving time and space
□ Co-operation</td></tr>
<tr><td></td><td>Notes</td></tr>
<tr><td colspan="2">Chronemics: Use of time in non-verbal communication
□ Waiting and actively listening
□ Waiting attentively for your turn</td></tr>
<tr><td>Examples</td><td>Notes</td></tr>
</table>

Temporality: Time and sequences of events • Receiving, then responding • Giving and taking further short turns • Building on the other’s response	
Examples	Notes
Vocalics: Non-linguistic vocalisations	
Examples	Notes
Emplacement: The experience of specific places and things	
Examples	Notes
Vocalics: linguistic vocalisations • wondering about what the other is doing, thinking or feeling • Naming positively what you see, think or feel • Receiving with friendly words; repeating and reflecting back • Checking understanding • Offering choices and making suggestions the other can follow	
Examples	Notes

Fig. 4: Video and transcript analysis template: Research group sessions.

Time / person	Transcript: Vocalics: Linguistic vocalisations	Embodiment: Kinesis: non-verbal communication Haptics: Touch Proxemics: Interpersonal space Chronemics: Time in non-verbal communications Vocalics: non-linguistic sounds	Temporality: Time and sequence of events Emplacement: Places and things Personae: Appearance, identity	VERP cycle: / intersubjective interactions.
Video code				
Notes				

7.3.2 Analysis as part of the research process

Pink (2015) suggests that engaging with material in this way allows analysis to be understood as an inextricable part of the whole research process and not a structured separate phase. And using VERP as a research method, meant that data emerged, and was engaged with throughout the research process. Indeed, my thinking about the video material and what data was emerging, began even before the research group sessions; that is, when first I received the video clips from the educator-participants. For example, my notes from viewing the first clips noted incidences of, '*friendly, playful touch*', and '*open hand gesture - means would you like to?*'. These notes formed the basis of the Work Discussions in the VERP reviews, which in turn suggested key ideas that later crystallized into emergent themes. This endorses Pink's (2015) assertion that fieldwork and analysis are not separate stages of research but that the process of analysis is embedded in the research encounter (p.143). She suggests that analysis is situated within the fieldwork process as the researcher will always be reflecting on their experience in the research environment in dialogue with their theoretical thinking.

Pink (2015) also maintains that from a sensory ethnography viewpoint, even when analysis happens away from the situation researched, the materials themselves are still evocative of the research situation and the process in which the materials were produced. This enables the researcher to re-encounter the sensory and emotional aspects of the research situations in a different time and place. Therefore, I needed to follow Ellingson's (2017) advice to acknowledge how my own embodied experience seeped into the analytical process. This sensory and emotional re-encountering was strong for me and may account for some of my initial reluctance to engage with the data. At that time, following Ellingson's advice to use 'artful' modes in which bodies figure centrally (2017, p.152), I likened the process to wading through mud, specifically to Micheal Rosen's book 'Going on a Bear Hunt', in which I couldn't go over, under or round it, I had to go through it, all while I was pretending I wasn't scared of 'the bear'. But when I did engage with the group session video materials and had the visceral experience of re-living my emotions, I realised that my reluctance was more personal. As Pink (2015) suggests, viewing film can activate memory and thereby influence the researcher's corporeal engagement according to their own lived experience, and watching those videos brought into sharp focus my grieving and stressed state at that time due to a bereavement. Pink (2015) suggests that such embodied engagement helps the researcher to feel their way back into the research encounter and the embodied knowing that is part of analysis.

Pink (2019) also asserts that in viewing footage produced in collaboration with participants, there is an embodied ‘re-touching of relationships, sharing an experiential field of textures and emotions’ that can evoke a ‘synchrony between viewer and viewed’ (p.145), allowing for a parallel, resonant experience between researcher and participant. However, this parallel experience depends on the researcher’s previous sensory experience of what is viewed. This applied to my engagement with the data in the video observations; although I wasn’t present in the actual environment at the time of filming, my lived experience of having been a practitioner in an early childhood setting in the past, meant that I have been directly immersed in many such moments at other times. So, on viewing the observation clips, sensory and body memory contributed to my understanding of what I was seeing. For example, I could feel the strain in Sarita’s arms and back as she rocked Theo to sleep, and I could smell the odour of nappy bins and cleaner that is typical of baby room bathrooms as Remy changed Layla’s nappy. This reflects Barad’s (2007) concept of spacetimemattering, in which she argues that space, time and matter are not separate linear entities, but instead, are in constant communication, entangling with each other, muddling a particular framing of time and producing material-cultural worlds through intra-action.

An embodied approach to data engagement, also means taking account of the sensory aspects of the environment and objects, such as the video clips and recording devices used, and whose ‘presence is neither innocent nor inconsequential’ (Ellingson 2017, p.134). Pink (2015) advises that it is critical for researchers to better understand the implications of such technologies and to have the skills and knowledge to deal with the challenges they may pose, ethically and practically (Pink, 2015). This was certainly relevant in this research. The difficulties I had in sourcing an appropriate device, which then didn’t work properly, resulted in no or poor-quality sound in some recordings. Initially, viewing video without sound felt difficult when there was no possibility of referring back to linguistic communication to clarify meaning. But in fact, this technological difficulty helped me to focus on embodied processes throughout the video viewing. In addition, using one device at first, limited the camera view. But after initial difficulties, using two devices enabled a wider camera view that incorporated all the participants in the research group and so provided data literally from another viewpoint. Another aspect of video recording that fed directly into the group VERP / Work Discussions and thereby into a significant idea in this research is the issue of environmental sound. Using unsophisticated equipment that didn't filter out background noise, helped the group to notice the impact of this aspect of their everyday environments on the children and themselves, as discussed in chapters 9 and 10. Thereby emphasising the importance of attending to the whole soundscape (Pink 2015) and that even incomplete recordings can be of use in research (Thanem and Knights 2019).

7.3.3 Co-creating data

Using VERP and Work Discussion as research methods, meant that data was co-created throughout the research process. However, Pink (2015) emphasises that when data is co-created, there is a process of re-shaping ideas and practices, as new understanding emerge, as I found in the process of assembling and engaging with this research material. For example, my first viewings of the video clips were almost wholly through my existing professional lens. However, sharing part of the research material with my (international) Pikler Case Study group, where I was engaged in Work Discussion as a participant, meant I benefited from the group's multiple perspectives, which highlighted my encultured understandings. Similarly, the insights of the educator-participants in the video review and Work Discussion sessions of their lived experience, formed the key themes of the research findings. As Jordan and Henderson (1995) argue, "Collaborative viewing is particularly powerful for neutralizing preconceived thoughts on the part of researchers and discourages the tendency to see in the interaction what one is conditioned to see or even wants to see" (p. 44). In this way, engagement with this research data was refined and guided by what was resonant or noticeable and what was noted as significant reflected what held meaning for me and the educator-participants. In this way the assembling and engagement with data were subjective and the researcher, participants and data were entangled (Ellingson and Sotirin 2020).

Conclusion

The research process discussed in this chapter enabled a detailed reading of the minutiae of the embodied intersubjectivity of the child- and educator-participants during their interactions, which included thinking about how intersubjective body actions create meaning, the construction of body-self through interaction with others and with the more-than-human, how the environment influences how we act and use our bodies, and how time is experienced, each of which are foci of discussion in part 4 of this thesis.

Part 4: Empirical Explorations

'Hands constitute the infant's first connection to the world... Hands pick him (sic) up, lay him down, wash and dress and maybe even feed him. How different it can be, what a different picture of the world an infant receives, when quiet, patient, careful yet secure and resolute hands take care of him - and how different the world seems when these hands are impatient, rough and hasty, unquiet and nervous. In the beginning hands are everything for an infant. The hands are the person, the world' (Pikler in Roche, 1994:20).

Introduction and overview of findings and discussion chapters

The following three chapters will present the findings from this research in answer to the research questions set out below. They will discuss the emergent data in relation to relevant literature and research and will support the central argument of my thesis that physical care interactions are central to babies and young children's experience in early years settings and therefore should be a central focus of practice.

Firstly, in chapter 8, I discuss the data that were assembled from the video observations undertaken by the educator-participant-researchers of themselves engaged in physical interactions with one or more of their key children in their nursery group setting in relation to research question 1 (RQ1):

1. What elements of embodied interactions might be identified as contributing positively to babies' and young children's experience in early years settings?

This chapter draws on data from ten video observations that were reviewed in the VERP / Work Discussion sessions and with reference to others that were submitted by the educator-participant-researchers but not reviewed (see appendix 3.9 Table of data sources). These data found that in the processes of 'holding the baby', educators and young children use their bodies as powerful conveyors of meaning in subtle and complex ways, particularly in the use of touch and proximity, the qualities of which are influenced by the educators' intentions and which impact children differently and solicit different responses, with affective touch that is attuned to the child's state being a key element of embodied interaction that culminate in 'loving moments' and so positively contribute to young children's experience.

Chapter 9 then draws on data from both the child observation videos and from the videoing of the research group sessions that relate to research question 2 (RQ2):

2. What factors influence educators' approaches to and experience of embodied interactions in the physical care of young children?

These data found that both tangible and less tangible factors in the environment influenced physical interactions between educators and babies and young children and that very influential intangible factors were time, and the educators' capacity for attunement, empathy and self-regulation.

Chapter 10 then discusses the data that arose from the process of the research, and which address research question 3 (RQ3):

3. How might attuned embodied interactions in early years practice be supported and facilitated?

This chapter draws on videos of each of the six research group sessions, which included eight VERP individual reviews (Kennedy et al 2015), the subsequent group Work Discussions (Rustin and Bradley 2019), and the journal notes group members kept throughout the process of the research. The data that emerged from these materials found that educators' awareness of and capacity for attuned embodied interactions can be facilitated through reflexive use of video material in a strengths-based ethos, using experiential processes in a small group of peers, where these enhance educator's professional confidence and self-esteem, and thereby contribute to self-efficacy, which is a key aspect of 'holding the educator'.

The fourth chapter in this part of the thesis, chapter 11, serves as a summary discussion of the key findings of the research and then weaves the threads of the research together and discusses the connections that arose from across the research data between the educator and child-participants' experiences of embodied intersubjective interactions.

As previously discussed in chapter 7, the video materials were viewed and annotated multiple times during the research process both separately and in conjunction with each other, which enabled patterns of linked data to emerge, informing the concluding discussions of connections in chapter

11. Data were assembled in relation to Ellingson's (2017) framework for understanding embodiment, combined with the elements of intersubjectivity that constitute the Principles of Attuned Interactive Guidance (PAIG) of the VERP method (see appendix 3.4: Principles of Attuned Interactions and Guidance (PAIG)), as set out in Fig. 1 in chapter 8 and appendix 3.1: Data analysis template, coalescing in the concept of embodied intersubjectivity, which are the basis of these discussions.

In the following chapters, the most relevant parts of the observation video transcripts are presented within the text, illustrated by still photographs taken from the video data and templates used for analysis and montages of the child observation videos, and group review videos are available through the secure link created by and available from the university.

The educator and child participants interacting in these video clips were:

5. GS1:
   Leiya with Otto (and Cleo)
   Popi with Elenora, Cleo, Perse, Alfred.
6. GS2:
   Chaya with Ella.
   B with Menashe
7. GS3:
   Munehra with Alena
   Shahida with Aliyah, Rahima
8. GS4:
   Remi with Layla
   Sarita with Rocco, Theo

See appendix 1.1 for information relating to the educator-participant-researchers. The children were aged between 5 and 30 months at the time of recording, with the majority being between 12 and 24 months old. They came from a range of ethnic and linguistic backgrounds.

Chapter 8: Embodied interactions and babies' and young children's experience in early years settings

8.0 Introduction

This chapter answers RQ1 by drawing on data assembled from the video observations undertaken by the educator-participant-researchers of themselves engaged in physical interactions with one or more of their key children in their nursery group setting.

- What elements of embodied interactions might be identified as contributing positively to babies' and young children's experience in early years settings?

The key findings from data in relation to this research question affirm that physical interactions are central to babies and young children's experience in early years settings. Data show how, through a reciprocal embodied dialogue that combines body position and proximity, use of hands, touch and gestures, children and educators seek and use connection and use their bodies as powerful conveyors of meaning; of self, each other, and of events and the environment in early years settings. The varying uses of touch, their impact on children's experience and how they are influenced by educator's intentions and the environment, was particularly significant and led to identifying a 'continuum of touch'. The high level of interpersonal and intrapersonal skills and self-regulation required of educators to respond sensitively in their physical interactions with children, also emerged in these data, and identified 'loving moments' as significant in educator-child relationships.

In this chapter, I discuss data in relation to the elements of embodiment; kinesics, proxemics and haptics, as set out by Ellingson (2017), in conjunction with the intersubjective elements of attunement, reciprocity, mirroring and imitation, containment and empathy, and the synchronised timing and turn-taking of proto-conversations, but with an emphasis on the physical dimensions of these, as they manifested in the observation data. Reading the data through the lenses of the elements of embodiment and of intersubjectivity allowed for the emotional and relational aspects of embodiment to be highlighted, and the physical aspects of intersubjectivity to be emphasised, which may otherwise be understated if only looked at separately, and thereby allowed a more holistic understanding of the impact of attuned embodied interactions on children's experience.

All aspects of embodied intersubjectivity were evident across the child observations; however, some observations featured some elements more prominently than others. Therefore, I discuss those primary observations to illustrate that element, and cross reference to other observation examples to support and expand the discussion.

8.1 Embodied interactions: Kinesics

The data presented in this section illustrate how educators and children co-ordinate the kinetic elements of body orientation, posture and gesture with touch, eye contact / facial expression, and related vocalics to create and communicate meaning, and to express self, emotion and ideas in an embodied process that directly impacts children's experience in early years settings. In the observed interactions we see how kinetic communications, which range from very small, barely discernible movements to large obvious ones, convey a huge amount of significant information that express much more than speech can (Doherty-Sneddon 2003). The data that convey this most prominently emerged from observation GS1-L2, where Leiya is trying to persuade Otto (20 months) to come for a nappy change. In Leiya's VERP introduction, she said*:*

'This is me trying to get Otto to change his nappy. So normally, it takes a lot of time. His favourite word at the moment is 'no', I don't want to change it' so this was me trying to persuade him... so at the end I asked him if he wanted to look at a book.'

Context: Leiya is Otto's key person. In the video clip, there is a group of 3 children, Otto, Cleo and Albert, standing at a low table playing with playdough.

Leiya is crouching down on the other side of a low table. She leans across the table and gently prods Otto's tummy.

Leiya: 'Shall we go and change your bum-bum? You've got a poopoo'

Otto is looking down at the playdough he is cutting. He looks serious, then up at her with a slight smile and says something (not audible on recording). He looks at her, making eye contact and then back down, while shrugging one shoulder.

L repeats in a high-pitched, questioning tone: 'You've done a poopoo, shall we go and change your bum-bum?'

Otto continues to look down with a sullen expression. His face is flushed.

Fig.5: Gentle prodding

Fig.6: Shrugging

Fig.7: Cleo intervenes

L tips her head to the side and with a forced smile says to Cleo, 'Otto doesn't want to change his nappy', shaking her head sorrowfully. Otto watches and also shakes his head.

He is looking at her and listening. He looks at Cleo, they laugh together, and Otto jiggles his body. L makes a playful like grimace, baring her clenched teeth and making a 'grr' sound.

Fig.8: Otto's offer

Fig.9: Disruption

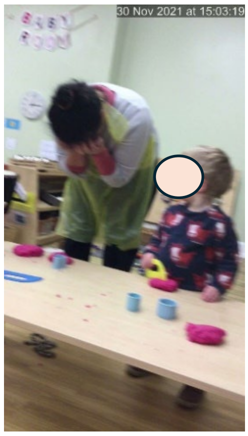


Fig.10: Mock despair

Leiya stands up and moves around the table to stand next to him, leaning down. He watches her move and then looks back down at the playdough.

She then crouches down next to him and makes a gentle tickle gesture on his tummy again. She looks directly at him, and he offers her a piece of playdough.

Leiya stands up and tries to take O's hand, he pulls it away, looking cross and makes a moaning sound. Leiya flops her body forward and makes a 'humph' sound. She covers her face with her hands.

Otto looks up at Leiya. She crouches back down.

Otto makes a waving gesture at another child who is making a banging sound, Leiya to Otto: 'is he too noisy?'

Leiya: 'Shall we take a book Otto?' She turns her body face on to him and makes her torso more upright. 'Shall we go and find a book on the bookshelf?' She points over to the books, he follows her gesture with his gaze, smiles and says 'yes' turning to run to the bookshelf. Leiya smiles broadly.

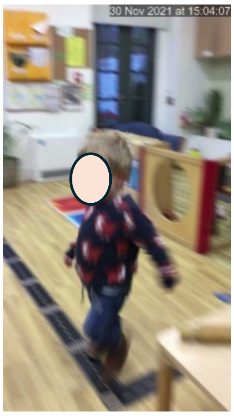


Fig.11: Repair; leaving space for co-operation. Fig.12: Moving towards the task

Video link: GS1-L2: Leiya and Otto (20 months) Nappy change.

This scenario is an everyday example of an educator negotiating a necessary physical care event with a toddler, who is typically practicing his autonomy, self-direction and resistance to coercion (Manning-Morton 2024). Close analysis of their physical interactions suggests how both bodyselves convey their bodyfeelings about the situation. For example, Otto's facial expression appears sullen from the beginning of the observation, to when he accepts the offer of a book three minutes later (except when laughing with Cleo). Also, when he looks at Leiya, he quickly looks down again, and he shrugs his shoulder and shakes his head in refusal, all of which convey his resistance to her request and his apparent discomfort with the situation. At the same time, Leiya shows that, even though this is expected behaviour from Otto, it is still frustrating for her. She makes a playful like grimace, and when Otto rejects her taking of his hand, she flops her body forward and makes a 'humph' sound as if giving up and covers her face with her hands in mock despair. However, she does this in a light-hearted way, and her sing-song tone of voice and playful touch when tickling his tummy seems to indicate that her intention is to keep this situation positive. In so doing, she is also responding to Otto's half-smiles that indicate his own partly playful approach to the situation. So, even though her frustration may be real, Leiya seems to suppress that in favour of negotiating an agreed resolution. She conveys her intention to pursue their task with her body but also that she will 'make space' for his resistance and use humour to reconcile their different agendas. It is likely that both Leiya's and Otto's ability to feel free to express their bodyfeelings in this situation, attest to the foundation of their existing positive relationship.

Leiya also models self-regulation, as, after the 'disruption' to their interaction when she tried to hold Otto's hand and he pulled away, she 'repaired' the connection by coming back down to his level, turning directly towards him and re-negotiating with further offers, thereby manifesting attuned intersubjectivity in her body movements. According to Tronick's Mutual Regulation Model (2007, 2010), such affective "matches" and "mismatches", are a usual feature of attuned interactions and that mismatches or miscommunications, such as Leiya prematurely taking hold of Otto's hand, are useful in as much as they highlight the separateness of the two bodyselves and thereby contribute to awareness of self and other and to developing mindsight. But what is crucial in these miscommunications, is that there is also 'repair'. Quick reparations convey the message that a miscommunication can easily return to a shared intersubjective state (Tronick and Cohn 1989; Weinberg and Tronick 1994). This self-correcting process can be seen when Leiya returns to crouching by Otto's side and gives him her full attention with her body stance and gaze. Otto also seems to indicate his willingness to negotiate and compromise, with his offer of a piece of playdough, which Leiya accepts in an embodied 'serve, receive, return' attuned interaction between them, with the playdough also playing a role in this interaction coming into being.

Stern (1998) recognized that in everyday physical interactions during practical tasks such as this nappy change, affects and intentions are communicated through the pattern of inter-modal fluency of action, voice, and touch, structured by their intended outcome (Trevarthen and Delafield-Butt 2013). And the timing and energy of body movements convey affective value, which enables social and cultural learning about such shared tasks (Stern 2010). In this observation, there are embodied behaviours that seem to help Otto move towards agreeing to be changed.

For example, Leiya moves to his side of the table, thereby removing a barrier between them and physically manifesting that she is emotionally ‘on his side’. She then crouches back down to his level, turns her body towards him and makes direct eye contact, conveying her focused attention on him. She accepts his play ‘offer’ with her hands, which says, ‘I am receiving you’, and vocally empathises with his discomfort with the loud noise, which says ‘I notice and care about you’. At this point, he looks at her longer and looks away as if thinking about what she has said. Whether these embodied communications make it easier for him to accept her (familiar and usually welcomed) offer of a book and happily go to be changed or not, we cannot know, but in these embodied intersubjective interactions, they both express and understand their desire to retain positive regard for each bodyself/other and to negotiate power and control in the situation, as Leiya respects Otto’s autonomy while also holding the frame of the task to be done. In this way, we can see how their movements and utterances are unconsciously coordinated as they participate in each other’s sense-making (De Jaegher and Di Paolo 2007) and dynamically move towards a shared social understanding, in which Otto’s positive sense of self is maintained, as suggested by his proud and lively demeanour on leaving the bathroom after the nappy change.

These data illustrate the subtlety of embodied interactions, and how educators and children co-ordinate the kinetic elements of body orientation, posture and gesture with touch, eye contact / facial expression, and related vocalics to create and communicate meaning, and to express self, emotion and ideas in an embodied process. The data also points to how those physical communications directly impact children’s experience in early years settings, through the educator’s capacity for attuned, self-regulated responses, which support the child’s autonomy and positive sense of body/self.

8.2 Embodied intersubjectivity: Attuned interactions, reciprocity, mirroring and imitation

The emergent shared social understanding seen in GS1-L2, can also be seen in observations GS4-R1: Remi and Layla (16 months) Nappy Change and GS3-M1: Munehra and Alena (24 months): Putting shoes on, where the intersubjective elements of attunement, reciprocity, mirroring and imitation are a key feature. These elements are particularly prominent in observation GS4-R1, where Remi sensitively reads Layla's non-verbal communications, tuning in to the meaning of her actions and vocal expressions and synchronizing her responses according to the meaning and intention of them. For example:

Layla: Abdabdaa. Layla turns her head, seems to notice the figures on the wall and reaches towards the Red Riding Hood figure with her whole hand open. Remi follows her gaze and the intent of her gesture and mirrors the gesture by pointing at the figure.

Fuchs and Jaegher (2009) suggest that when perceiving others, a proprioceptive component is included that connects bodies and allows living things to anticipate the intention of actions, and so both participants in the interaction experience the whole development of the situation, which is co-constituted by their bodily movements. They also explain how this proprioceptive component is central to the 'serve-receive-return' tennis metaphor that illustrates proto-conversations (Trevarthen and Aitken 2001). Fuchs and Jaegher (2009) use Merleau-Ponty's term of "operative intentionality" (Merleau-Ponty 1962, p. 139) to describe a process of incorporation in which each communicator co-ordinates their body to receive the other's communication in a 'unified field of sensori-motor coherence' (Fuchs and De Jaegher, 2009, p.473). They also use the term 'prolepsis', to describe the capacity of living beings to anticipate the goal and outcome of actions and to take into account the effect of their behaviour on the object or event they are interacting with. And in GS4-R1, Remi incorporates Layla's body actions into her responses and anticipates Layla's action goals in the way she places her hands and follows her gaze. She also takes Layla's physical, emotional and mental states into account by altering the pitch and tone of her voice, her facial expression and the timing and vigour of her actions according to her perception of Layla's behaviours, which are themselves responses to Remi's actions, vocalics and perceived mental state. For example:

Layla says 'Ohh / aah' as she lays down, and she laughs, clasping her hands together in front of her.

Remi: Was that funny? Was that funny? (in an excited tone) Remi looks fondly at her and they laugh together, Remi tickles Layla's tummy.

And:

Remi points at the figures: Winnie the Pooh? Cinderella?

Layla: 'uer' she points back to the Red Riding Hood. 'Abda'.

Remi: Little Red Riding Hood?

Layla: 'teb' and kicks her legs

Video link: GS4-R1: Remi and Layla (16 months) Nappy Change

Stern (1998, 2010) discusses such interactions as ''vitality forms'', where the 'tune' of the interaction are contingent responses to the emotional temperature of the infants' communications (Stern, 1998, p. 55). So, an important factor in affective attunement is synchrony or 'intermodal fluency' (Stern 1998, p. 51) in which communicative cues are noticed, processed and responded to, through different sensory-motor modes in a rhythmically coordinated way. This creates a dyadic state of mutual awareness (Stern 1998), that is not divided between two bodyselves but arises from the process in which they are both immersed, and which engenders shared understanding. The meanings in these 'conversations' are conveyed through different sensory-motor modes and Zlatev at al. (2008) propose that processes such as the perception of bodily movements and emotional facial expressions, underlie the beginnings of understanding other's minds

Fig. 13: Remi and Layla attuned intersubjective communication

This is evident throughout GS4-R1, as both Remi and Layla wait and take turns, listening to each other's vocal tones and watching the other's bodily movements and facial expressions in a way that typifies a proto-conversation (Trevarthen and Aitken 2001). In addition, the context of this focused and unhurried 1:1 care event, meant that this observation included the most ‘serve and return’ interactive couplets of all the conversations in the observation clips. But, as Trevarthen (2004) suggests, it is not only the amount of ‘serve and return’ communications that are important but the qualities of the voice tone and actions that convey attuned intersubjectivity, as it is the ‘living emotions’ in the educators voice, language and non-verbal behaviour that are as important to the child’s learning as the ideas they are wanting to transmit. Trevarthen (2004) also asserts that these elements should be as present in the communications between educators and children in early years settings as in parents' communications with babies and young children.

Much of such primary intersubjectivity is unconscious, where two partners intuitively read and anticipate the movements and expressions of one another in a reciprocal process. This is called ‘structural coupling’ by Schore (2001) in which the brains of each partner connect and, when these interactions are synchronised and matched in emotional tone, the brain releases hormones such as oxytocin that reinforce feelings of attachment and relationship by making it pleasurable (Schore 2001). For example:

Layla says: ‘cat’, she wriggles her body.

Remi turns to her, also wriggles her body and head and smiles and they laugh together, looking at each other.

Remi: ‘Cat, is that your cat dance?’ She says with pleasure and laughs.

Video link: GS4-R1: Remi and Layla (16 months) Nappy Change

In this interaction, we can also see the unconscious mirroring of behaviours that are a feature of attuned intersubjective interactions, as Remi physically indicates her understanding of Layla’s communication with her hand gestures and facial expressions and Layla also mirrors Remi’s expressions, as they actively interrelate with human movement in rhythmic patterns together.

For example:

Layla looks down at her pile of figures ‘gaga’, then points at the blank wall. ‘Gaga’. She waves her hand across the wall with a slight shake of her head.

Remi: 'There's no more here, look, it's gone.' And Remi mirrors Layla's action, also waving her hand across the empty space. She is looking intently at Layla at this point.

Layla: 'agon' and she repeats the waving motion as if in confirmation of their agreed meaning of 'the figures have all gone from the wall' and then points to the PP figure 'cat', she says.

Fig. 14: Imitation and mirroring in attuned embodied interactions

Trevarthen (2005) asserts that in reproducing the behaviour of others we create intersubjectivity and that the capacity to imitate and re-present actions is innate as these intersubjective interactions involve a sub-cortical, multi-modal mirror system (Gallese 2003, Ramachandran 2004). These resonance processes in the brain allow infants and young children to recognize that 'those acts are like these acts' or 'that looks the way this feels' and thereby to match self and others' experience from birth, thereby creating a bridge between self and other and engaging in intersubjectivity (Rochat et al 2009) and laying foundations for mindsight and empathy.

Another observation in which unconscious mirroring is evident is GS3-Sh2: Shahida and Rahima: Just woken up / Cuddle, but the mirroring is so subtle and indirect, it would not have been noticed had it not been for the replaying of the clip in the VERP process as discussed further in chapter 10.

Context: Shaheda is sitting in a low adult chair cuddling Rahima while she wakes up from a sleep.

Sh starts to make gentle circles on R's back with the fingertips of her right hand and then strokes R's back up and down. Her left hand is still.

R has her head turned in, resting on Shaheda's chest but makes small wriggling circular motions with the fingers of her hand that is resting on Sh's front, as if mirroring Sh's actions.

Fig. 15: Subtle mirroring of circular hand movements

This example reflects the 'doubleness' of the experience of touching and being touched (Merleau-Ponty 2002), in which the different and separate perceptions of our own hands and the hands of another person, can also be coupled together and so, may change from being the active hands and the passive hands in turn. Merleau-Ponty suggests that situations in which someone else's hands might be experienced like one's own are sources of empathy and also infer reciprocity (2002, p.225). Such a concept of an embodied reciprocity and empathy also relates to significant findings that arose in the research group process, discussed in chapter 10 and is therefore one of the entwined threads of this research discussed in chapter 11.

But in GS3-M1: Munehra and Alena (24 months): Putting shoes on, the mirroring seems to have more conscious intentionality.

Munehra looks in the direction that Alena is pointing and then back at her making an open-handed questioning gesture with her hands, smiling and looking directly at A.

Munehra repeats the questioning gesture and Alena turns around, away from her and drops down to the floor… she sits back on her heels. Her hands look as if she's about to clap, which may be a mirroring of M's gesture.

Alena looks at Munehra, moves her hand up and then out, mirroring the questioning gesture and looking towards the item in question. M repeats her gesture in emphasis.

A repeats the gesture and looks back at M. She brings her hands together in a small clap, shrugging her shoulders in pleasure.

M also shrugs her shoulders, then brings her hands together and clasps them.

Alena also brings her hands together and looks away.

Munehra also looks away and points, they are both smiling. A looks to where M pointed, bringing her finger to her mouth, as if thinking.

A crawls across the floor, then turns and looks back at M. M is walking towards her with her hands in a questioning gesture again.

A mirrors her action, she looks at her hands and shakes her head. M kneels next to her and gestures again.

A mirrors this gesture and then crawls off.


Fig. 16: Imitation and mirroring actions as intentional communication

Video link: GS3-M1: Munehra and Alena (24 months): Putting shoes on.

In this observation, Munehra and Alena are mirroring each other's actions in conscious imitation to more clearly communicate their meanings. We can see in the repetition, slower action and greater emphasis of Munehra's gestures how she is adjusting her responses in consideration of Alena's level of understanding. And she is using her hand gesture in such a way as to indicate that there is space and time for Alena to respond, taking time to receive Alena's imitative gestures, which will be instrumental in supporting her development of mindsight (Siegel,1999). In this way, imitation also serves interpersonal and emotional functions, as babies and young children use it to connect and feel what other people feel. Trevarthen suggests that imitation can act as affirmations, acceptances, or commentaries in a communication and that older infants and toddlers imitate to display and reinforce friendship or affiliation (Trevarthen et al.1999), - as in observation GS1-L2 when *Otto looks at Cleo as Leiya shakes her head, and they laugh together.*

Infants and young children also use conscious imitation as part of learning a new or arbitrary social behaviour (Trevarthen 2005), choosing who, what and when to imitate (Tomasello 1999), as they distinguish between others' emphatic actions and their usual everyday interactions. So, for example, we see Layla repeatedly putting the figures on the wall and removing them again in imitation of Remi's actions and we can hear how her physical mirroring and imitation is becoming vocal echoing as she repeats 'ook' (look), '*agon'* (all gone) and 'cat'.

Data from all these observations point to the subtlety and complexity of kinetic elements of embodiment and related intersubjectivity to create and communicate meaning. These data also indicate the importance of these kinetic elements for children's understanding of self, others, relationship and the world and how they may impact children's physical experience in settings. Data also begin to point to the significance of physical proximity, educator's use of hands, as discussed below, and the influence of the physical environment on interactions discussed in chapter 9.

8.3 Embodied interactions: Proxemics

The reviewed observations were also analysed in relation to the proxemic aspects of intimate space, personal space, social space, and public space (Doherty-Sneddon 2003), and in this section, I look at how even very small adjustments in body proximity convey meaning, intent and affect. In terms of intersubjective interactions, these proxemic aspects relate to the categories of 'giving time and space' and 'co-operation'.

The use of interpersonal space to convey meaning is clear in GS1-L2 discussed above. Leiya accommodates Otto's expressions of autonomy through his resistance behaviours and gives him enough time and space to move to co-operation. She closes the distance between them to show both her positive regard for Otto and also to convey her intention to move towards completing the task. To do this she places herself within what is usually regarded for adults as the 'intimate space', i.e. less than 45 cm from the body. However, she leaves a gap between their arms and slightly leans back, thereby leaving both physical and mental/emotional space for him. Doherty-Sneddon (2003) explains that adults do not apply usual social proximity rules to their interactions with children, often placing themselves inside the child's intimate space. This is usual for very young children, who need a lot of intimate physical care. However, this doesn't mean that babies and young children aren't sensitive to proximity behaviours. In fact, because closeness can bring dominance and violation as well as protection and care, children are acutely aware of what adults' proximity behaviours mean and are learning the proximity rules of their culture from birth. Therefore, because there is an inherent asymmetry in adult-child interactions (size, power, language, understanding), adults must redress this through sensitive behaviours, such as Leiya's crouching down at Otto's level, giving front-on attention and soft eye-contact, to convey a non-threatening communication, as care and benign intent are more clearly indicated in a front-front body orientation (Douglas 1966). In addition, Otto also uses a change in proximity to indicate his intention, although in this case, he moves towards the task rather than the person, as when; *Otto follows her gesture with his gaze, smiles and says 'yes' turning to run to the bookshelf*. In this instance it seems that use of interpersonal space to convey meaning is emplaced as well as embodied (Pink 2015).

So, through combining physical closeness with friendly facial expressions, sensitive touch and gentle or playful voice tone, adults convey to young children that their proximity is benign. Physical orientation can also express intimacy, with front: front orientation expressing protection of the vulnerability of the front body in comforting holding. These embodied expressions are particularly important when children are more vulnerable due to distress. For example, in observation GS4-S1, where Sarita is comforting Rocco who is distressed at separating from his parent, there is almost constant connection between their bodies as she holds and comforts him, as in these examples:

Sarita carries Rocco into the room. His body facing hers and face is close to hers

S turns back to face into the room, holding Rocco on her hip with her right arm around his body and left hand on his leg. His right hand is on her shoulder.

S sits down on the step to the external door, holding him facing her, with her hands to his back and back of his head

As she talks to him, S rests her face / head to his head and gently pats his back.

She puts her hands back on Rs back and head, and continues rocking and stroking his head

S rests her cheek on his head and makes gestures for the song, then goes back to rocking. All this time, R is snuggled into her chest. She kisses the top of his head.

Fig.17: Slight variation in proximity between heads and torsos

Video link: GS4-S1: Sarita and Rocco: Arrival and separation.

This observation also illustrates how peri-personal space, i.e. the region of space immediately surrounding our bodies, may be hand-centred, head-centred, or trunk-centred. Nagayama et al (2015) suggest that the border between intimate and outer spaces for babies is usually a distance of about 1 metre between their head and their parent / carer's hand, as that is the distance within which they usually greet each other. Further to this, it seems from this data that when heads/ faces as well as hands and torsos are in close front: front proximity, it can indicate emotional closeness that conveys care and affection and thereby may offer comfort at times of distress or vulnerability. However, it must be considered that the detail of the distances and behaviours deemed socially acceptable within the proxemic zones are culturally determined. Therefore, this requires the adult to know the child's socio-cultural context very well and to closely read the child's cues to gauge what the child needs at that moment. And, in GS4-S1 we can see how Sarita seems to vary how close their bodies are in very small degrees, according to how she reads Rocco's level of distress. When she senses him calming through the relaxation of his muscles, she creates a slight gap between their heads and torsos, then closes it again when she receives the message from his response that he isn't ready to separate from her.

For example, she *opens her arms and leans back, looking at him, he doesn't respond. S: 'You want cuddles.' She puts her hands back on Rs back and head.*

Negayama et al (2015) identify how mothers and infants dynamically adjust their body behaviours to maintain secure holding and how 'putting-down' is a separation for the child who has previously been held securely. For a child who is already distressed at separating from their parent, another physical separation through being put down, would therefore exacerbate and renew their distress (Bowlby 1973). Sarita shows her understanding of this as she receives Rocco's embodied, affective communications. And, through her perception of, and sensitive response to his body/feelings, she shows the intersubjective component of empathy. However, as with Leiya's embodied communications to Otto, and Chaya's changes to Ella's position in GS2-C2, Sarita's movements also seem to convey to Rocco an intended outcome that they will move on to other activity and into the social proxemic zone at some point. Through drawing his attention to familiar things and people in the environment, coupled with slightly separating their torsos, and using body movements that are more energetic than the comfort of soothing stroking, the embodied affective narrative is 'I empathise with your distress, but soon you will feel better and get involved in the activity of the group'. Importantly however, this is attuned to Rocco's communicated state.

For example, *S: 'ah, where's your friend Cleo? Shall we go and look for Cleo? Yeah? Come on then.' She stands up, holding his now limp body to her and tries to interest him in breakfast and then in play. He looks briefly then turns his head back into her shoulder, she shakes her head. S: 'No? shall we go back and sit down for cuddles?*

In this way, the timing and kinematic process of Sarita comforting Rocco, actualises the embodied intersubjectivity of their interaction, and contributes to his experience of co-regulation in the cultural context of their early years setting (Negayama et al 2015).

In Rocco's proxemic and kinetic behaviours, we also see a young child's typical 'fight, flight or freeze' response to separation from their primary caregivers (Bowlby 1973). This is most noticeable in crying and clinging behaviours but also expressed in apparently contradictory whole-body movements that reject and move away from the caring person but at the same time, seek proximity to them. For example,

Rocco's face is scrunched up in distress. He is reaching towards Parent with both hands, leaning towards her and crying.

He flings himself round, pointing to the room door. Then back to the other side and back to the door. S hoists him up on her hip. He flings his upper body back.

R turns into S's chest in distress. Crying loudly

S sits down on the step, holding him with her hands to his back and back of his head as he flings himself back again.

She is looking at him with a calm expression. R flings his upper body from side to side and turns to point behind him.

She brings her cheek to his head and strokes his back. R flings himself to the side.

He kicks his leg and brings his arm up and wriggles as if trying to get down.

He looks briefly then turns his head back into her shoulder

He is pointing towards the door. R turns back towards the food. S points at it again, he flings himself back and points at the door.

S goes back to rocking. All this time, R is snuggled into her chest.

Fig.18: Rocco's distress manifests in ambivalent behaviours

Video link: GS4-S1: Sarita and Rocco: Arrival and separation.

Rocco's behaviours also show how his feelings are core to his body's processes, his distress at abandonment prompts behaviours that have evolved to promote his survival (Damasio 1999). And Sarita, shows her understanding and acceptance of this through closely reading his physical cues and responding respectfully.

For example, while still in his parent's arms, Rocco rejects Sarita's touch, and she withdraws. *S reaches out and strokes R's head. He shifts away to his right a little. She drops her hand.*

So, these data illustrate how educators' use of bodily proximity and orientation impacts a child's experience of relationship (how well I know you and are empathetic towards you), emotional safety (how sensitively I hold you and for how long) and personal autonomy (how much physical and mental space I make for you) and also convey the socio-cultural expectation of proximity behaviours in an early years setting.

In so doing, data show that benign proximity of heads and torsos and front: front body orientation are elements of embodied interactions that are intended to positively support children and that even small changes of degrees of separation of bodies indicate changes in a child's state or in the educator's intention. Data also point strongly to the imbricated nature of the embodied behaviours of benign physical closeness, with their related intersubjective behaviours of attunement, empathy and containment, as discussed further below.

8.4 Embodied intersubjectivity: Attunement, empathy and containment

Observation GS4-S1, discussed above, also clearly illustrates how Sarita is not only physically holding Rocco, but also emotionally holding him, receiving his distress through her close physical contact and gentle, soothing touch and also verbalising her empathy, *'I know sweetie, I know. I know, mmm*?' thereby physically manifesting her attunement to his mental, physical and emotional state. According to Stern (1998), affect attunement is the way an adult sensitively reads a child's non-verbal communications and vocal expressions and mirrors and synchronizes their behaviours and vocalizations in a way that resonates with the child's emotional and mental state. These key aspects of attunement can also be seen in observation GS4-R1: Remi and Layla (16 months) Nappy Change and in GS1-L2, Leiya and Otto (20 months) nappy change discussed above, and in GS4-S3, in which Sarita is rocking five-month-old Theo to sleep, discussed further below. In these scenarios, through tuning in to the children and engaging empathetically, the educators are also acting a ‘containers’ for the children’s potentially overwhelming feelings. In Bion’s psycho-dynamic theory of ‘container-contained’ (1962), when an infant or young child has physical-emotional sensations that they can’t cope with, they try to get rid of them by expressing them vocally, such as through crying or screaming, or physically such as through frantic movement, screwing up the face or throwing their bodies, as we saw Rocco doing, for example. The attuned adult then takes the feelings into their mind and ‘holds’ them, manifested through reassuring vocalisations and gentle physical holding, such as Sarita’s. In this way, they also process those feelings of distress, excitement or anxiety and transform them into something manageable that the child can take back into themselves. The child then feels mentally and emotionally held and, through the adult’s physical and vocal behaviours, has a real experience of how feelings can be managed and so, through a process of co-regulation, children are then increasingly able to manage and think about their feelings and experiences because they develop confidence that their feelings are taken account of. Such as in Sarita’s reassurances to Rocco above, when Leiya empathises with Otto’s discomfort with a loud noise, and in Remi’s matched response to Layla’s laughter.

Although such scenarios may not be seen as particularly notable in the day-to-day life of an early years setting, the manner and qualities of the physical interactions within them, manifest and convey ideas about the nature of the educator-child relationship and so, constitute fundamentally important socio-emotional-relational learning for the child (Fotopoulou et al 2022), as discussed further in section 8.5.

Therefore, this thesis asserts that educators need to be able to receive and contain the kind of distressed, contrary or contradictory behaviours observed in GS4-S1 and GS1-L2, which depends on their interpersonal and intrapersonal skills and self-regulation; their ability to be open to, and empathise with the child’s physical and emotional communications (Manning-Morton 2006), which is therefore, a key factor that impacts on embodied interactions, as discussed further in chapter 9. And all of which become more perceptually salient through the use of video in the VERP process as discussed in chapter 10.

8.5 Embodied interactions: Haptics

In this section I discuss data that were assembled in relation to the use of touch in the child observation videos. Data identified a range of different types of touch that impacted variously on children's experience, and which related to educators' intentions and were also influenced by environmental factors, as discussed in chapter 9.

The data discussed in this section, particularly highlight the relationship between benign proximity, touch and reciprocal affect in embodied interactions and I identify this as of central significance to elements of embodied interactions that contribute positively to young children's experience, and therefore as having significant implications for the use of touch in communications between educators and young children particularly when engaging in personal body care events.

8.5.1 Affective Touch

In the observation of Sarita and Rocco above (GS4-S1) much of Sarita's empathy and support for Rocco is expressed through the emotional warmth of her touch, which is widely accepted as being the type of touch that is instrumental in supporting social and emotional aspects of self and promoting relationship (Hertenstein & Weiss 2011, Fairhurst et al 2022). Affective touch increases engagement and establishes positive associations with carers thereby promoting and enabling affective and socio-cultural meanings to be shared between child and caregivers (Schwimer and McGlone, 2022, Fotopoulou et al 2022). But affective touch not only serves social attachment, it also provides homeostatic and allostatic regulation (Manzotti et al. 2023), being vital in organising the nervous system. So, through slowly stroking Rocco's head and back, Sarita is providing the kind of gentle affective touch that regulates fear and stress reactivity in infants and young children, as it releases endorphins and oxytocin, which help counteract the threat / fight or flight response (Manzotti et al. 2023). As discussed in chapter 3.2, it is slow stroking that engages the CT fibres, which convey affect, code positive touch, and thereby buffer stress (Morrison 2022). So, the speed of touch, as well as the degree of pressure, determines its calming effect.

Fig.19: Expressing emotional warmth through touch

Such affective, gentle, loving touch was also strongly evident in observation GS4-S3, in which Sarita is rocking five-month-old Theo to sleep.

Sarita is standing holding Theo securely in her arms across her body. Her left arm is supporting his upper body with her spread hand holding his lower back / bottom.

S sits down in a comfortable adult chair, holding T with both arms. She is looking at him constantly with a soft gaze. She rocks her body slowly backwards and forwards.

S brings her right hand up and gently strokes his forehead and nose with her forefinger.

She turns back to T, still stroking his head and watching him carefully.

S stops stroking and gently cups the side of his head with her open palm.

She then moves her right hand and softly pats his thigh rhythmically.

She looks back at T and strokes his thigh, then lightly pats his back with her left hand. She continues to rock, now backwards and forwards, and goes back to stroking his head.

She continues to look at him, rock and stroke his head and then gently stroke his ear.

She brings her hand up to his hand again, stroking the back of his hand with her thumb, then stroking his head again.

Video link: GS4-S3: Sarita and Theo (5 months): Rocking to sleep.

Sarita's gentle touch and holding is even more important in the context of this observation, as Theo was still new to the setting and to Sarita, and the calming sensory information from this affective touch carries messages about his safety, security and survival in a potentially threatening situation where he is separated from his primary carer (Bowlby 1973, Beltran et al 2020, Remland and Jones 2022).

Such affective touch (and body orientation and proximity of heads and torsos) was also evident in observations GS2-C2 Chaya and Ella: Just woken up/ Cuddle and GS3-Sh1 Shahida and Rahima: Just woken up / Cuddle, which both featured children who were waking up from being asleep. Video link: GS2-C2 Chaya and Ella Just woken up, cuddle

For example, in GS2-C2, *Chaya places her arms around Ella, her left hand gently strokes E's back. E has snuggled her head and body forwards into C's chest. C strokes her back again, slightly rocks from side to side and smooths E's hair back from her face with her left hand while her right hand is still holding her. C drops her head down closer to E's, moves her hands to rest on E's back. She continues stroking her back, slowly and gently, with small finger movements as well as her whole hand.*

And in GS3-Sh1, *Rahima is sitting on Shahida's lap, lying face down onto her belly and chest, her head turned to the side. Sh's arm is around her with her left hand resting on R's back, her head slightly tilted down towards her. Sh is making gentle circles on R's back with the fingertips of her right hand and then strokes her back up and down. Sh continues to pat and stroke R's back with circular motions. She gently touches R's cheek and strokes her hair back from her face.*

These data support the idea that slow, gentle, affective touch in everyday caregiving plays an important part in the child's developing awareness of their internal and external physical and affective states, their relationships and sense of self (Beltran et al 2020, Fotopoulou et al 2022). As the qualities of sensations from other-touch are interpreted and internalised as conceptions of self (Bion 1962, Winnicott 1965), personality development is also rooted in embodied experiences. Along with internal bodily feelings and muscle sensation, the processing of tactile information through the skin is the earliest way that infants experience their bodies, so self-touch and other-touch are key in the processes of understanding bodyself (Boehme and Olausson 2022). Therefore, physical interactions, are fundamental to a child's body/self-awareness and self-concept and to bodyself/other relationships, which has significant implications for the use of haptics in communications between educators and young children.

<u>8.5.2. Proxemics + touch = holding</u>

Overall, data from these observations show the close relationship between physical proximity, touch and physical/emotional holding. For example, in observation GS4-S1, Sarita not only uses her whole body to hold and contain Rocco's distress but also uses her hands to communicate her care for him through touch. She gently places her left hand on his back and strokes his hair with her right, places both her hands on his back and strokes him, gently pats his back and cuddles him. These observations also show how close, front: front proximity, combined with friendly facial expressions, sensitive touch and gentle voice tone convey affection and positive meaning to a child. As the autonomic, hormonal, sensory and motoric responses, identified by Schore (2021), constitute the biological components of mental and emotional attunement, containment and intersubjectivity (Stern 1998, Bion 1962, Trevarthen and Aitken 2001), wherein attuned affective touch is seen to support positive attachment relationships between infant's and caregivers (Schwimer and McGlone 2022, Fotopoulou et al. 2022, Manzotti et al. 2023).

In this way, this research suggests that benign proximity, combined with affective touch result in a type of holding that reflects the imbricated processes of emotional and physical holding in Bion's concept of containment (Bion 1962), which constitutes an emotional holding in mind manifest through a physical holding in arms, and emphasises an embodied intersubjectivity.

<u>8.5.3. Proxemics + touch + holding + reciprocal affect = 'loving moments'</u>

In addition, to benign proximity and gentle touch, in observation GS4-S3 Sarita and Theo (5 months): Rocking to sleep, we can see how mirroring and reciprocity of touch and gesture that is synchronised, evokes corresponding feelings and the development of a mutually affective resonance as identified by Stern (1998), Trevarthen (2001) and Schore (2001), and can be seen to contribute to Sarita's bonding with Theo through Theo's corresponding gestures to Sarita's, and Theo's developing trust, as illustrated below.

Theo closes his eyes and brings his hand down; his fingertips are touching her skin, necklace and neckline of S's T-shirt.

He brings his hand up and touches her face, gazing at her. He repeats this gesture, then brings his hand down to rest on her upper chest. His eyes are closed. S continues to rock and stroke his head.

He lifts his hand up, her necklace briefly catching in his fingers, and touches her chin; eyes open, gazing at her. His eyelids droop and his hand comes back down to her neckline.

His hand is still on her neckline / necklace, and as she relaxes her arms, his hand slides down and then grips on to her t-shirt.

S leans back slightly, looking closely at T. She glances up and smiles, then looks back at him with a gentle, loving smile.

Fig.20: Mutual gaze, mutual touch and mutual holding.

Video link: GS4-S3 Sarita and Theo (5 months): Rocking to sleep

Further to this, these observation data show that when these benign responses are combined with reciprocal, synchronised and mutually affective interactions between educator and child, this can result in what, in this research, we came to call 'loving moments', which build relationship. These moments seem to be the culmination of the attuned, intersubjective 'dance' between educator and child who are reading and anticipating the rhythmic movements and expressions of one another (Stern 1998). In unconscious dialogical, reciprocal interactions (Schore 2021), where each participant's perception–action loops are coupled with the other through gaze, touch and sound, and which also interweave autonomic, hormonal, sensory and motoric processes, feelings of bonding and attachment are reinforced (Schore 2001). It is from these moments that infants are gaining huge amounts of information (Rochat et al 2009, Delafield-Butt and Trevarthen, 2015) and is the primary route to understanding self and others and to generating shared meaning (Violi 2009, Lindblom 2009, Fuchs and De Jaegher 2009).

‘Loving moments’ can be identified through close observation of the facial expression of the adult, which expresses living emotion, comprising a prolonged soft gaze that conveys positive regard, a relaxed facial expression with a slight or more pronounced smile in the eyes and lower face, and gentle slow-paced physical touch. The mutuality of eye contact, where the gaze of the child as well as the adult, enters into a dialogue, is key, as the gaze conveys attention and indicates intention and also causes bodily sensation according to its direction and intensity, thereby being a central part of the enactive communication (Fuchs and De Jaegher 2009). In this way ‘loving moments’ are a spontaneous emotional exchange that are manifest through embodied, intersubjective interactions.

Fig.21: Loving moment contributing to relationship

Along with ‘no touch’ policies (Tobin 1997), the expression of love in educator-child relationships has, and is, often seen as taboo and not ‘professional’ in ECCE. In a significant challenge to this discourse, ‘Love’ as a concept and its expression in early years pedagogy has been discussed by Page (2018). Page defines her conception of ‘professional love’ as a reciprocal pedagogic relationship, which is complementary to and thereby builds a ‘triangle of love between parent, child and early years practitioner (op cit.). In this model, Page draws on Noddings’ (2003) ‘ethics of care’ to suggest that ‘professional’ love derives from a deep reciprocal relationship, which results in the capacity to de-centre and emotionally invest in the relationship. Much of Page’s conception chimes with my previous research on 0-3s educator’s emotional relationships with children

(Manning-Morton 2006) but differs to this research in as much as it does not consider the physical expression of such love and therefore the pedagogical application of the concept is nebulous. In contrast, the conception of ‘loving moments’ as identified in the observations above renders these interactions and relationships tangible and thereby more realisable in practice as they can explicitly be observed and physically experienced. In addition, a concept of ‘loving moments’ allows for other feelings too, the recognition of which forms part of self-awareness and therefore of when embodied interactions become misattuned, as discussed in the next section.

8.5.4. Playful / Stimulating Touch

The observational data show how soothing touch can transmute into more stimulating playful touch when the intention or task of the educator is to wake the child, rather than help them to sleep. For example, in GS2-C2, after cuddling her for a while, Chaya lifts Ella to sit sideways on her lap, thereby creating a degree of separation between their bodies.

Chaya tucks E’s hair behind her ear, tickles E’s tummy with her forefinger; tapping it up and down and then wriggling all her fingers on E’s chest 3 times, taps E on her nose gently with her forefinger and slightly jostles her knee.

In this observation and others, these more stimulating actions were usually accompanied by the educator watching the child’s response and, where the child did not respond positively, or at all, the educator usually returned to more soothing actions, indicating an attuned response, in which the educator waits, watches and receives the child’s response in the form of their physical cues. For example, in GS3-Sh1, Shaheda alternates her slow, stroking actions with more excitatory actions of gentle tickling and beginning to play ‘Peep-bo’, as follows.

Shaheda grasps Rahima’s forearms, one in each hand and brings her hands up to her face, then opens them wide. ‘Peek-a-boo’, they are both smiling but R pulls her arms out of Sh’s grasp and turns her body away. Noticing this response, Sh smooths R’s hair back again and tilts her head around to look R more directly in the face. ‘Are you still tired?’ R looks away over Sh’s shoulder, Sh pats her cheek then rests her hand down on R’s knee, thereby de-escalating the interaction.

But a few seconds later, she grasps Rahima’s forearms again, opens them wide and waves / shakes them.

Do you want 'row your boat'? R is still looking away, twists her hands out of Sh's, who opens her hands, circles them around to reposition her grasp; now she is holding R's hands from underneath.

Sh: 'Ready, shall we do some singing?' Sh is looking at R closely and R is looking at her, then looks away and seems to try to remove her hands again but Sh starts to play 'Row the boat' instead. She sings the song and pulls their hands and arms back and forward, causing R's upper body to rock. R's body seems tense as if she is resisting the motion. She is looking away. Sh continues to sing, R looks at her with a slight smile. Sh rocks her from side to side and R seems more relaxed and is smiling. But she then looks away, uncertainly.

Video link: GS3-Sh2: Shahida and Rahima: Just woken up / Cuddle

Fig.22: Stimulating playful touch

Here, it seems as if the educator capitalises on the positive aspects of the child's cues, as they fit with her intention to move the child on to an awake state, and the child's cues of reluctance are either missed or overridden by the educator, and consequently the child may be prematurely cajoled into activity, as follows.

Sh prods her tummy, tickles her cheek and then lifts her hands in hers, rocking again but a bit more gently. By the end of the song, they are both laughing and Sh tickles R's cheeks again. But R again looks away and brings her right hand up to her ear. She turns and yawns, her hands resting loosely on Sh's lap. Sh strokes her cheek then rests her hands on R's knees. Sh: Still tired? R looks at Sh then away to her left and brings her right hand up to her ear again. Sh tickles her tummy to bring her attention back. R looks at her. Sh squeezes her legs, tickles her cheeks, then cuddles her in.

Video link: GS3-Sh2: Shahida and Rahima: Just woken up / Cuddle

These kinds of stimulating physical interactions are even more emphasised in a situation where the educator is trying to keep the child from falling asleep, as in GS4-R3 Remi and Cleo: Falling game. where

Remi was playing a rough and tumble, ‘falling’ game with Cleo, which, she reported, is a familiar and enjoyed game they often played. Video link: GS4-R3 Remi and Cleo Falling Game

R is sitting on a low chair. C is sitting astride her right leg, falling backwards with her head tilted back. R is holding both C’s hands and tickling her tummy with her right forefinger. She is smiling and making an 0 shape with her mouth. R pulls C back up by the hands. As C’s head comes up, R makes a surprised face; mouth and eyes open wide and then brings her face to C’s. C jerks her head and upper body back. R leans slightly back to counterbalance. She is watching C carefully. After repeating the falling back and coming back up again, R asks her ‘More? Or no?’ watching her face. C throws herself back again and R repeats the falling back and tummy tickling. Remi repeats this ‘checking in’ and follows C’s lead, slowing and calming down her actions, when Cleo cuddles into her.

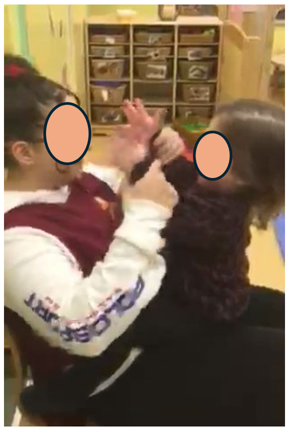


Fig.23: Remi mirrors Cleo’s expression Fig.24: B Keeps her face straight

Video link: GS2-B1: B and Menashe: Row the boat

Although Remi has the intention in this interaction to keep Cleo awake until her parents arrive to collect her (at their request), she is still co-ordinating this with Cleo’s cues, de-escalating the excitement by slowing and calming her voice and movements in response to C’s move to ‘snuggle in’, and following her lead by asking if C wants to continue. As Stern (1998) describes an infant’s tolerance for stimulation may increase as they mature but each child at each phase will have optimal levels of stimulation, below which they will seek stimulation and above which, they will avoid stimulation (p.233) and so, sustained high arousal of the central nervous system through over-stimulation results in negative affect (Sroufe 1996). The capacity of a young child to modulate arousal is preceded by a history of visceral experiences of arousal escalation and de-escalation in which the adult offers tolerable levels of stimulation and protects them from excessive arousal. They do this through attuned co-regulation, in which the child can impact the situation, and through de-escalating arousal stimulation when it threatens to overwhelm the child's capacity (Sroufe 1996, Shanker 2012). So, an attuned educator alters the pitch and tone of their voice, their facial expression and the timing and vigour of their actions, according to whether the child's arousal level is manageable for the child or not. For example, when a game changes from being exciting to worrying and the child indicates discomfort or disengagement, the attuned carer will de-escalate the intensity of the interaction by pausing the game until the child indicates they want to carry on. But if interactions are regularly unsynchronised or mis-attuned, where the adult frequently misses or ignores the child's signals, infants and young children become stressed and their feelings of anxiety increase and become a chronic state (Tronick et al 1979, Tronick, 2007). It is Remi's attunement to Cleo's level of arousal, her de-escalation at key points and the subtle differences of the types of touch between Remi and Cleo, that differentiate this example of a 'falling' game to that observed in GS2-B1: B and Menashe: Row the boat discussed below.

8.5.5. Controlling / intrusive touch

In observation GS2-B1 B and Menashe: Row the boat (viewed in group session 5 at Ch's request but not part of a VERP review) the educator very much leads the interaction, both physically and verbally and does not display the same level of attunement as Remi in GS4-R3. In this observation 'B' is sitting on a chair with Menashe on her lap. He is facing her with his legs astride. Although she is watching his responses, at times they are not received, for example, M's apparent efforts to be affectionate seem to make B uncomfortable and she repeatedly removes his hands and diverts him by instigating a vigorous hand pushing action and then the falling game, in a response that may reflect Piper and Stronach's idea of 'no touch' practices that perpetuate feelings of shame, disgust and embarrassment in relation to physical interactions. Most pertinently, the quality of B's actions was more sudden and jerkier than Remi's and consequently appeared rougher, and her facial expressions were less expressive, even blank at times, which are indicators of misattunement (Tronick et al 1979, Tronick, 2007) and not reflective of the excitement of the game, as Remi's were in GS4-R3.

For example, *B opens her hands, and they push their hands against each other. M pushes forward and she pushes back in a very quick, forceful motion. On the second push, she grasps both his hands / wrist in hers fully and shakes back and forth in several quick bursts of movement... She grasps his wrists again and rocks him backwards and forwards very rapidly several times, with enough force to make his head jerk back and forwards. His arms seem quite rigid. They are both half-smiling.*

The kind of fast or brisk physical interactions that appear to be part of controlling or intrusive touch, also appear in some of the observational videos (not reviewed) of caregiving situations such as nose wiping or hand washing, where moving and manipulating the child's limbs or body position, without reference to the child's cues, aims to accomplish the task quickly. This may result in children's overt expressions of negative affect, such as protesting, but may also include more subtle cues such as gaze aversion or passive compliance.

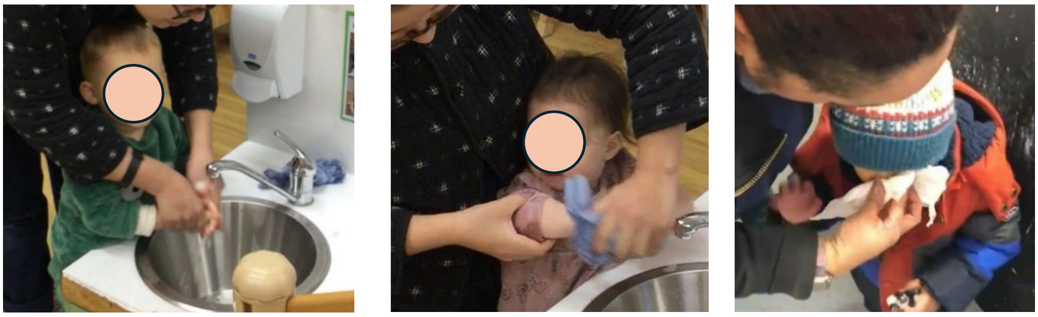


Fig.25: Passive compliance in response to brisk actions.

8.6. Conclusions in relation to touch

Data from these observations conclude the following: Firstly, affective touch that is attuned to the child's state and intends to soothe, comfort or reassure is instrumental in supporting children's positive body/feelings, body/self and body/self/other relationships and is therefore a key element of embodied interaction that may positively contribute to young children's experience. The well-documented benefits of affective touch to babies' and young children's wellbeing are identified above and in chapter 3.2, and Peláez-Nogueras et al (1997) found that rhythmic stroking, which involves gently stroking and circular movement using the palm of the hand or the fingertips, resulted in more eye contact, smiles and vocalisations in children's responses.

Secondly, the use of touch to connect with a child or to bring a child's attention to self, other or aspect of the environment, such as in GS1-L2, where Leiya gently and playfully prods Otto's tummy. Playful or connecting touch to gain a child's attention is also thought to be beneficial in terms of stimulating awareness of others' intentions, joint attention and moving from primary to secondary intersubjectivity (Delafield-Butt and Trevarthen 2013; Trevarthen and Delafield-Butt 2013). However, although it is often assumed that different types of playful and connecting touch have interchangeable meaning and function, Peláez-Nogueras et al. (1997) identified that these types of touch can result in more or less positive or negative affect and may evoke more or less infant attention. In this regard, this research introduces a view of 'playful' or stimulating touch as not always benign in effect and confirms Peláez-Nogueras et al's (1997) findings that tickling and poking type touch can produce avoidant responses, such as head and gaze aversion. This aversion can be reflected in negative affect, and protesting, crying, and gazing away behaviours, all of which are usually obvious to caregivers and, in this research data, were seen to be received and respected by the educators in the majority of instances.

However, reading a very young child's responses to 'playful' touch can be difficult due to the mixed cues they might display. For example, tickling type touch can cause laughter and twitching reflexive movements, even when the child does not welcome it (Peláez-Nogueras et al. 1997). Therefore, this research agrees with Peláez-Nogueras et al's (1997) suggestion that it is important to differentiate between different types of touch such as patting, stroking, poking and tickling, and to consider children's different responses to them.

Fig.26: Shrugging, laughing and ‘snuggling in’ as ambivalent and ambiguous responses to tickling.

Such ambivalent and ambiguous responses were evident in GS3-Sh1, in which, as well as pulling her hands away, turning her body away, averting her gaze and snuggling in, Rahima also smiles and shrugs at being tickled and has a kind of fixed grin on her face during the ‘round and round the garden’ finger rhyme and briefly laughs during the ‘Row your boat’ song play with Shaheda.

Rahima looks at Shaheda with a slight smile. Sh now rocks her from side to side and R seems more relaxed and is smiling.

Sh slightly jogs R up and down. R is looking at her expectantly. Sh lifts R’s arms up and shakes them. They are both laughing. Sh drops R’s hands and prods her cheeks fondly with her forefingers. R brings both her hands over on top of Sh’s. She looks away and brings her right hand up to her ear.

Because children’s responses to tickling type touch can be mis/interpreted as enjoyment, Peláez-Nogueras et al (1997) recommend that caring adults refrain from this kind of touch. This view is shared by Magda Gerber, who adapted the Pikler approach in the USA to become RIE (Resources for Infant Educators) (Gerber 1997). She says: “Whenever I hear or read statements that encourage grown-ups to initiate certain activities that "stimulate" the infants to respond …, I feel uneasy. I consider tickling a young baby disrespectful. I prefer to be responsive to an infant's initiations rather than stimulating and exciting the infant." Here, Gerber is particularly critical of stimulating touch to change a child’s emotional or physical state.

She says, ‘Tickling is physically exciting and is often used by adults in order to change a sad or tired child into a giggly one. Sadness, discomfort, frustration -- they are all valid human emotions. Why would we want to suppress them?’ (p.72)

Therefore, although this thesis recognises that there are some gentle tickling type touches that convey affection and connection, it would argue that educators need to be able to identify the subtle differences of the quality of touch within those types, such as degree of firmness, speed and evenness and that using touch in this way should generally be avoided in ECCE. It is also important for educators to refine their perception and understanding of the possible different meanings of children’s embodied responses. For example, it is usually straight forward to interpret a child’s pulling away or body and gaze aversion as discomfort and refusal, but less so to consider a child’s smile or laugh as maybe a placatory or ‘fawning’ threat response (Nelson 2025), rather than enjoyment. In addition, this research suggests that responses not usually considered as avoidance such as shoulder shrugging and ‘snuggling-in’, as seen used by Otto, Rahima, Ella and Menashe in these observations, should be noticed and interpreted carefully by educators as they too may indicate possible negative, or at least ambivalent, responses. It is also possible to surmise that children’s ambivalent responses to adult’s uses of touch, are not just expressions of compliance or non-compliance. They may also manifest the child’s internal struggle between autonomy and social belonging, between wanting to be their own person and follow their own self-chosen path and wanting to retain their carer’s good favour. They may also represent a child’s awareness of the feelings and motives of others and of developing what Bowlby called a ‘goal-corrected partnership’ with their carer (Bowlby 1988). In what is an asymmetric relationship, usually the adult carries the responsibility for the equilibrium of the relationship, but where an adult is not attuned to the child, the child may have feelings of responsibility towards the relationship and therefore to ‘repair’ misattunement (Lieberman 2017, Karen 2024), as is perhaps the case in Menashe’s kissing of B’s hand in GS2-B1.

Fig. 27: Shoulder shrugging, ‘snuggling-in and placatory affection as possible avoidance behaviours.

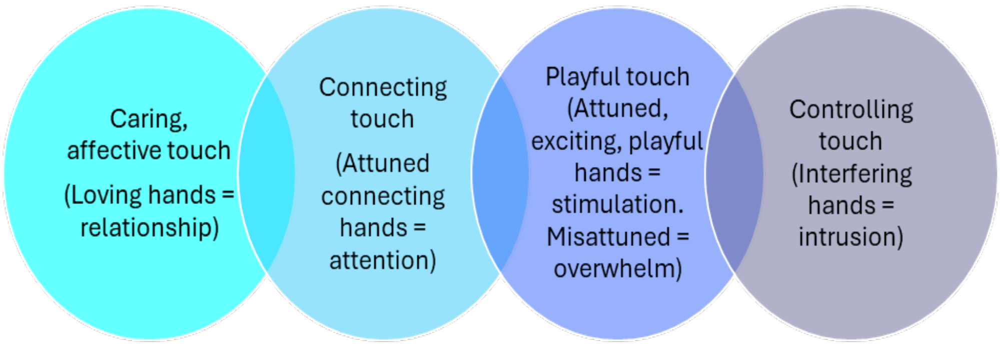
Thirdly, playful or stimulating touch can be seen to be used as a strategy for managing children’s physiological states according to the adult’s agenda, such as tickling touch to the face or tummy, as observed in GS2-C2, GS3-Sh1 and GS4-R3. This reflects either the educator’s response to parent’s needs or requests, and / or a possibly unconscious response to the pressure of time or the needs of other children in the group (embodied narrative: ‘I need you to be ready to rejoin the group and play as I have other things I need to do’), reflecting Leavitt and Power’s (1997) concept of ‘body-time’ in ECCE, that is, practices and schedules that exert control over children’s physical needs (discussed further in the section on Chronemics and Temporality in chapter 9). This intention to move children on to a different state or activity may then lead to playful stimulating touch to transmute into more controlling touches that are used to encourage compliance.

8.6.1 A Continuum of touch

In summary, this thesis proposes a continuum of different types of touch with young children, from caring, to connecting, to playing, to controlling, which subtly shift in quality as interactions unfold, and which overlap according to the adult’s intention. It also suggests that these different qualities of touch impact children differently, solicit different responses and thereby indicate what adult’s hands might mean for a child, as set out in Fig. 28 below.

Fig. 28: A continuum of touch in relation to adults' intentions

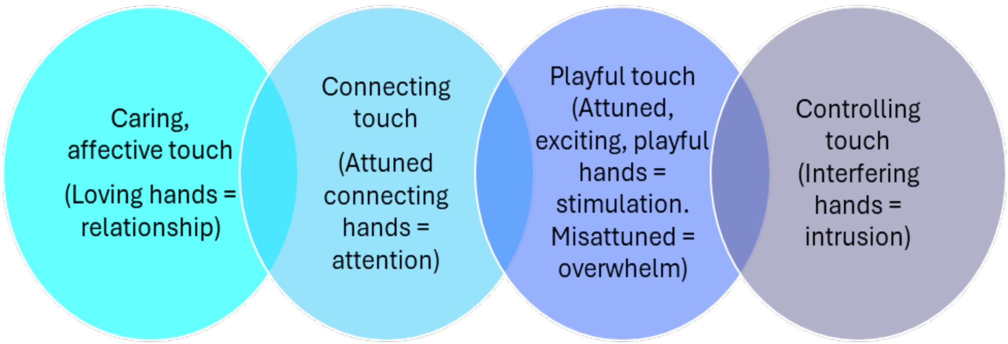
Descriptor of type of touch **Degree of firmness, speed and evenness**	Slow, gentle rhythmic stroking. Circular or light, soft stroking touch using the palm of the hand or the fingertips. Gently bringing heads together. Slow, smooth rocking movements. Close proximity of torsos. Front: front orientation	Gentle prodding. Soft stroking of face or head. More active hand actions with fingertips or palms. More distance between torsos. Front: front or front: side orientation	More vigorous prodding. Tickling / poking. Gentle jostling of bodies and limbs. Varied distance between torsos. Varied orientation	More vigorous tickling / poking. Manipulating the child's arms, hands, body, legs using sudden, rapid or jerky movements. More vigorous jostling / rocking. Random adjustment of the child's hair / clothes/ limbs / body position. Varied distance between torsos. Varied orientation



Adults' intentions/ behaviours	To soothe, care, comfort. Attuned to child's responses	To bring the child's attention to aspects of the environment / themselves and others. Attuned to child's responses.	To engage the child. To stimulate a response. To change a child's physical / emotional state. Attuned /mis-attuned.	Adult's need to move child on to another activity. To encourage compliance or gain child's attention. Mis-attuned to child

Fig. 29: A continuum of touch in relation to children's responses and impact

Child's response	Relaxation More eye contact smiles and vocalisations. Reciprocal gestures	Positive responses: eye contact, smiles, vocalisations. Ambivalent responses: shrugging Avoidant responses: head and gaze aversion.	Positive responses: eye contact and reciprocal gestures. Ambivalent responses: twitching movements, 'snuggling in' and shrugging Avoidant responses: head and gaze aversion, pulling hands away. Negative affect: protesting.	Ambivalent responses: twitching movements, 'snuggling in', shrugging. Avoidant responses: head and gaze aversion, pulling hands away. Passive compliance. Negative affect, protesting, crying.



Impact	Soothing. Reinforces social attachment. Provides homeostatic and allostatic regulation. Regulates fear and stress reactivity. Builds the foundations of co-regulation.	Stimulating / relational. Stimulates awareness of others' intentions. Reinforces joint attention.	Stimulating / excitatory. Stimulates awareness of others' intentions. Reinforces joint attention. Reinforces social rules and belonging. Loss of bodily integrity, autonomy and control.	Stimulating /inhibiting. Negative affect. Loss of bodily integrity, autonomy and control.

Other types of hand use were observed that are not included in this graphic as they did not always include direct touch but were part of the embodied interactions and carried a lot of meaning in the educator-child embodied communications.

8.6.2 Helping hands

Many examples of educators' hands helping children could be seen in the observations, such as Remi holding Layla's hands to help her climb the steps to the changing mat (GS4-R1), or Leiya and Chaya helping Otto and Ella to select books (GS1-L2, GS2-C2). In most instances of 'helping hands' the educator's intention is to support the child in achieving or accomplishing a certain action or task. Sometimes this is a self-chosen task and sometimes an adult -led action, and the degree to which the adult's hands might be supportive or interfering seems to be influenced by the educator's views of the child's capabilities and their role as an educator, and the environment or activity concerned.

For example, Leiya's helping gesture is limited to slightly pulling a book forward, allowing Otto to complete the action of choosing. Whereas, in GS2-C3 Chaya and Ella playing with construction Chaya can be seen to be showing Ella how to use some square magnetic construction pieces, according to Chaya's own idea of making a tower of cubes.

Throughout this play, Chaya leads, handing Ella one piece at a time to add to Chaya's tower. When pieces fall, E then drops them deliberately and Chaya 'joins in' by squashing the tower down with her hands, but when E imitates this, trying to squash Ch's new tower, Ch pushes her hand away, wanting her to wait until she has completed the tower, only then is E allowed to break it. It is only when Ch is distracted by the camera, that E autonomously joins pieces of the toy together.

Video link: GS2-C3 Chaya and Ella playing with construction

From this observation data and others also not discussed in the VERP sessions, it seems that where educators perceive a situation as a learning opportunity, especially when it involves a play object, they use their hands in a more directive and interfering manner. In her research into effective interactions with young children, Fisher (2016) identifies that educators often 'interfere' in children's self-directed learning, 'hijacking it for their own ends' (p.xiv) to 'teach' what they believe needs to be taught, in the belief that children learning alone are missing out on what they think needs to be learned. I suggest that these beliefs and the actions observed in the research data reflect the current pedagogical emphasis on adult-led learning in early childhood in the UK (EYFS DfE 2024). This contrasts with the Froebelian approach of freedom with guidance (Bruce 2021) and the Pikler approach to autonomous self-initiated activity in play (Kallo and Balog 2005), in which constant adult involvement in children's play is seen to detract from the child's autonomy and competence. Instead, Piklerian practitioners watch and pause before intervening or interacting in children's play. This gives children time to problem solve, think and respond, and shows trust in them as competent people. The educator's role is one of active non-participation, in which they are attentive and present, sensitively engaging with children when invited (Tardos 2007).



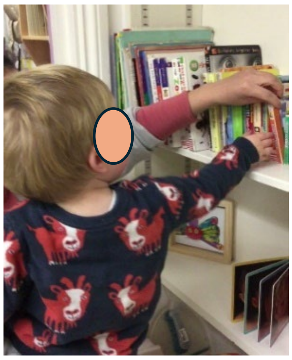


Fig.30: Helping hands; - supporting or interfering?

<u>9.6.3 Explaining and offering hands</u>

Another, frequent use of hands in the observations was an open-handed gesture, held palm up in front of the body in an offering or questioning gesture. In contrast to 'interfering' hands, this gesture seems to convey support but leaves space for the child's choices and thoughts.



Fig.31: Explaining and offering hands

8.7 Conclusion

The data discussed in this chapter confirm that bodies are powerful conveyors of meaning in early childhood settings, in terms of how educators use their bodies, how babies and young children express themselves through their bodies, and how children and educators come to understand each other's embodied communications in a reciprocal body-dialogue. The data also highlighted the subtle, and often unconscious, detail of these embodied communications in everyday practice.

In this regard, how educators use their hands in relation to touch was a significant finding and so this thesis proposes a continuum of types of touch, ranging from soothing, affective touch, to connect with and gain children's attention, playful touch to make connection and to stimulate, but which may also lead to touch that controls or manages children's physical and emotional states. These types of touch are influenced by educators' intentions and impact variously on children's experience. These findings contribute a new perspective on physical interactions in early years pedagogy and have significant implications for educators' professional skills and knowledge development.

Of central significance to these findings was the identification of 'loving moments' in educator-child relationships. These were found to arise when benign proximity, affective touch and attuned containing responses were combined with reciprocal, synchronised and mutually affective interactions. Such moments are understood to underpin relationship and therefore constitute a key element of embodied interaction that positively contribute to young children's experience.

In summary, this chapter identifies the following key findings in relation to RQ1: What elements of embodied interactions might be identified as contributing positively to babies' and young children's experience in early years settings?

- The co-ordination of kinetic elements of body orientation, posture and gesture with touch, eye contact / facial expression, and related vocalics support the creation and communication of shared meaning, which can enable children and educators to express and understand self, emotion and ideas in an embodied process.

- Educators use a range of types of touch across a continuum, which may subtly shift according to the adult's intention and impact children differently and solicit different responses.
- Affective touch is instrumental in supporting children's positive body/feelings, body/self and body/self/other relationships, and is therefore a key element of embodied interaction that may positively contribute to young children's experience
- Playful or stimulating touch may not always be benign, particularly if used as a strategy for managing children's physiological states according to the adult's agenda and can result in ambivalent or avoidant responses in children.
- Embodied behaviours are imbricated with their related intersubjective behaviours: Benign physical proximity and affective touch are imbricated with emotional holding
- The attuned embodied 'dance' of benign proximity, affective touch and reciprocal synchronised and mutually affective interactions culminate in 'loving moments', which positively contribute to relationship

Data from the child observation videos also highlighted the challenge for educators in emotionally containing the ambivalent feelings and sometimes ambiguous behaviours expressed by children and the depth of understanding, observation and reflection, and high level of self-regulation required to sustain attuned interactions. Therefore, chapter 9 discusses this further, as a key factor that may influence physical interactions with babies and young children. Chapter 9 also draws on this data to discusses other factors that impact embodied intersubjective interactions.

Data arising from these observations also drew attention to the power of video to make noticeable children's experiences of physical interactions that may not usually be noted as particularly significant in day-to-day practice. So, chapter 10 discusses how using video might support educators' awareness of physical interactions further.

Chapter 9: Factors Influencing Embodied Interactions between Educators and Babies and Young Children

9.0 Introduction

This chapter addresses RQ2 by drawing on data assembled both from the video observations of educator-child interactions and from the videos of the six research group sessions.

RQ2: What factors influence educators' approaches to, and experience of, physical caregiving interactions with young children?

Reviewing both these sets of data together, using Ellingson's (2017) framework of embodiment conjoined with intersubjectivity, as in the previous chapter, but with a focus on the agential nature of material objects and forces, enabled a detailed reading not only of the physical interactions between the child- and educator-participants but also of the factors that influenced those embodied interactions.

As regards the educator-child observations, the data indicated significant findings in relation to tangible aspects of the physical environment, such as furniture and objects, the noise levels in the environment and the number of children present, and less tangible factors such as the pressure of the number of tasks educators have to attend to and therefore pressures of time, as first raised in chapter 8. Data also found that an intangible, but very influential factor is educators' capacity for attunement, empathy and self-regulation. As regards the videos of the group process, significant issues also emerged in relation to tangible aspects of the physical environment, and the impact of 'actants' or inanimate objects on the group process, and of time, both in terms of the chronemics of intersubjective interactions and of the temporality of events, which are discussed further in chapter 10.

Data in relation to these factors emerged through an embodiment framework that included the element of emplacement, i.e. lived space and the experience of places and things, and time, both chronemics and temporality. In relation to intersubjectivity, the elements of PAIG (See Fig.1 / appendix 3.1), such as 'waiting and actively listening', 'waiting attentively for your turn' and 'receiving, then responding' gave rise to data in relation to educators' capacity for attunement. However, there are no elements of PAIG that relate to emplacement, therefore, combining the PAIG and embodiment elements as I have done in this research, effectively allowed for data in relation to emplacement to emerge in the VERP reviews and contributed to the holistic approach of this research.

9.1 Factors in the Environment: Furniture and objects

Data that emerged from the video observations of educator-child interactions show that intra-action within and across the environment is central to the scenarios discussed and has a direct and indirect impact on embodied interactions. For example, in GS1-P5: Popi Singing with Group and GS3-Sh2: Shahida and Aliyah Sharing a Story, the song cards, instruments and story book all directly influence the educators' and children's body movements; holding, dancing, gesturing, as well as their bodies impacting the objects; holding, dropping, turning and moving them around. In these observations, the intra-action is generative; the children choose and use the objects freely and the objects both suggest and match their interests. This is particularly the case in GS4-R1: Remi and Layla (16 months): Nappy Change, where the wall behind the changing table and the laminated figures stuck to it, and the wet wipes / gloves etc., are all active participants in the event as they provoke, support and are an integral part of their embodied intersubjective interactions coming into being. For example:

Layla notices the storybook illustration figures displayed on the wall

Remi pulls at the figure to unstick it from the wall and gives it to Layla.

Layla moves the figure to her left hand and presses it against the wall.

She then pulls it away again and holds it in both hands, looking at it intently.

She looks around then points at her changing box containing the wet wipes. Remi picks them up and shows them to her, 'these are your wipes', Layla looks, 'and your nappy'. Remi shows her the nappy.

Layla begins to try to take one out of the packet. Remi holds the packet still while Layla pulls at a wipe with one hand. It is stuck, R eases it out a bit with her finger,

Layla: 'Adada'. She reaches for the wet wipes again; Remi holds them up for her to try again to remove one. They are tucked inside. Remi pulls one to the opening then waits for Layla to pull it out. Layla pulls it out.

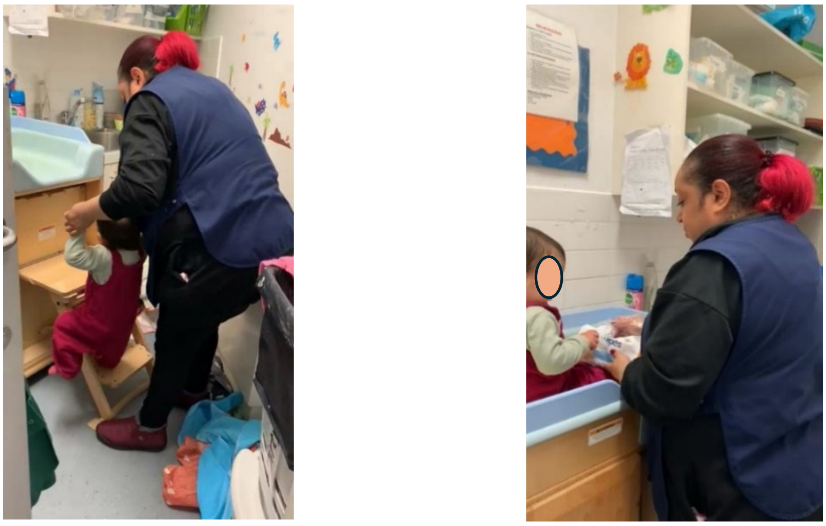


Fig.32: The furniture and equipment are active constituents of the care event

The environment can be seen to influence Remi and Layla's interactions in several ways. For example, all the items they need are to hand, and the pull-out steps up to the changing table support Layla's autonomy in accessing the changing table and reduce the amount of lifting Remi has to do. However, other aspects of the environment impinge less helpfully. The space is cramped, making it harder to navigate, and there are things on the floor that impede Layla's access to the steps without Remi's help, which in turn impacts the degree of autonomy Layla has in her movement and this part of the care event (Tardos 2007). This also caused Remi to reflect on her pedagogy; in her reflective journal notes, she commented on the messiness of the space, which she said, only became apparent when viewing the video. But we also acknowledged that having the laminated figures that could be removed and replaced was an effective pedagogical choice that matched the interests of the children. However, this pedagogical choice could reflect a view of this care event either as a focused time for engagement with others and the world, or as an event during which children need to be distracted. Whichever it is, this pedagogical choice is created by the positioning of the changing table against the wall, which featured significantly in the intra-actions in this observation; without it, the whole interaction between Remi and Layla would have come into being differently, perhaps with less time engaged in the playful communications described in chapter 8.

Similarly, in observation GS3-M1: Munehra and Alena (24 months): Putting Shoes On, various objects and aspects of the environment seem to act as supports to Alena's movements and also as impediments. For example, the table is supportive to Alena's ability to stand and then get down to the floor but also gets in her way as she crawls across the floor and bumps her head on it. Although unpleasant, even this kind of experience, contributes to children's understanding of the qualities of objects and their intra-active impact, which are ever changing as their engagement with them varies. In this observation, clothing was central to, and often led, Alena and Munehra's movements. In wanting to reach their goal of going outside, putting on socks, shoes and coat became necessary actions that put these objects at the centre of their interactions, taking a pivotal role in a dance of hands/ sock/ feet, hands/ shoe/feet, hand/leg, hands /arm /trunk/coat, and enabling the embodied intersubjective interaction. For example:

A offers the shoe

M is holding the sock up for her to see

M puts the sock on A's foot.

M picks up the shoe then puts it down. She reaches for the other shoe and puts it on the floor

M turns back to the shoe and struggles a little to push A's foot right in.

A leans forward and picks up the other shoe

M shows her the sock

A lifts the shoe to show her.

M leans over A to reach her left foot and puts on the sock

A leans forward to grasp the coat

M reaches and lifts the coat from the peg

M holds up the coat*, places it around A's shoulders.*

Video link: GS3-M1: Munehra and Alena Putting Shoes On

Fig. 33: A dance of hands/ sock/ feet, hands /arm /trunk/coat

Attending to objects in the environment is the focus of Trevarthen and Aitken's concept of secondary intersubjectivity (2001) in which there is joint attention of the adult and infant to an object of shared interest that is included in both subjects' perspective and experience (Tomasello et al. 1999), as discussed in chapter 5, and further illustrated in GS4-R1 as Remi and Layla both attend to the objects that are key components of the nappy change.

Layla points at the nappy sack. Remi mirrors this gesture, confirming what it is 'yes, and nappy sack. And what are we missing? Gloves!' She reaches for protective gloves.

Layla: 'dat' she points again at the wet wipes.

Remi: They're your wipes, she hands then to Layla, 'you hold those'.

Video link: Remi and Layla (16 months) Nappy Change

Krueger and LeGrand (2009) describe this as the 'dialogical, bi-directional, reciprocal relationship between self and world' in which the internal self and the external world inform and shape each other in an inseparable constitutive process. Such joint attention leads to increased mutual intention-reading between carer and infant. However, it is not only external inanimate objects that are attended to in these triadic joint attentions, but also bodies and their dynamic coordinated interactions (Negayama et al 2011). For example, in GS1-L2 and GS4-R1, Otto's and Layla's bodies, where they are and what is to be done with them, is the subject of focus. Negayama et al (2011) suggest that using the body as the object is an earlier form of triadic exchange, which is most typically seen in care events where the body is the focus of attention. So, in GS1-L2, Munehra's and

Alena's joint attention swerves between the coat, shoes and socks and Alena's feet and body in coordination with Munehra's hands and body. And at the same time, it is as if the shoes and socks provide a framework for how their bodies co-ordinate, guiding and being guided by their actions. In addition, full experience of these intra-actions is facilitated by the amount of time Munehra (and Leiya and Remi) allows for each communication and action.

These data therefore suggest that by conjoining the concepts of intersubjectivity and embodiment in the data analysis process, joint attention may be seen to include not only objects but also embodied people, relationship, actions and time. In this regard, this thesis argues that all the children's bodies in the observations are central to the space and time of care events and therefore, their bodyselves must be the focus of physical interactions in the context of the physical environment, and consequently those events, their timing and process, should be a central focus of pedagogy.

9.1.1. Emplacement in the child observations

Although secondary intersubjectivity connects to the environment element of embodiment by recognising the role of objects, it largely constructs objects as passive targets of the gaze or manipulation, whereas an embodiment perspective would suggest that the objects referred to in such triadic exchanges are also active in the exchange. Embodiment sees the environment as influencing how we use our bodies, and understand the bodies of others, as we intra-act with the more-than-human, tangible and intangible aspects of our lived spaces (Ellingson 2017). Similarly, Pink (2009) identifies that embodiment is contingent upon the environment and context, as embodied responses are elicited by a vast array of sensorial factors such as temperature, noise levels, topography, light, décor etc. Therefore, Pink emphasises a post-human idea of emplacement that sees humans as embedded in a material world where people and objects intra-act as part of a network (Pink 2009).

These concepts are highly relevant for studying the lived experience of babies and young children, whose senses are very acute to sensory stimulation (Jones et al 2006) and whose bodies are at the centre of their experience; sense- and meaning-making connectively through their perceptual, motile, affective and cognitive processing (Marshall 2016, Pexman 2019). In addition, they have embodied ways of knowing and of being in the world, and the world mediates and is part of their bodyselves. So, children's body/selves and physical experiences are constructed not only from their interactions with other human minds/ bodies, but also through mutually constituting intra-actions with non/material things (Murris 2016). Therefore, consideration of spaces, objects and materials are core to thinking about young children's embodied experiences, which is why in early years pedagogical thinking, spaces, objects and materials are understood to be of central importance to children's experience and in manifesting a setting's approach and ethos. For example, the importance of children using '100 languages' of expression in Reggio Emilia's early childhood programme, is reflected in the inclusion of an atelier in the physical environment, which is sometimes called the third teacher (Edwards et al. 2011). And the design of the changing platforms in Pikler settings, allow for children's free movement and autonomy in accordance with their pedagogical principles (Tardos 2007). Research in ECCE also highlights that the physical environment directly impacts how the needs of babies and young children are met; both in practical and psychological terms, as the quality of physical environments in settings is associated with the quality of educator-child interactions (Harms et al. 2017, Urlaub et al. 2016). These concerns are reflected in these observations, which suggest that intra-actions within and across the environment are enhanced when educators incorporate consideration of emplacement into their embodied interactions.

9.1.2 Emplacement in the research group process

The importance of the environment to the research group process was emphasised from the beginning. In session one, Tovah had suggested we needed '*a comfortable room I suppose, physical environment, warm… food…*' as part of our working contract. And we had adhered to that, with the start of each session including a lot of focus on each other's physical comfort and always providing snacks and flowers to make the environment attractive. Making the environment physically as well as psychologically comfortable, which was part of my intent to make the research process a positive experience for the educator-participants and to model the importance of physical comfort for learning in pedagogical practice. However, this was compromised in session three. On arrival, I realised that I had left my laptop at home, which meant that we had to use the centre office in order to view the video clips on the computer. This meant that we were crammed into a small space on uncomfortable seating and with awkward views of the screen. On viewing the video, it seemed clear to me the degenerative impact of this, with everyone contorting their bodies in order to find somewhere to lean on for note taking, for example. However, although I was embarrassed by being the cause of this situation, no one verbally expressed discomfort.

Fig. 34: Physical discomfort in session 3

One explanation for this is that such physical discomfort is an everyday experience for early years educators, who regularly hold their bodies in awkward poses when holding young children, sitting on the floor or crouching down to play. Thereby reflecting Mauss's idea of 'bodily techniques' (Mauss 1973, p.70) where the body is trained to adopt to function effectively in a particular socio-cultural context. This draws attention to the idea that it is not just children's physical experiences that can be overlooked, but also educators', who also seem to disregard the impact of such discomfort on their bodyselves and indeed, may even see being uncomfortable as a comfortable (as in familiar) aspect of their professional persona. For example, my questions to Shaheda and Sarita about the physical effort of holding Aliyah and Theo in their observations GS3-Sh2 and GS4-S3, did not get much of a response, as if they gave the idea little importance, but when acknowledging the back and arm strain of slowly putting Theo in his cot, there was a ripple of half-laughter in the group, like a wry acceptance of this shared experience. And in a response to GS4-S3 that reflected Pink's (2025) assertion that collaborative viewing provokes shared, parallel sensory and emotional experience, Popi remarked,

'*The pain in your arms, holding for so long*', and then, '… *when I was watching your video, it brought back memory… I felt that pain for you, because you don't feel it for yourself, because you're in that moment … And you know when you're giving, doing all these things for the babies, …and that stress itself, we don't feel it because we just have to get it done. But it's a lot of stress.' (RG-S3)*

On popular psychology websites it is commonly held to be useful to 'get comfortable with being uncomfortable' (for example, psychologytoday.com, how-to-get-comfortable-being-uncomfortable), usually in relation to learning new things. However, from a feminist viewpoint, and in the context of the physical work of early years educators, I would contend that this idea perpetuates the requirement to suppress feeling in order to sustain an expected outward appearance, that is at the core of the concept of emotional labour (Hochschild 1983, Colley 2006). In her feminist analysis of discomfort, Chadwick (2021) suggests that for women, there is a disjuncture between our embodied sense of self and the self we are expected to be in social terms. I would extend this to the experience of the mostly female early years workforce, where there is a disconnect between real embodied experience and 'the norms, values, scripts, narratives and authoritative knowledges of our broader societies, institutions and communities' (Chadwick 2021, p. 558) as applied to the narrative of the, caring early years educator who does the job for 'love' (Taggart 2011), but which ignores the physical graft of working with young children. As Taggart says, 'The ideal carer exhibits 'engrossment'… while experiencing 'motivational displacement' which temporarily marginalises the carers' own concerns (Taggart 2016, p. 175).

Paying attention to such physical experiences in the VERP / Work Discussion sessions made such care-giving encounters visible, through exploring the embodied facets of intersubjective interactions. Through valorising self-care, this process also brought into consciousness the links between educators own physical experiences and those of the children as discussed further in chapters 10 and 11 and thereby, influencing the educators thinking and approach to their embodied interactions with children. Therefore, bringing such embodied experiences into consciousness, rendered them remarkable and noticeable as a contributing factor to a positive ‘holding’ environment for the educator that may then enhance ‘holding the baby’.

Further to these points, data did not just highlight the more concrete, tangible aspects of the environment as factors that impact embodied interactions but also the less tangible aspects of sound, other children and time, as discussed below.

9.2 Factors in the Environment: Noise

An aspect of the environment that became prominent through watching the video observations was the amount of background noise that is prevalent in early years settings and noticing noise was influenced by the technology used to gather data. Ellingson (2017) refers to the impact of objects on an inquiry, and this was evident in this regard as the unsophisticated equipment at my disposal did not balance the sound recorded, which brought our focus to bear on how noise may have a negative impact on both children and educators, distracting them from focusing on the immediate interaction.

This was evident in GS3-M1: Munehra and Alena Putting Shoes On, when they were both distracted from their task by what was going on around them. This seemed to interfere with how easily they accomplished putting the shoes on and perhaps detracted from Alena’s participation and co-operation, for example:

A looks around, then back at M, pointing to some activity off camera. M looks around, then turns back to the shoe and struggles a little to push A’s foot right in. A is looking around the room, not engaging with this.

Video link: GS3-M1: Munehra and Alena Putting Shoes On

In contrast, although Remi commented on the background noise levels that she could hear on playing back the GS4-R1 observation video, at the time, she was able to focus on and hear Layla very well, facilitated by being in a separate room and also the amount of time she had to spend in the interaction.

High levels of background noise were mostly caused by general activity, as Shaheda commented on her video clips in RG-S4:

'*It was quite noisy, quite busy… the background noises as well, we don't really think about, you expect the children to sit and listen and concentrate, but there's so many things going on around that you don't realise. … adults talking or someone coming up the stairs, that's so distracting…'* Video link: RG-S4 Sh1 and 2 Review and discussion

In terms of children's experience, exposure to constant noise results in having difficulty with sustaining attention and discriminating sounds, which can lead to poorer memory and speech (Shield and Dockrell 2008), as well as impacting their focus on a chosen activity and being able to relax. As noted earlier, babies and young children's senses are very acute, so they are more affected by noises, textures, smells and flavours than most adults, and less able to filter out peripheral or superfluous sensory stimuli (Greenfield 2015). This can result in overload, distress or disengagement.

In this research, the VERP/ Work Discussion process was instrumental in enabling the educator-participants to make a connection between the children's experience of noise levels and distraction in settings and their own experience in the group sessions. In session three, having to meet in the setting's office meant the phone rang periodically, Remi was coughing a lot due to asthma, and there were noises from outside of children and parents arriving. This was noticed by Sarita, when she was distracted during the experiential exercise, meditative body-check. She noted,

'*I thought, this is not the same experience I had the first time… It wasn't a day like today (with children present), it was just us in here, so it was a lot more quiet… I couldn't help but going back to the first one and seeing how different it was, as relaxing as it was, (this time) I was more distracted by children coming in, the door, the phone ringing. There was a lot more distraction this time round, so more difficult.'* (RG-S3).

This experience was repeated in session four, which also included distractions from the environment such as children playing and looking through the windows into the room. As with physical discomfort noted above, what is notable about these instances of noise and distraction, is the degree to which they went unnoticed at first and seemed to constitute a level of sensory load that was accepted as a 'norm', barely noticed until brought to consciousness through the VERP review and Work Discussion process that required a focus on embodied experiences. This suggests that increasing educators' awareness of the impact of noise on their own physical experiences in this way may then engender awareness of the influence of noise on children's experience and thereby lead to pedagogical changes.

9.3 Factors influencing embodied intersubjective interactions: Other children

In addition to factors such as noise, other children can also be a source of distraction in the environment that influence embodied intersubjective interactions. A clear example of this is in GS4-S3, Sarita rocking Theo to sleep, where she is doing so in the play area rather than the sleep area, due to low staffing levels. And, although the general noise level isn't very high, she is distracted by the activity of the other children in the room six times in the five-minute clip, as follows: (Appendix 4.1: GS4-S3 Sarita and Theo (5 months): Rocking to sleep. Timing between changes in touch and position)

00.40: S looks away towards another child in the room. 'Are you ok Joseph?' she says in a low, quiet voice. Her rocking seems to speed up slightly at this point.

1.16: S looks away towards something else in the room and then back to T.

2.19: S looks around at what is going on in the room briefly, then back to T

2.24: She looks again and moves her leg.

3.02: She glances up and smiles, then looks back at him, makes a quiet sshh sound. (children's voices in the background)

3.51: She glances up around the room again and talks to another child. 'Are you ok Rocco?'

Video link:GS4-S3 Sarita and Theo (5 months): Rocking to sleep

And in the group discussion, Sarita commented,

'Just being aware the whole time there's other stuff going on, too. You know, although you are being focused, it does take away a little bit, which means that you can't be as relaxed in the moment.' (RG-S3) Video link: RG-S3 S3 Review and discussion

And Sarita’s comment echoes her embodied response to these distractions, which seem to be accompanied by a slight speeding up of her rocking motion and patting of Theo.

These aspects of this observation show how the organisational factor of staffing levels impact embodied intersubjective interactions, which, along with group size is one of the key elements that contribute to levels of quality in ECCE provision (Munton et al. 2002)

9.3.1 Intersubjective interactions in groups

Many of the observations reviewed in this research featured dyadic intersubjective interactions, but in a group situation, as in early years settings, such interactions become very complex. For example, in the first 15 seconds of GS1-P5 Popi Singing with group, (appendix 4.2) Popi jointly attends to different objects and aspects of the environment in quick succession with different children. Firstly, to something on Perse’s jumper, then to the song card with Alfred, and so on throughout the observation as she enters, and then exits, and then re-enters dyadic interactions with each child, referring to people and objects in their environment. In this way Popi shared her attention amongst the children, noticing and responding to their individual and group responses simultaneously.

For example, *when she starts singing, Cleo turns towards her. Elenora is sitting close by and watching. Popi looks from Alfred to Perse as if checking that the singing is ok and then to Cleo. She has an open, half smiling expression on her face and playfully prods Cleo’s tummy as if to welcome and include her.*

Popi’s attention is also on the children’s interactions. For example: Cleo had been showing Popi a toy monkey, which Elenora then reaches for.

P: There you go, I think Elenora would like to have monkey. She offers the toy monkey to Elenora, who goes to take it but then turns away. Perse takes the monkey, but Alfred takes it from her hands and cuddles it. Cleo is watching.

Alfred shakes the monkey then drops it in front of Elenora

P to A: Be gentle

Fig. 35: Popi attends to Perse, Cleo, then Alfred, then Elenora

Video link: GS1-P5 Popi Singing with Group

This complex web of secondary intersubjectivity has implications for both the children and the educator. It could mean that children compete for attention, potentially resulting in the most able or vocal getting noticed, and quieter children not, illustrated by Elenora in the group scenario above. And, in a pedagogical approach that emphasises the adult's role in leading learning and thereby being the centre of focus, this dynamic is increased. It also increases pressure on the educator, as, even small group situations such as described here, demand heightened awareness, the ability to vary responses second to second, and to vary synchrony and 'vitality flow' of responses according to their knowledge and reading of each child. This may not always be possible, so the chances of mismatch will be higher. For example, Popi checks the children's responses to her singing and de-escalates the speed and volume, but in a larger group of children this would be less likely to match the states of each child.

Group size in early years settings is much debated in relation to the impact on various aspects of children's development and wellbeing (For example, Legendre, 2003 on cortisol levels, or Volling and Feagans, 1995 on sociability). And in terms of overall quality of provision, Howes et al (1992) measured thresholds of quality in provision for 0–2-year-olds in the U.S. focusing on adult: child ratio and group size. They identified that larger groups of children were associated with settings rated as inadequate but that 'children in infant classrooms with six or less children, toddler classrooms with 12 or less children, and preschool classrooms with 18 or less children were more likely to experience developmentally appropriate activities' (p. 454). And in the National Institute of Child Health and Human Development (NICHD) study (1996), smaller group sizes were associated with a higher frequency of positive caregiving, saying, '*Consistently, then, across types of care, when more infants were being cared for, observed positive caregiving was lower'* (p. 300). Despite this, group sizes across all age groups in the UK, usually exceed these numbers, as allowed by the regulatory framework (DfE 2024). And, although the debate about quality variables in early years provision is not the focus of this research, the observational data highlight the intricacies and complexities of embodied intersubjective interactions in a group of children and thereby suggest that there are increased challenges for educators in maintaining attuned responses to different children's interests, mood or understanding as group size increases, so smaller group sizes both overall and in specific play events are optimum for attuned interactions. While 1:1 care events can provide very young children with the socio-emotional support that enables them to then navigate group relationships with peers more confidently (Tardos 2007).

<u>9.3.2 Group interactions: Other children as observers and mediators</u>

In the discussion of observation GS1-P5 above although the children are mainly focused on Popi, they are also paying attention to each other:

Alfred dances vigorously spinning around, all the while holding the song card. Cleo is watching him, smiling. Perse and Elenora look up at him straight faced.

We see Elenora sitting nearby to Popi, observing all the interactions and behaviours of those around her. The possible explanations for her apparent passivity in this group are myriad; from her age, temperament or disposition or current emotional/physical state, to her familiarity or liking for the activity, environment or people. But what we can see from the observation is that this means that the amount of direct attention she receives from Popi is less, compared to the other children and we can see how she is carefully watching everything that is going on around her and will be learning something from these interactions.

But in GS1-L2 we see a different type of onlooker behaviour. As Leiya is negotiating with Otto about changing his nappy, Cleo observes their interaction, and then asserts herself into the scenario five times, in ways that seem to act either as a mediation, diversion or tension breaking intervention. (See appendix 4.4 for a breakdown of timings in these interactions). For example,

L to O: 'You've done a poopoo, shall we go and change your bum-bum?'

Otto continues to look down with a sullen expression. His face is flushed.

Cleo: says 'Hello' to Leiya, turning her body so her face is directly in front of Leiya in a way that cannot be ignored. Otto smiles at this.

L tips her head to the side and replies 'Hello' in a sing-song voice and with a forced smile and says, 'Otto doesn't want to change his nappy', shaking her head sorrowfully. Otto watches and also shakes his head.

L: 'Otto, shall we go to, go on the ladder? Shall we go and climb the ladder? He is looking at her and listening. He looks at Cleo and they laugh together, and Otto jiggles his body.

Cleo: 'Ladder'

L: 'Ladder, he doesn't want to go on the ladder' To Otto: 'do you?'

Otto, looking down, 'No'

Cleo says something to Leiya.

L to C: 'he does, he needs to change his bum-bum 'cos he's done a poopoo'

Cleo: 'Yeah' and pulls at her own clothing

L: 'aah not you Cleo, thank you for offering, you've been changed'

Video link: GS1-L2: Leiya and Otto (20 months): Nappy change

Fig. 36: Cleo intervenes

These interventions of Cleo's may be interpreted as a bid for Leiya's attention, but her relaxed posture and the timing between the interventions suggest that this isn't the case. It seems as if, through her careful observation of the interaction, she is trying to help, and indeed, she succeeds in making Otto laugh, which breaks the tension, and in diverting Leiya, giving her pause for thought in the situation. This illustrates how all the children are learning about social relationships from all the interactions in a group. Indeed, Bradley et al's research (2024) show that infants as young as 9 months old are capable of 'groupness', that is, their social behaviours are influenced by two or more other group members. However, it should be noted that this study was of quartets of infants, i.e. a smaller group than is usual in baby room settings but has positive implications for organising for autonomous play for babies in small groups of three or four.

The data presented above show how the size and organisation of groups for babies and young children can be difficult for children of this age to navigate. But data also suggest generative learning about bodyself/other interactions in small group scenarios, where children can influence embodied intersubjective interactions as mediators as well as observers, not only of each other but also of the interactions between the educator and another child. Therefore, it is important educators both take account of children's embodied intersubjective interactions with each other and also reflect on how their own interactions and behaviours convey messages to all the children present.

9.3.3 Group interactions in the research group

The issues of group size, dynamic and relationship discussed in relation to the child observations above, can also be applied to the research group process. As described in chapter 7, in cooperative inquiry, groups of between six and twelve persons are thought to work well (Reason and Heron 2001) and the typical composition of a Work Discussion group is between six and ten (Rustin and Bradley 2019), as this size of group enables all voices to be heard because the facilitator can create enough space for each person to be given attention, and so for interpersonal relationships to grow through the sharing of different experiences. I contend that this attention to such intersubjective dynamics in groups of adults, should also be applied to group arrangements for young children, who also deserve group arrangements that allow for their voices to be heard, for personal attention, and for relationships to flourish.

9.4 Factors influencing embodied intersubjective interactions: Time

In addition to the factors in the environment discussed above, data highlighted issues of pressures of time and the number of tasks educators have to attend to as impacting their physical interactions and thereby, the experiences of the children. Therefore, in this section I discuss data in relation to the embodiment aspects of chronemics, the use of time in communication, and temporality, the timing and sequences of events.

Data in relation to the use of time in communication has previously been discussed in relation to attunement in chapter 8, where the verbal and non-verbal communications between Remi and Layla in observation GS4-R1: Remi and Layla (16 months) Nappy Change, indicated attuned and synchronised interactions in a way that typifies a proto-conversation (Trevarthen and Aitken 2001), Analysis of this video observation shows that there are 27 'serve, receive and return' interactive couplets in this 5-minute observation, which is the longest conversation held of all the observation clips. As Remi identified in her joint review,

'*I actually got time to interact with her properly, … before we did the nappy it was conversation, communicating. She was babbling, she was saying some words. And also, I got to hear what words she can say. Even if they weren't clear, it was a moment where we're communicating.' (RG-S3)*.

In terms of chronemics, the synchrony of proto-conversations requires mutually adaptive timing (Feldman 2007), awareness of the timing of the other person's responses, and anticipation of an appropriate response in time. Such awareness is thought to be present from birth (Trevarthen et al.1999, Nadel et al., 1999) and unsynchronised responses are found to be incomprehensible and disturbing to both child and adult carer (Tronick and Cohn 1989, Weinberg and Tronick 1994). And when discussing intercorporeity Merleau-Ponty (1962) suggests that interrelation with others includes time or inter-temporality.

But key to Remi and Layla's sustained interaction was not only the chronemics of attuned responses but also the temporality of the timing and sequence of this event. As Remi said,

'… *if you've got six children and you've got to do all the nappies in a certain time frame, you miss out engaging with them. You're literally just changing nappies; you talk to them while you change the nappy but it's not as lengthy as this. And because she happened to be the last one, I was able to take my time and engage with her properly. Whereas if she'd been the first it wouldn't have happened. It would have been very, very brief and short*' (RG-S3). Video link: RG-S3 R1 Review and discussion

So, this observation highlights the relationship between chronemics and temporality, and between the kinetic body that moves and the dynamic impact of that on other bodies in relationship to each other (MacRae 2020), where shared meaning is created through two embodied agents interweaving and synchronising in the present time.

9.4.1 Time and task pressure

Remi's statement above and the group discussion that surrounded it in session three, reveal the constant pressure to carry out tasks within a setting's time frame, which, I contend, can have a negative influence on physical interactions and thereby on children's experience in settings.

Leavitt and Power (1997) apply Foucault's concept of 'disciplinary time' (Foucault 1979/1975) to the organisation of the day in early years settings, wherein control over children's physical needs, in order to 'civilize' them, is routinized for the efficiency of the organisation. Leavitt and Power (1997) call these temporal regimes 'body time' and identify how they impose an external time clock on the child's embodied temporal rhythm. As Popi inferred, when she shared,

'*When I was in the baby room, ... yes, children had their own routine … and when that child is settling... it's almost like training your body and the child when you do that and when you do it often, they learn*'.

Remi and Popi's comments reveal the primacy of institutional time over lived time that is experienced by educators as a constant pressure to get things done, and by children as being rushed through care events, with little collaboration in the processes (Laurin, 2018). Indeed, Leavitt and Power (1997) suggest that the cost of 'civilizing' child-bodies in this way, is inattention to and disrespect for children's lived embodied experience and neglect of their embodied selves. And in practice terms, Tardos (2007) notes that because physical care tasks are often repeated, the actions and movements that educators use may become faster and more mechanical, lifting children suddenly and laying them down unexpectedly. Such actions can become rough and result in children feeling off-balance and tense physically and disregarded and out of control emotionally.

In this research however, data suggests that the educators often made efforts to balance the individual needs of the children with the expectations of the institution. There were several examples of practices that prioritized the child’s lived time, such as Leiya waiting for Otto to be ready to change his nappy and Sarita commenting about Theo,

‘*Because he's a ‘baby’ baby, he's only five months, obviously, his time is a little bit different compared to the other children, so, we're doing nappies with a different routine.’*

However, these temporal regimes still existed but were perhaps, implemented more subtly with the educators using aspects of the environment to help the children learn about and comply with the routine.

For example, Popi reported, *‘our babies, after lunch and cleaning, they have a play and then the beds are out, and you slowly turn off the light then the background music starts to play. And then you just say ‘it's gonna be sleep time soon, let's take our shoes off’, and some of them will come and do it or they go to their beds. And we put the blinds down and they go to bed, so, I don't feel like it should be like pressured... (RG-S4)*

And Shaheda added*, ‘the children wipe their own faces, obviously we help them ... And then we’re like, ‘shoes off’, so we've got verbal cues; 'shoes off’ means sleep time. But then one of us is turning off the lights so that again, there's environmental cues. And then they just automatically go to the sleep room.’ (RG-S4)*

This means educators having to find ways to negotiate or subvert these temporal regimes in the interests of the child, where they have the understanding and capacity… instead of the temporal regimes being organised in the service of the child’s needs.

As discussed in chapter 8, a key finding that emerged in relation to the pressure of time, was how touch became more vigorous and sped up and through the ways that the educators used stimulating touch and physically handled the children to move them on (physically and emotionally) from where they were at the time towards something else. For example, while Sarita was comforting Rocco in his distress (GS4-S1), she was also using her embodied communications to move him on to another state and another activity, through drawing his attention to familiar things and people in the environment. This was especially the case in the scenarios where a child was waking up, as if what was important at that time was to move a child on to rejoining the group and play, as with Shaheda playing tickle games with Rahima in GS3-Sh1. This response to the pressure of time may arise from complying with parent's requests (as in GS4-R3), an awareness of the needs of other children in the group and / or the pressure of other tasks, or indeed, a discomfort with a close emotional interaction with a child (Elfer 2015). But I suggest that moving children on from care events in this way is also influenced by the valuing of 'educational' play activities over physical care times that is inherent to the English EYFS curriculum framework, as discussed in chapter 2.1, and which results in UK settings allocating limited time to these events. In contrast, in the Pikler approach (Tardos 2007) caregiving events are valued as a key time for the child and educator to build secure trusting relationships, and for the child to develop a healthy self-image, so, they are a primary focus of practice and take up a large portion of the day, with each event being given sufficient time. The educators move slowly, they tell the child what they are about to do before they do it and wait for a response that indicates the child's understanding, adapting their touch, movements and gestures to the child's rhythm and tempo. And they invite participation, offering the sleeve or trouser leg and waiting for the child, however young, to respond by moving their arm or leg. In the child observations in this research, adopting a slower pace of gesture and movement was evidenced in GS4-R1, where Remi's actions can be seen to slow down during the nappy changing event, in contrast to the 'fast pace of the diapering routine' noted by Laurin (2018) as usual in settings. This, as noted by Remi, was enabled by the temporality of the situation of Layla being the last child to change and Remi being able to take her time, making this a valuable opportunity for a meaningful encounter for them both.

However, I suggest that the unconscious focus of 'moving on' seen in the educators' actions, is also influenced by the wider social context of the developmentalism that pervades early childhood policy and pedagogy. As discussed in chapter 2.1 the metanarrative that early childhood is a critical period for influencing what children might become (Moss and Cameron 2007), and a curriculum framework (EYFS, DfE 2024) that focuses on goals and outcomes and positions educators as responsible for children meeting those outcomes through their practice (Castro-Kemp and Kemp, 2025), means that the idea of ‘moving children on’ is a strong underlying discourse in educators’ ‘disciplinary space’ (Foucault 1972/1979). In a systems perspective, this can be understood as the macro contexts of policy impacting the micro practices of educators and experiences of children (Bronfenbrenner 1979). So, it is not just children who are subject to the temporal regimes inherent to their ‘disciplinary space’, educators also are subject to policy and guidance documents that construct the discourses through which they come to think about pedagogy and about children’s physicality and physical needs and professional caregiving practices;- they also learn body-rules (Mauss 1973) as they are enshrined in policy guidance and regulatory processes. And the resulting temporal regimes of moving children on developmentally and of moving quickly through care events to learning activities that are deemed more important, results in educators feeling rushed and stressed, and children’s embodied experiences being disregarded.

In this way, the timing of kinetic processes in practice, reflects the cultural context of early years settings. And in the wider social context of the Global North, where lives have become overwhelmed with speed and ‘productivity’, slowing down and giving full attention to a task brings stillness and the capacity to think and reflect, and perhaps then to question and change the parameters of the disciplinary space.

<u>9.4.2 Time in the research group process</u>

In this regard, data from the research group sessions, suggest that using VERP, in which micro-moments of video were slowed down, and a Work Discussion structure that allowed sufficient time for educators to think about their work through allocating focused time and using pauses as windows for reflection, gave the educators a direct experience of a child’s need also to be given time to process their thoughts. Slowing down and having time also seemed to allow the educator participants to question the disciplinary space and perhaps the normative developmental discourses of their work.

As Popi reflected, '*I think it (rushing and doing things for children) makes our life easier. That's why we do it. Because what you're doing in that moment, because you want something, you have a goal in your mind. But what is it doing to that child? You're taking away such important learning from them.' (RG-S3)*

Popi's comment here, shows how having time in the VERP review and Work Discussions, and the slowing of the video clips, enables conscientisation of the disciplinary space and resulted in 'time' being a key point of practice change identified in the session six review of the research.

So, consideration of time was a planned part of both the content and process of this research, both in relation to the temporality of the group and how the sequence of events was part of the group process experience. Each group session was planned with a consistent pattern and according to a planned time frame, which allowed for equal space and attention for each educator's observation material and sufficient time to reflect on thoughts, feelings and physical responses and for discussion to take place. So, time to slow down and reflect was integral to each group session. For example, I would acknowledge the need to 'breathe' and 'arrive' in the group at the beginning of sessions and allow time for journaling to reflect on thoughts arising from the previous session and as discussed in chapter 10, there were many times when I paused, allowing a few seconds for thoughts to form and be expressed in the individual reviews. Also, interspersing discussions with time for individual journaling enabled group members to formulate their responses in their own time and gave space and time to talk and respond to each other. Allowing time to think in this way is an experience that many early years educators identify as lacking in their professional lives (Manning-Morton 2014, 2024), where constantly doing and being busy is a common feature and part of a professional persona. In a psychodynamic perspective, such busyness can be interpreted as an avoidance of difficult feelings and thoughts, so slowing down and time to think can be anxiety provoking. Therefore, close attention to the structure and process of a group is crucial, so that anxiety might also be contained by the temporality of the group process and then reflexivity can occur.

Overall, the data discussed in this section indicate the connectedness of children’s and educators’ experience of temporal regimes in settings and consequently that time is a major influence on embodied intersubjective interactions.

9.5. Factors influencing embodied intersubjective interactions: Educators’ capacity for attunement, containment and self-regulation

Data from the child observations and the group review sessions suggested another, intangible factor that influenced the educator’s embodied interactions with the children, that is, how their capacity for attunement, containment and self-regulation influenced their approaches to physical interactions.

As discussed in chapters 5.1 and 8, using mindsight (Siegel 1999) is constant in working with babies and young children and pervaded the observations, such as in GS4-R1, where Remi repeatedly asks Layla, *‘ready?’ / ‘are you ready?’* indicating that she is thinking about the child’s perspective and experience. And mindsight underpins empathy, which involves experiencing the inner world of the other, through reading their feelings in their whole body and facial expressions, such as when Leiya empathised with Ottos’ discomfort at a loud noise, in observation GS1-L2. Further, when these empathetic responses are physically and emotionally synchronised, the adult becomes attuned to the child’s communications, as illustrated in observation GS4-R1 between Remi and Layla and GS4-S2, between Sarita and Theo. Also, attunement relates to Bion’s psychoanalytic concept of ‘container-contained’ (Bion 1962), in which the adult ‘container’, not only empathises with the child, but also processes the child’s emotions in their own mind to make them manageable for the child. This requires that the adult is open enough mentally and emotionally to receive the child’s feelings and then has space in their mind, to process them (Miller et al. 1989).

In addition, babies and young children’s physical vulnerability means that they are often in a stress response mode when in new, unusual or unwelcome situations, as exemplified by Rocco's crying and clinging behaviours and uncontrolled body movements in response to being separated from his parent in GS4-S1. In psychodynamic terms, children in such situations, will defend themselves psychically against the anxiety, frustration or anger they feel, by splitting off these uncomfortable feelings and projecting them onto their carer (Segal 2004). The emotionally available adult then receives these feelings, and manages the feelings for them, as in GS4-S1, where Sarita receives Rocco's distress through her physical holding, proximity and touch and also verbalising her empathy. In this example, it is reasonable to infer that Sarita's attuned, containing responses enabled Rocco to feel physically, mentally and emotionally held, and to begin to be able to think about his feelings and experiences because Sarita's mind turned his raw experience into a manageable awareness of feelings (Miller et al. 1989).

This ability to offer attuned containment does not only apply to working in situations of high emotional stress, but in many everyday situations with babies and young children, whose emotional lives fluctuate regularly and rapidly, and who are practicing autonomy, assertiveness, self-direction and resistance to coercion (Manning-Morton 2024) in their relationships and interactions. In addition to the empathy, attunement and containment required in such situations, educators need to be able to self-regulate as exemplified in GS1-L2, where Leiya not only attunes to Otto's feelings and behaviours to help move towards a negotiated co-operation in the nappy change, but she also regulates her own feelings and so, is able to 'repair' their disrupted connection (Tronick 2007) and continue their positive interaction, despite feeling a degree of frustration at his refusal, as detailed in chapter 8.

Therefore, data from these and other child observations, highlight the high level of emotional attunement and self-regulation required of educators, to empathise with and contain young children's emotional states. But this isn't always straightforward, as Manning-Morton (2006, p.46) says:

…for the privilege of being seen as experts in children's learning and development, early years practitioners need to also engage with the darker side of children's learning and developing, with their distress, their defiance, their dependency ... This is a major professional challenge for early years practitioners, as engaging closely with young children touches deeply held personal values and often deeply buried personal experiences.

So, educators may then mentally defend themselves against a child's feelings because they provoke unpleasant or difficult unconscious memories and feelings in themselves. These psychological defences are unconscious psychological configurations that play a central role in dealing with anxiety and thereby generally help us to maintain psychic equilibrium (Bateman and Holmes 1995); they emerge in stressful situations and exist in everyone. But when stress and anxiety are high or chronic, as may occur in early years settings, defences can also result in separating off emotional life from the conscious mind, which can then, in intersubjective interactions with young children, prevent empathetic and attuned responsiveness to children's needs (Manning-Morton 2011).

Therefore, I have previously suggested that to be able to engage with the more difficult aspects of practice, educators need a high degree of emotional maturity and self-awareness to be able to self-regulate when feeling challenged by external factors or internal unconscious reactions (Manning-Morton 2006, 2011, 2014). A view that is reinforced by the observational data arising in this research. I further suggest that attaining and maintaining this kind of professionalism relies on external 'containing' structures for the educator, that is, an organisational context that values the emotional dimension of practice as a valid professional concern, and, in the light of the data in this research, valuing the physical dimensions of practice too. In previous research (Manning-Morton 2006, 2011, 2014) I have illustrated this as an 'emotionally intelligent cycle of practice' wherein the well-being of the children depends on positive relationships, which in turn require the educator to have effective interpersonal and intra-personal skills. Data from this research would emphasise that physical interactions of proximity, touch and holding are central to those relationships, so educators also need awareness and understanding of their embodied intersubjective interactions as part of their inter and intra-personal skills, and appropriate opportunities to develop those skills and understandings are key to maintaining these, as discussed further in the next chapter.

9.6. Conclusion

This chapter shows how conjoining the elements of intersubjectivity and emplacement in this research, highlighted the interconnectivity of space, objects and also people, relationship, actions and time and thereby found that the environment has a high level of influence on physical interactions in relation to space, furniture and objects. And that generative intra-actions within and across the phenomenon of environment, educators and children, are enhanced when educators connect with how these are incorporated or entangled in their embodied intersubjective interactions.

A significant finding in this chapter is that the factor of time is a major influence on embodied intersubjective interactions. The temporal regimes that are inherent to early years settings are seen to have an overt influence on the qualities of physical interactions, both through educators' use of environmental cues to encourage children to comply with the routine, and also through a more subtle influence in terms of the ways that the educators used touch and physical interactions to encourage children to move on to the next part of the day. This thesis suggests that the micro practices of educators moving children on is influenced by the developmentalism that pervades early childhood policy and pedagogy and a curriculum framework (DfE 2024) that values 'learning' over 'care' and focuses on goals and outcomes on the macro level. But that educators attempt to circumvent the coercive aspects of these temporal regimes by focusing on the characteristics of the individual child.

Consideration of other factors of the phenomenon of environment, such as noise, showed the degree to which sensory overload and physical discomfort are generally accepted by educators as a 'norm', which encapsulates the narrative of the early years educator who marginalises their own needs in their emotional (and physical) labour. However, data from the group sessions identify that a reflexive process enables educators to make links between children's experience and their own, as it can bring into consciousness the intersensorial experiences of discomfort and noise as factors that impact intersubjective interactions, as discussed further in chapter 10.

In addition to environmental factors, data also found that educators' capacity for attunement, empathy and self-regulation is an important factor that influences their embodied interactions. This research affirms previous studies that propose that the high level of emotional attunement and containment that babies and young children need, requires educators to have a high level of intrapersonal skills and self-regulation (Manning-Morton 2006, 2011, Elfer 2015), and that this might be supported through process oriented, reflexive professional development opportunities, as discussed in the next chapter. In addition, data suggest that the size and organisation of groups for babies and young children, may compromise the educator's capacity for attuned interactions, which thereby impacts children's experience of being 'seen' 'heard' and thereby 'held'.

In summary, this chapter identifies the following key findings in relation to RQ2: What factors influence educators' approaches to, and experience of, physical caregiving interactions with young children? Which indicate a matrix of factors as illustrated in Fig. 37 below.

- The environment has a high level of influence on physical interactions and that these are enhanced when generative intra-actions with the more-than human are incorporated into educator-child embodied intersubjective interactions.
- Time is a major influence on embodied intersubjective interactions and time pressure is exacerbated by settings' temporal regimes that devalue care events and a developmentalist discourse that focuses on goals and outcomes.
- Noise, sensory overload and physical discomfort tend to go unnoticed unless brought to consciousness by reflexive video observation.
- Larger groups of children compromise educators' capacity for attunement to each child, which limits the degree to which children are 'held in mind'.

- Educators' capacity for attunement and self-regulation is a key factor that influences embodied intersubjective interactions with children.

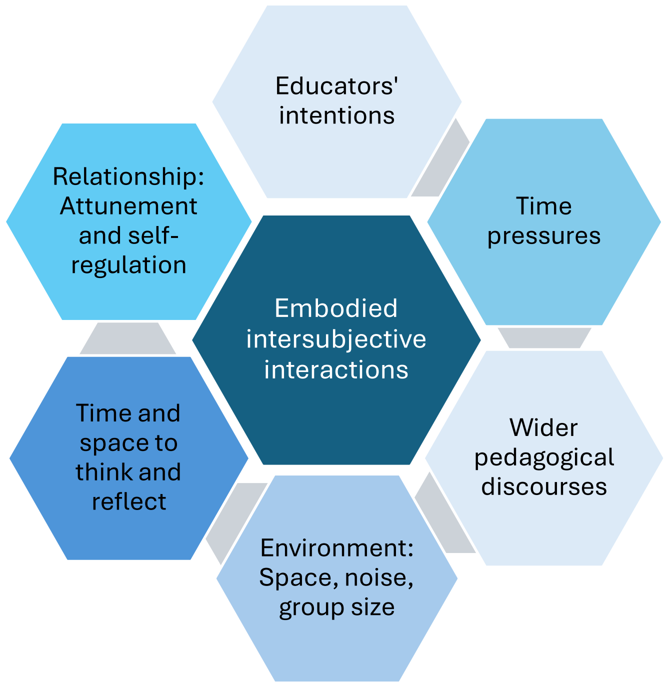


Fig. 37: A Matrix of Factors that contribute to embodied intersubjective interactions

Chapter 10: Supporting and Facilitating Attuned Embodied Interactions in Early Years Practice

10.0. Introduction

As well as setting out to explore elements of embodied interactions between educators and young children, as discussed in chapters 8 and 9, this research also aimed to consider how attuned embodied interactions might be supported in practice. Therefore, an essential part of this thesis is to consider how the role of the research process itself was instrumental in that regard, paying attention to how this research was done, as well as what it did, and analysing and discussing the process of the research, with the aim of addressing RQ3

- How might attuned embodied interactions in early years practice be supported and facilitated?

So, this chapter discusses the data that were assembled from the videos of the six research group sessions, which included the eight Video Enhanced Reflective Practice (VERP) (Kennedy et al 2015) individual reviews of the child observations, and the subsequent group Work Discussions (Rustin and Bradley 2019). To do this, I first discuss the data that emerged in the research group process in relation to Ellingson's (2017) framework for understanding embodiment and then in relation to the elements of intersubjectivity integral to the Principles of Attuned Interactive Guidance (PAIG; see appendix 3.4) framework used in VERP, which are both discussed with reference to a co-operative inquiry process (Reason and Heron 2001). In addition, as this chapter discusses group processes and relationships, it also draws on writings on group dynamics (Tuckman 1965, Egolf et al 2013, Furman et al 2014, Benson and Benson 2018).

The findings that became significant in relation to this research question, and that are illustrated in the discussions to follow, were the power of video to enhance perception and understanding of the complexity and nuance of physical interactions in early childhood settings and how using video in a strengths-based approach such as VERP, positively impacted the educator-participants professional self-concept and pedagogical thinking. In addition, data show how reflexivity can flourish through peer-to-peer reflection in small group Work Discussion (Rustin and Bradley 2019), where there is an emphasis on learning from experience, positive modelling of attuned interactions. Data also suggest that critical reflexivity can develop where the construction of reflexive thoughts is questioned and attention is paid to issues of power in the group through the facilitator's own reflexive practice. Further, data suggest that such experiential and reflexive processes in the research group processes, served to make conscious the unconscious processes at play in the group and thereby potentially facilitate the reframing of ideas in relation to physical interactions, and are therefore, key processes that 'hold' the educator in their professional endeavours.

10.1. Supporting attuned embodied interactions in practice through embodiment in the group process

10.1.1. Kinesics and Vocalics

Ellingson (2017) suggests that most qualitative research includes little attention to kinesics, or non-verbal communication and yet non-verbal and non-linguistic signals are crucial to the meanings conveyed to others in communicative interactions. And, in this research, this is a central focus not only in relation to the educator-child interactions but also the interactions amongst all members of the research group, including myself as group facilitator. In this context therefore, embodiment meant being aware of our breathing, the way we were sitting, the tension in our bodies, any discomfort or feelings of ease. It also included the thoughts and emotions that we had and an awareness of where these might have come from or what they might be connected to (Leigh and Brown 2021). So, viewing the group session data through an embodiment lens allowed for interpretation not only of the educator participants' responses but also of my own non-verbal behaviours and enabled deeper reflexivity on how my role in the research process was entangled with creating shared understandings of physical interactions in care-giving moments. Such reflexive consideration of the embodied interactions in the group was fundamental to the group being a containing experience in which we felt 'held'.

For example, throughout the sessions, I was conscious of how my body positioning conveyed to the group when I was leading (standing up, writing on the flipchart, for example) and when I was following (sitting, hands resting, listening etc.). In addition, viewing my body actions on video provoked an immediate recall of my feelings and thoughts at the time. For example, in relation to kinesics and vocalics, it became apparent to me how my non-verbal behaviours reflected the degree to which I agreed or felt comfortable with the participant-researchers' contributions, such as placing my hand over my mouth or smiling broadly and nodding emphatically when affirming the ideas expressed. Sometimes though, my body language was more ambiguous. For example, I often rubbed my hands, massaged the palms, or clasped my hands together. The meaning of this isn't immediately clear, although it possibly relates to the way self-touch reinforces one's sense of self (Boehme and Olausson 2021); so, could have been a way of anchoring my embodied self in the situation when my mind was partially preoccupied with external thoughts.

Such ambiguity is increased when interpreting the non-verbal behaviours of others, as, in an interpretivist frame, these interpretations are made through the lens of my own subjective experience and open to misinterpretation unless corroborated by other contextual information. In the child observations, contextual information from the educators was helpful in supporting understanding but was not always immediately available in the research group. For example, on viewing the session four video, I noted how both Shaheda and Munehra were yawning and fidgeting in their seats, apparently struggling to keep focused. Initially I assumed they were bored or uncomfortable, but when I reviewed the video and saw them refuse snacks, I realised that their behaviours were more likely caused by them fasting for Ramadan, which was confirmed, as Ramadan was later acknowledged in the session. So, interpretations of non-verbal behaviours were clearer when they were acknowledged at the time, explicitly noticed, or verbalised, as well as displayed bodily, thereby considering the wider embodied phenomenon. The initial nervousness in the group in session one is another example of this, not only were tense facial expressions, body postures and body movements displayed such as folded arms, clenched hands and flushed faces, but they were also verbalised by educator-participants, *Popi: Today I'm actually really nervous,* and Leiya: *Coming here today was a little nerve wracking to see everybody.*(RG-S1). Verbalising, noticing and responding to these embodied communications during the group session contributed to the 'holding' environment. However, the embodied communication of them became more consciously noticed through reviewing the video data.

Fig.38: Defensive arm folding

The positive impact of the collaborative and containing processes of the VERP / Work Discussion methods in the research group was evidenced in the steadily increasing confidence and ease within the group as manifested in the kinetic behaviours, such as more extrovert, larger gestures, relaxed body positions, freer movements and livelier vocalics, and these were also confirmed in group members' discussions and reflective journal notes. As Munehra noted, in session one, she '*mainly just listened because I was nervous about talking*', but by session five, she '*found it easier to discuss my thoughts and opinions*'. Vocalics then, also generally changed over the life of the group from tentative to more assured, as relationships and confidence grew. But they were also an indicator of the intent of the speaker in the moment, or a measure of their mood, or the emotional temperature of the group at that time. For example, the laughter and light-hearted tones during the 'hospital' experiment in session four or the lower, calmer voice levels after the relaxation exercise in session three.

Mutual support within the group became apparent from the beginning, with comments in session one such as, '*we're all here to learn*' and '*sharing experiences*', and '*I touched on quite a lot of points that you said', 'I agree* *with most of what everyone said'* contributed to 'group cohesion'. This illustrates Tuckman's third phase of group process (Tuckman 1965, Egolf et al 2013, Furman et al 2014), in which 'the group' becomes an entity, through acceptance of each group member and their interest in perpetuating the group. But group cohesion was also strongly influenced by how things were said. For example, in session one, Remi and Sarita's willingness to speak openly about their ambivalence about joining the group set the tone for emotional honesty, and Tovah and Chaya's openness about 'not knowing' allowed for a spirit of inquiry. And non-linguistic vocal behaviours such as 'mhmm' and laughter, combined with non-verbal head nodding, conveyed recognition and agreement with each other from early on and contributed much to this group moving very quickly through Tuckman's first group stage of 'forming' to 'norming' and some initial examples of 'performing' (Tuckman 1965, Furman et al. 2014) such as in their instigation of creating a WhatsApp group in session one.

I suggest that this rapid move to and ease of group cohesion was enabled by the collaborative research process, the use of PAIG (Kennedy et al 2015), and also the use of experiential and reflexive practices from the very beginning. But also, group cohesion seemed to be underpinned by the establishment of relationship, firstly through my existing relationships with the early years community in this locality, and then through the pre-research setting visits, when we engaged in some experiential exercises, thereby initiating participation. This was then continued in session 1 of the group, when we engaged in a reflective exercise focused on thoughts and feelings about coming to the group for the first time. The purpose of this exercise was two-fold. One was to offer an activity in which the educators could get to know each other; a type of introductory 'icebreaker' activity commonly used in training group scenarios (Benson and Benson 2018). But the other purpose was to reinforce the reflexive and experiential approach of the research group and the linking of personal experience and feeling with professional understanding of children and practice, so, in our discussions, links were also made to how children might feel in new and strange situations. As Sarita said, (with her chin on her hand, thoughtfully) '*I think, following on from that, it really made me reflect on how children in* *general, if they know something is coming… that can make such a difference instead of 'come, you're doing this' because then that becomes overwhelming.'* (RG-S1). This was one of the first examples of combining 'experiential knowing' with 'practical knowing' (Heron and Reason, 2001) that I hoped would lead to a transformative process that might facilitate attuned embodied interactions, and which was evidence of the rapid establishment of the research group as a 'work group' (Bion 1962), that was providing a 'holding' environment for such reflexivity to flourish.

<u>10.1.2. Haptics and Proxemics</u>

Increasing confidence and feeling comfortable in the group and with each other was also evident in changes in proxemics, with participant-researchers always sitting next to their setting partner at the beginning, but this becoming more varied towards the end of the process, thereby reflecting the changing relationships over the life of the group. Touch, although little in evidence throughout, also changed from none at all, to a few incidences by session six.

Haptics or touching, like proxemics, can express the relationship status of those interacting in the context of group process (Ellingson 2017). It is notable how, in contrast to the frequency of touch occurring in the child observation videos, there was little touch between the educator-participants in the group sessions. In fact, instances of touch are limited to only two occasions. And touch between myself and educator-participants is indicated rather than actualised, instead, I use gestures and eye contact as a substitute for touch, for example, in session two I reach out and nearly touch L's arm in reassurance. One occasion when this apparently appropriate group 'norm' for a group of professionals was disrupted though, was during the 'hospital' experiment in session four. By this time, the group had become more at ease with each other and had stopped wearing masks, and there was direct instruction for the group members to touch each other in the exercise. This experiment derives from an exercise I first experienced in training with Elinor Goldschmied and is similar to experiments used in Pikler trainings in relation to respectful care. It allows participants to explore and directly experience positive and negative physical interactions through role playing an 'A&E' scenario. It involves half the group being patients and half being medics, with the sting that, unbeknown to the patients, some of the medics' roles are to be keen, caring and sensitive and the others to act bored, disinterested and rough. The 'patients' choose what is wrong with them, so they have control over which part of their body is touched and the 'medics' choose who to treat. As is usual in this exercise, group members all chose to physically interact with someone they knew - their setting partner, which, as well as meaning they felt more at ease with the exercise, also seemed to allow for touch to continue during feedback about the experience; *P holds on to L's arm while giving feedback, Sh touches M's back,* as in Fig. 37 below.

Fig.39: Experiencing touch in the 'hospital' experiential exercise

The purpose of using such an experiential approach is to harness the reservoirs of experience and application of learning to real life situations that andragogy suggests is characteristic of adult learners (Knowles 1970). In order to move towards a deeper understanding of babies' and young children's experience, reflection on feelings arising from personal embodied experience is combined with thinking about ideas in practice, thereby facilitating a physically and emotionally internalised conception of the impact of physical care interactions on children (Ingold 2000, Elfer and Dearnley 2007). In such role play, the 'as if' element of enacting the embodied behaviours of the role allows us to enter into an empathetic relationship with the situation, and our emotional responses combine with our physical experience to become knowledge (Ingold 2000, Erturk 2015, Campbell and Miller 2023). In this way, imitation of kinaesthetic experiences can engender not only a personal experiential understanding but also a reciprocity of understanding that connects physical experience to knowledge through emotion (Campbell and Miller 2023), thereby potentially facilitating more attuned embodied interactions in practice. It has long been my contention (Manning-Morton 2006, 2011) that by invoking the voice of the child through such experiential processes, educators are enabled to move away from the professional jargon and reductionist thinking that otherwise act as buffers between their thinking and feelings, to be able to consider in more depth the emotional and embodied impact of their practice.

Another key aspect of this exercise is the element of fun it allows. Interestingly ‘Being friendly and / or playful’ and ‘Having fun’ are included in the PAIG in relation to children, but not in the VERP version for working with adults. However, ‘having fun’ is just as important in learning processes for adults, as an enhanced mood increases the release of dopamine in the cortex, which is associated with satisfaction, motivation and learning (Lucardie 2014). In this instance, there was an explosion of raucous laughter amongst the group, which seemed to release tension, and this relaxed mood enhanced relationship forming in the group and thereby contributed to group cohesion (Tuckman 1965, Egolf et al. 2013, Furman et al. 2014). Also, a relaxed mood allows for easier processing of information and greater cognitive flexibility, which facilitates an openness to new information and self-reflection in relation to practice.

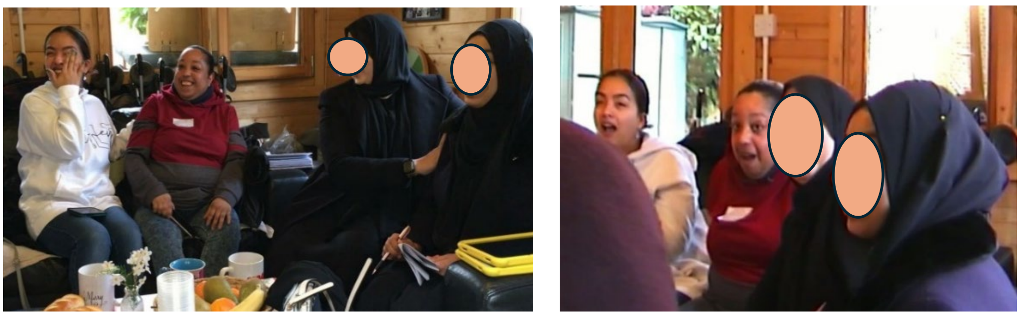


Fig.40: Fun and laughter in the group

The embodied behaviours amongst the group at this stage of the group process reflected the deep engagement that Reason and Heron (2001) say is typical of phase III of co-operative inquiry. Examples of nodding and smiling at each other were numerous, both in agreement with an idea or in recognition of a shared experience, and there were increased instances of direct eye contact in interactions. At this point, the research process was bringing together all four ways of knowing, defined by cooperative inquiry as leading to transformation in practice (Reason and Heron 2001). 'Experiential knowing' that comes from direct encounters with people, places and things and includes feelings of empathy and resonance (as in the role play), combined with 'presentational knowing' in the expression of thoughts and feelings, with practical knowing (the physical interactions), which led to 'propositional knowing', manifest in the extensive discussion on children's physical experiences that followed the experiment. These discussions showed a high level of empathy and attunement amongst the educator-participants, and some deep reflection on practitioners' responses and behaviours, for example, Sarita reflected:

'I've just had a thought there. We tend to say 'Oh, you're fine,' you know, when children are crying, but she's telling me she's not fine.' (RG-S4)

And Munehra summed up a whole discussion about comforting distressed children by making the link between the child and adult's experience:

'*…it's how you present yourself to the child, the child will react. So, to soothe the child, you have to be calm yourself. If you panic, the child will panic.*' (RG-S4). Video link: RG-S4 M1 Review and discussion

Such statements evidence how the educator-participants were developing what they knew about children's distress through their experience, thereby combining experiential knowing with emergent propositional knowing (Reason and Heron 2001).

Video link: RG-S4 Experiential exercise and discussion

These data suggest that experiential exercises in group processes are a key pathway to supporting a deeper understanding of embodied intersubjective interactions, as they support educators empathetic understanding of children's experience through combining physical, emotional and mental processes in 'as if' scenarios. Data also indicate the strong thread that weaves through the kinetic, proxemic and haptic behaviours in the complex system of the embodied relationships of a group of people such as this research group, and how this provides the warp for the cloth to be woven with the weft of their interpersonal, intersubjective interactions and unconscious emotional transactions as discussed below.

10.2. Supporting Attuned Embodied Interactions in practice through intersubjective interactions in the group process

Viewing the research group videos through the lens of the PAIG framework (Kennedy et al 2015) as well as the elements of embodiment, enabled data to emerge in relation to the intersubjective interactions within the research group, with particular emphasis on attunement, containment and empathy, and reciprocity and mirroring. These aspects are central to providing an environment for children, in which they feel ‘held in mind’ and so, through the VERP / Work Discussion process providing a ‘holding’ environment for educators, allows a direct experience of such ‘holding’ for themselves.

10.2.1. Attunement, containment and empathy

In VERP, how the guider interacts with the participant is a key feature (Kennedy et al 2015). The Guider’s role is to be alongside, attuned to the participant’s experience and meanings, providing them with a direct experience and model of attunement, in order to enable a deeper understanding that is translatable into pedagogical practice. Therefore, in the review sessions, I followed these elements of attuned intersubjective interaction:

- Open tentative questions or sharing what you see.
- Wondering about what the other is doing, thinking or feeling.
- Naming positively what you see, think or feel.
- Looking interested with friendly posture; - showing emotional warmth
- Receiving; - returning eye contact, smiles, nodding in response
- Receiving the response; - responding; repeating and reflecting back.
- Watching and creating space for response; - waiting and actively listening
- Waiting attentively for your turn / Building on the other’s response

- Giving time and space at each turn / Continue giving and taking turns
- Responding naming own thoughts; - check for reception of your statement.
- Build on ideas give information / Deepen discussion by exploring thoughts and feelings; - checking understanding.
- Mindful response to your own feelings

(PAIG, see appendix 3.4)

The ethos of learning from experience and collaborative approach that underpin VERP, meant that in the individual video reviews of child observations, the emphasis was on drawing out the educator-participant's view. So, my embodied interactions included eye contact, interested expressions and smiling, and open body posture throughout. One of many examples, was in Munehra's review in session four, I smile and reach out a hand to her in a gathering motion, welcoming her to her session and I tip my head and raise my eyebrows in encouragement of her choosing a video clip. Through such embodied intersubjective interactions, I aimed to develop warm personal relationships, within which group members could safely and confidently consider their practice (Kennedy et al 2015, Doria in Kennedy et al. 2011). Empathetic understanding, non-possessive warmth and positive regard are seen as vital in the type of relationship exemplified in Work Discussion, and Doria et al (2009, 2011) suggest that establishing positive relationships in the VERP process is important because it is then that participants can best re/consider views of self.

Fig.41: Welcoming M to her review session

During these review times, I was almost exclusively focused on the individual educator presenting their video clip. And, as noted in 10.1

above, it seemed as if I used gestures and eye contact as a substitute for touch, intending to make the educator-participants to feel seen, heard and 'held' in the session. But as discussed in chapter 3, and identified in the child observations, the gaze communicates much information and causes bodily sensation in the receiver who may experience that gaze differently according to their experience and feelings and socio-cultural context (Fuchs and De Jaegher 2009). Therefore, the intensity of the guider/facilitator's gaze needs to be tempered according to each participant's state. This became apparent in the session six review, where Leiya revealed '*I didn't feel very comfortable, with you right there, watching me'(RG-S6),* whereas I had assumed that my focused attention would be welcome as she was the first of the group to undertake her review.

Fig.42: Focussed attention is not always comfortable

As well as focused attention, a lot of space and time was allowed in the sessions for the educator-participants' thoughts, feelings and understandings, both in terms of temporality (each educator had 30 minutes for their review plus 30 minutes group discussion), and also in terms of chronemics, including the PAIG elements of 'waiting attentively for your turn' / 'giving time and space at each turn' within the interactions. Pausing long enough to give the educator-participant-researcher time to reflect on and express their thoughts and feelings is key to guider-participant interactions, as it also leaves space for new narratives to emerge. And data show how I used pausing frequently throughout the individual reviews and group discussions, especially after viewing each video clip, allowing the educator time to process their thoughts. For example, in Chaya's review in session five:

Clip ends. Pause
J: What do you notice?

Ch: I was touching her.

J: Yeah, pause***, i****n what way?*

Long pause

Ch: Comforting.

J: And how do you think she feels right now?

Long pause,

Ch: Good? (J: yes) she's not moving (J: yes) she's not just trying to get down

J: yes, she's leaning back into that cuddle, isn't she?

In a profession where educators are constantly feeling under pressure from not having enough time, both the temporal space and the chronemics of pausing give educators the uncommon experience of having time to think about their work, so time is key to creating a 'holding' environment. In addition, slowing down an interaction by pausing, also models attuned interactions with children, giving educators a direct experience of a child's need to be given time to process their thoughts and ideas.

Pausing would be supplemented by other PAIG elements of 'open tentative questions', such as *'What did you notice?', 'Any other thoughts, reflections?',* and 'giving time and space at each communicative turn' through attentive listening, leading on to other PAIG aspects such as 'building on ideas, giving information' and 'deepening discussion by exploring thoughts and feelings' also featured throughout, for example in Chaya's review above,

'*Okay, so this is very interesting because it relates to what we've just been talking about, facing (babies) towards us or facing away. And I'm wondering what you were thinking when you changed her position?*'(RG-S5) Video link: RG-S5 C2 Review and discussion

In addition, I frequently reflected back in summary what I had heard the group expressing to me, in examples of the PAIG elements of 'receiving the response/ responding, repeating and reflecting back', which establish attuned relationships (Kennedy et al 2015), thereby empathising with the educator-participants' position and acting as a 'container' for feelings (Bion 1962). In chapters 4 and 8, I discussed Bion's theory of 'container-contained' (Bion 1962) as it applies to caring adults and children. But containment as a concept can also be applied more broadly as it occurs between adults too, where it is a process of enabling people to think about and talk through threatening or anxiety-provoking ideas with someone who can listen and think about them, returning them re-framed in an emotionally more manageable way (Elfer 2012). Therefore, Bion's theory is a central concept of containment in group processes when considering how educators might be effectively 'held' to support their thinking about physical interactions with children. For example, in session one, the educator-participants expressed uncertainty about what exactly we would be doing:

Tovah said: *… … At the moment that's in general, because I'm not exactly sure what we will be covering here… (RG-S1)*

My response to this comment intended to emphasise the collaborative aspect of the research but also to lay the first foundation stone for providing a 'containing' function as described in the Work Discussion method, thereby creating an environment in which work issues can be safely explored (Rustin and Bradley 2019).

I said, *'…a lot of you are saying 'well I don't know yet.' So, for you all to come here not knowing a lot of things, to me is very brave… and I think that indicates your interest and commitment to wanting to develop yourselves and your practice. (I pause) ... mm, one of the things that I want to convey to you is that we're gonna have quite a lot of not knowing (half laugh, pause). And I have also the not knowing, because … there will be different pathways and different issues and different ideas that you yourself will bring and will want to follow.' (RG-S1)*

Video link: RG-S1: Not knowing

When looking at the impact of unconscious processes on group functioning (1961), Bion noted that groups can find it difficult to manage anxieties that arise in the process, which then lead to different group behaviours such as passivity or task avoidance, so Elfer and Dearnley (2007) suggest that organizing, planning and facilitating group sessions, need to take account of these unconscious processes . In this way, as well as the facilitator performing the 'containment' function, the temporal structure or sequence of events of a group also contribute to group containment. So, the planned timings between and within these research group sessions, as set out in chapter 7, gave time and space for unconscious processes to be noticed and expressed. And these structures underpinned the attuned intersubjective interactions (Kennedy et al 2015), both between me and individual group members and between the group as a whole, which not only supported the group's outer moves to cohesion and performing (Tuckman 1965, Egolf et al 2013, Furman et al 2014) but also facilitated inner moves towards a capacity for deeper reflexivity. For example, the educator-participants also expressed anxiety and displayed nervousness about presenting their observations in the individual reviews in sessions two, three and four. In session three,

Remi said, *'I'm just really nervous.*', which I both received with a gentle smile '*Looking at your face, that's what I'm picking up*' and contained by reassuring, '*We're going to do a little bit of relaxation in a minute that will help.*' (RG-S3).

Bion also suggested that the group, as well as the facilitator, can act as an external support that performs a containing function, so in the scenario above, I encouraged this function by then saying to Popi and Leiya '*Was that similar for you last time*?', thereby identifying this nervousness as a shared experience. And, in the same session, when Sarita said:

'*My current feeling is definitely feeling anxious. And that's obviously because we're going to go through our observations…*' (RG-S3)

I noted how the group was looking and smiling at each other a lot, as they recognised their shared nerves about the process. These examples of shared recognition indicate how the containing function of the group was manifesting physically as well as verbally. This began early in the group process. At the beginning of session 2, when Popi and Leiya were the first to review their video clips, I explicitly acknowledged their feelings:

'*Can I just say, I do appreciate you've both been very brave being the first people doing this.*'

And when they finished their review, the rest of the group applauded (RG-S2). Video link: RG-S2 L2 Review and discussion

This nervousness and anxiety about entering the VERP process for the first time was not exclusive to the educator-participants but was also part of my experience. So, when I thanked Popi and Leiya for their contributions in that first review, my thanks were heartfelt because they came not only from appreciation but also from the relief of my own tension, which became physically and emotionally apparent on reviewing the RG-S2 video. Before embarking on these first reviews, I had repeated an explanation of the process and, as I finished the explanation, I paused and subsequently noted in my journal that, in that pause,

'*There was a mixture of both my and their apprehension in this moment. The pause was about me internally acknowledging that this is the real start of this process. It's like the taking in and holding of breath before plunging into water*' (Journal notes).

This example highlights how group (and setting) leaders also need 'holding' and where that might not be another person such as a supervisor, techniques such as journaling can provide a mechanism for sharing an experience and making sense of it. Etherington (2004) believes that a journal can be used by the writer to document their thoughts and feelings about any number of issues that seem important to them, and Moon (2013) suggests, journals can be 'a meeting place in which ideas can intermingle…[and] give rise to new learning' (p.17). In this way, I have previously likened the layered elements of container-contained to a set of Russian dolls, with the child as the smallest doll in the middle who is contained by the adults caring for them, who, in order to be able to carry out this function, need containing by others and by external structures of support (such as professional supervision, journaling etc.) (Manning-Morton 2011, 2014), thereby 'holding' the educator as well as the child.

10.2.2. Reciprocity and mirroring

The intersubjectivity elements of reciprocity and mirroring were also essential to the experience of feeling 'held' in the research group. Trevarthen suggests that reciprocity is a condition of successful intersubjective interactions (Trevarthen 1979, 2001), and that emotions are the essential regulatory factor in intersubjective contact, from which arise shared experience, shared values and shared meaning (Rochat et al. 2009). So, in the VERP process, attention was paid to group members' emotional states as in the PAIG element, 'wondering about what the other is doing, thinking or feeling' (appendix 3.4), both in the individual interactions and in the structure. For example, every session began with open space for the educator-participants to share how they were feeling and any thoughts arising from the last session. This aspect of the structure conveyed the import I gave to thinking about the other, thereby modelling the use of mindsight (Siegel, 1999), which in turn, seemed to engender reciprocity in the intersubjective interactions in the group. This was manifested through listening carefully to each other, giving space and time for each other to talk and respond, and also manifested in embodied reciprocal nurturing interactions within the group, such as providing snacks and drinks for each other, making sure everyone was comfortable and had what they needed, such as chairs, pens etc. For example, at the start of session four, Popi had mistakenly thought I didn't want a cup of tea, and on realising her mistake, immediately jumped up to get me one, and I noted how I felt touched by her looking after my needs. But further to this, as I started the session with my usual inquiry as to how everyone was feeling, for the first time, Sarita said directly to me *'How are <u>you</u>, Julia?'* I was looking and listening to Shaheda and Munehra, at this point so didn't respond at first – but I heard the question and remember wondering how to answer, as I was actually feeling very stressed, but I knew that in the context of my role as group facilitator, it would not be appropriate to let out all my feelings but also, I knew that this role required authenticity. The pause between question and response though, enabled me to give a regulated answer (in a manner reminiscent of Leiya's regulated response to Otto in observation GS1-L2). I looked at Sarita – *'a bit tired but ok.'* and Munehra looked closely at me as if gauging this response. For me, there was something deeply affecting about the care expressed in this scenario. Even now it provokes watery eyes and a quickened heart rate. It seemed as if both Sarita and Popi, and maybe Munehra too, had subconsciously picked up on my stressed state, - manifested in my slightly distracted behaviours and my breathing patterns, and, as Stern says (1998), had intuitively read the rhythmic movements and expressions of my behaviours and thereby responded in an attuned way.

This reciprocity or bi-directionality of intersubjective interactions (Reddy 2008), involves the ability to relate to, interact with and re-present other's actions and behaviours and link them with our own experience. This constitutes mindsight (Siegel 1999), which is underpinned by processes of mirroring (Marshall and Meltzoff, 2014), which are unconscious and involve matching or reflecting the other's body movements, stance, gestures, facial expressions and voice tone or phrasing, with one's own.

This serves interpersonal and emotional functions, as it extends interactive communications (Meltzoff and Moore 1994) and can 'act as affirmations, acceptances, or commentaries' in a communication (Trevarthen et al. 1999). Kennedy at al. (2011) cite research on mirror neurons (Ramachandran 2004) as biological evidence for what is seen to happen in the VERP process, suggesting that they are the biological correlate of intersubjectivity, as they not only fire when we perform an action but also when we observe the same action performed by another. But in this research, I suggest that mirroring not only happened at a single level between the guider and participant in the individual reviews, but also at several other levels. For example, the mirror neurons for 'smiling' would fire in the educator's brain on seeing a child smiling while filming the video observation, and again when reviewing the video, and again on seeing the guider smiling, whose mirror neurons have also fired at seeing the child and the educator smiling; the repetition and reciprocity thereby not only reinforcing neural connections but also strengthening relationship in a complex embodied intersubjective system. A relational system that Ellingson (2017) also cites as foundational when researching within an embodiment framework such as this.

These data emphasise the importance of attuned interactions in the VERP process (Strathie et al. 2015), which underpin the development of warm relationships and positive regard that are central to developing conditions that can 'hold' the educator effectively enough for change in relation to embodied intersubjective interactions to take place. The data presented here also draw attention to the importance of reflexivity, self-awareness and self-regulation on the part of a group facilitator as one of the outer 'Russian dolls' of container-contained (Bion 1962, Manning-Morton 2011), which is essential to this process.

10.2.3. A strengths-based approach

Central to the VERP approach is its strengths-based ethos, with the underpinning beliefs that everybody is doing the best they can at the time, that all people have the capacity to change, and that affirmation and appreciation of strengths and the person's active participation are key to change processes (Kennedy et al. 2015). Data suggest that this ethos was a key factor that contributed to the educator- participants' willingness to reflect on their practice, and thereby, to positively impact physical interactions with babies and young children, through bringing them into focus, and through increased confidence and positive professional esteem.

This is in line with other research using this method (Kennedy et al 2015), that show how VERP can be effective in promoting professional reflection. However, as discussed in chapter 7, being confronted with oneself on video can create uncomfortable states of cognitive dissonance between the perceived self and the ideal self (Doria et al 2013). Usually this results in participants seeing their actions as negative compared to their ideal beliefs but in VERP, the deliberate selection of positive clips and the positive framing of discussions, means that it is the evidence of positive behaviour that is often incompatible with negative self-beliefs. For 0-3s educators in the UK, any such existing negative self-belief is exacerbated by the current cultural context of ECCE, where the voices of educators working with 0-3-year-olds have been marginalised in early years discourse (McDowall Clark and Baylis, 2012, Dalli et al 2011, Rockel 2009) and concepts of professionalism devalue their caring role and specialist knowledge and expertise (Manning-Morton 2006, Goouch & Powel, 2013), as discussed in chapter 2. In such a context, it was not surprising that at first, keeping focused on strengths and positive examples of practice, when reviewing the videos in the research group, was a challenge. Initially there were evaluative comments following individual video reviews such as, '*That was quite good as well*' (Popi) and '*I think it was really nice*' (Shaheda). This tendency to evaluate is highly influenced by the current early years culture that is couched in a critical frame that requires educators in the UK to evaluate themselves, with a constant focus on what is not good enough (Osgood 2012, Castro-Kemp and Kemp 2025). Such critical evaluation was not only evident in educator-participant's feedback to others, but it was also seen in their responses to their own observation video clips. In directly critical comments such as,

'*I actually notice that watching my own videos... I'm like, what's this? What's that? kind of questions and I'm thinking shut up, you're asking too many questions…*'(Popi) and also, self-deprecating comments using the word ‘just’ in ways that minimised their practice or knowledge ‘*I think it's just something that we do’ (*Shaheda*)*. It was also shown through non-verbal responses such as Chaya shrugging at my positive comments, as if what she was doing didn’t signify much.

Fig. 43: ‘So what’ gesture with hands and shrug.

In this review, Chaya also made a gesture with her hand spread in front of her with upturned palms, as if to say ‘so what’ but pausing meant that she had space to go beyond dismissing her actions in the video to thinking more deeply about the child and also perhaps to valuing her practice more. However, as these responses were constantly met with my actions and words focusing on the positive aspects of the video observations, gradually the strengths-based ethos of VERP took hold and feedback began to consist of more reflective comments such as ‘I *felt really calm watching that video…*’ (Popi). In addition, this strengths-based approach also began to counteract negative self-beliefs and to positively impact the educator-participants professional self-esteem. As evidenced in the session 6 review, where they commented:

Sarita: ‘*It (the research) has allowed me to be less critical of myself and actually focus on the things that are working’.*

Shaheda: *‘I’ve taken from this to be more patient with myself and the children, giving myself more time to communicate with my team too.’*

And Popi also explained how this approach had impacted her own leadership practice with her team:

‘*After the last session, I was so energised. When I was watching the video, and the step by step you took me through, there was a lot of positivity, and a sense of, ‘you know what, it's not all wrong.’ And I thought, why don't I do that with my staff, because a lot of the time, they don’t get to* *be told that they're doing a great job. They need to see that there is a lot of positivity in the way they interact with children and how they handle situations day to day.' (RG-S3)*

Therefore, this research asserts that a strengths-based ethos was a key factor that contributed to the educator- participants' willingness to reflect on their practice, and thereby, to positively impact physical interactions with babies and young children, through bringing them into focus, and through increased confidence and positive professional esteem.

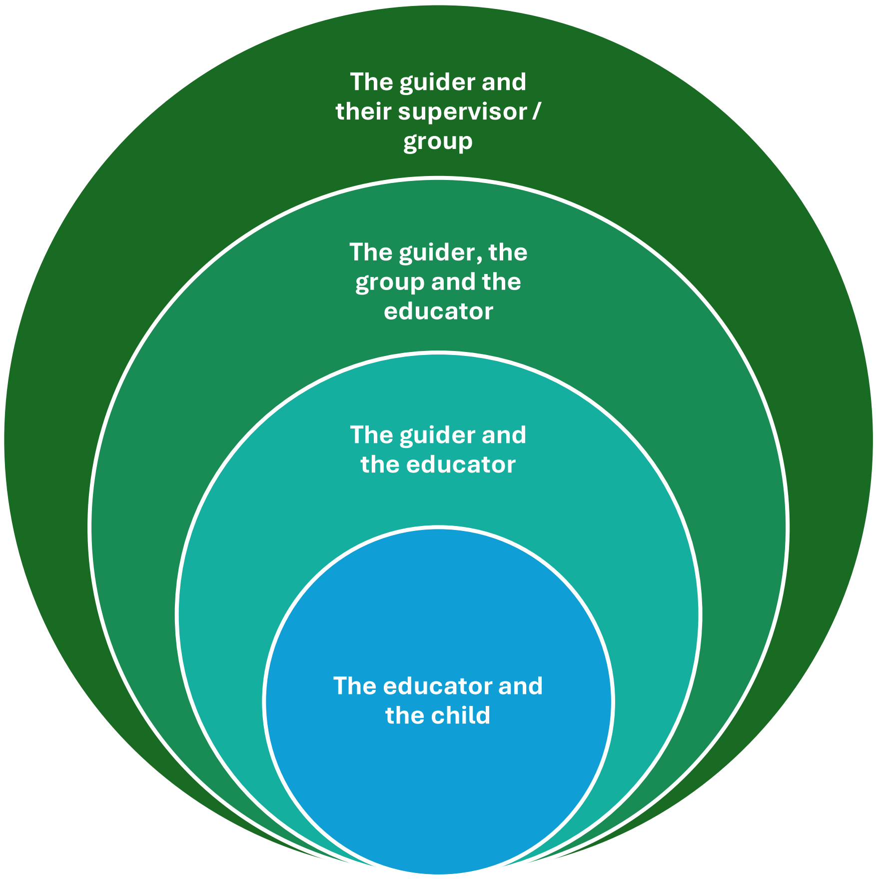
In this research, the strengths-based approach was enhanced by using a 'reflective team' approach as suggested by Kennedy et al (2011), which includes the idea from Work Discussion (Rustin and Bradley 2019) that peer-to-peer reflection in a small group provides a safe space for sharing practice, exploring dilemmas and challenging thinking. And, in a co-operative inquiry context, a closed, stable small group environment offers participants a safe space within which inquiry can flourish. As Popi noted,

'*To be able to have these discussions with people who know what you're going through, not questioning what you're doing, but being able to make you think. I think that was really impactful for me*' (RG-S6).

But, through my own reflexive process, I realised that it wasn't only the educator-participants who struggled with a strengths-based approach, I also found it a challenge, steeped as I have been in looking critically at practice throughout my professional life. Consequently, on reviewing the first observation videos, I was overwhelmed with hopeless feelings, believing I could see nothing positive. Fortunately, a VIG supervisor encouraged me to keep looking and assured me that there was always something positive to see. And on re-viewing, I realised that my habit of looking for what was 'wrong' was preventing me from seeing positive examples. The VIG supervisor's advice was invaluable in helping me to maintain a focus on what was working and on sustaining a positive approach throughout the research process. This affirms the idea that the concept of 'container-contained', wherein containment might be represented by a set of nesting Russian Dolls, or concentric circles (Manning-Morton 2006, 2024), is applicable to all those involved in processes of care for others, however far they might be from the cared for person at the centre, as only then are they helpful to the person they are ‘containing’. As Miller et al (1989) say, ‘the ‘container’ may then be in need of containment’ (p.27), because an observer often becomes a ‘container’ for some aspect of the experience observed, and, when functioning well, the reflective team or group may then act as a ‘container’ for the observer, helping them to maintain the capacity to attend to what is observed. This process at the heart of Work Discussion and resonates with the ‘nested intersubjectivity’ of the VERP process as identified by Kennedy et al (2015) in which the interactions between VERP guider and client are supported by a VERP supervisor and the video and the overarching values and principles of the approach (p.27).

The Russian doll / nested intersubjectivity therefore is a key concept in relation to providing an effective ‘holding’ environment that supports educators in thinking reflexively about their physical interactions.

Fig. 44. Nested intersubjectivity in the ‘Holding the Baby: Holding the Educator’ research (after Kennedy et al. 2015)



10.2.4. Challenges, interventions and power in the group process

In the container-contained model discussed above, the ‘container’ does not just absorb the other’s feelings but also processes them and re-presents them in a way that can be thought about. Similarly, in the VERP process, the guider does not just receive and accept what is presented, they also build on what is seen and said, such as ‘responding naming own thoughts’ and ‘build on ideas give information’ and ‘deepen discussion by exploring thoughts and feelings.’ So, there are elements of PAIG that infer a leading role in VERP interventions. Co-operative inquiry also suggest that part of the lead researcher / group facilitator role is to challenge or intervene in both the group process and the task where necessary (Reason and Bradbury 2006, Reason and Heron 2001). However, direct interventions such as Reason and Bradbury (2006) might conceive, were minimal in this research group, there were just three direct interventions when I asked group members to avoid evaluative comments in their feedback. Other challenges were embedded in our joint reflections, such as,

‘*Actually, I've just realized that I'm just accepting what you're saying, which is fine, but could you give me an example of what that looks like?*’

Or through my body language, for example, pausing long enough to give the educator-participant-researcher time to reflect on and extend or revise their thought. So, VERP interventions have a less directive emphasis, instead, they are couched in personal reflection that maintain a focus on positive actions. For example, I commented to Leiya,

‘*So, what I thought was interesting about this was the immediate joint attention on something else. And I think that this is when he offered you the play dough, that was a joint attention, but also the book is the next time when there's a really strong joint attention, that you're both focusing on.*’

This approach to intervention or making challenges is rooted in the strengths-based ethos of VERP and reflects the underpinning belief that affirmation and appreciation of strengths are key to change processes (Kennedy et al. 2015). This requires a group leader to carefully consider the reasons for an intervention and makes practicing reflexivity vital in a lead researcher role. An example of this occurred in relation to the PAIG aspects of ‘building on ideas, giving information’ and ‘deepening discussion by exploring thoughts and feelings'. In the group sessions, there were many instances where I led the discussion by introducing a pedagogical or theoretical idea in relation to the observation being reviewed. For example,

'... and there's this thing about a 'repair'. So, there was this disruption, when you tried to hold this hand and he wasn't having it, but you repaired by coming back down (to his level).

But the videoing of the group discussions enabled reflection on my actions and behaviours in this regard, especially through shared video viewing, which allows for multiple viewpoints and can offer an alternative interpretation (Flewitt 2006). For example, following a case study presentation of part of this research to my Pikler colleagues, it was noted how often I offered theoretical ideas to build on discussions. It was suggested that by doing this, I might be '*putting things on the high shelf*', that is, presenting ideas that may be out of reach of the educator-participants. This prompted me to reflect on why and how I was doing this, and so, became more careful about these interventions, checking the group's understanding when I made them in line with the PAIG elements of 'checking understanding' and 'check for reception of your statement'. However, because I believe that learning is a combined process of thinking, feeling and doing, I considered that referencing these ideas was an important part of our discussions. I also sensed that they were welcomed by the group, who, in session one, had explicitly identified their desire to learn from, as well as contribute to the research. But to confirm my position, I included a question about this issue in the follow-up interviews, for example,

'*Every so often I would just say, oh, and that's about this bit of theory or that bit, you know, ... And I wondered what that felt like for you?*'.

And the most common response was that the educator-participants found these pieces of information useful and interesting. As Popi said,

'*I'm actually quite comfortable with that, learning new things. So, when you do that, it makes me feel like, oh, okay, that makes sense*.'

And others commented that it gave meaning to the research and their observations. As Rustin suggests, 'the combination of experience-based discussion and learning of relevant concepts and theories, enables practitioners in caring professions, that have human relations at their centre, to find meaning in their experiences and to develop their capacity for thoughtful practice' (Rustin and Bradley 2019).

Reflecting on interventions also entails reflecting on the balance of power between the group leader / researcher and group participants. As Reason explains in relation to co-operative inquiry, 'There is a line of creative tension between power and authority, on the one hand, and collaboration on the other.' (2002, p.174). Therefore, because this research was designed to be a collaborative partnership, I also reflected on another instance that highlighted how collaboration and a passive 'non-intervention' is still an intervention that directs the group, as follows:

The video data show how, by session 5, the group was very familiar and confident with the VERP process and often led the discussions. I noted,

'*I sit back as R and P talk about staff members motivations. I'm letting this run because I think I know where it's going and it's a discussion I welcome.'*

On other occasions, my body language subtly suggested that I was pondering on whether and how to direct the process such as '*bring finger to lips and look around the group questioningly. I hesitate and look up as if thinking before I ask…*' And sometimes I made this explicit, for example in session four I said,

'*I'm trying to decide which experiment to do and whether or not to go outside, … 'it's up to you, what do you want to do, go outside or stay in here?' (RG-S4)*

In some contexts, this could be interpreted as indecision or a lack of leadership, but in this collaborative approach such flexibility and consultation reflected my confidence in the group's right and readiness to share in decision-making.

However, there was one instance when devolving the power of a decision to the group, was as much about my own uncertainty, as about purposeful collaboration. In session 5, for the first time, Chaya had submitted a video featuring a colleague who wasn't in the group, so I had discounted looking at clips from that video. But after looking at her own clips, we had some time left and Chaya suggested looking at clips from this video. I hesitated, looked at my watch and said, *'I'm not sure' (long pause), 'Let's wait and see what everybody says and if we've got enough time'*. Then to the group, '*Okay, so the next decision is, do we want to use the next 10 minutes talking, or do we want to look at a bit more video?'*

The group agreed to watch a clip from the video, which then prompted a discussion that questioned the educator's motivations and actions. And, although the group approached the discussion in a measured, mature, and respectful way, and even though the discussion was rich in learning, afterwards I was uncomfortable with this decision as it did not reflect VERP's strengths-based ethos. Reason and Heron (2001) emphasise that any intervention in a group process must be done with awareness of whether the intervention is appropriate or not. Checking the appropriateness and usefulness of my responses was a constant meta-awareness process for me as the group facilitator and VERP 'guider', and in the above instance, I questioned my motivations in this (non) intervention and how appropriate it was. As a result, I suggest that, for collaboration to flourish, it is important that a group-facilitator or lead-researcher ensures that their use of power is 'in the service of creating a space for collaboration' (Reason and Heron 2001), but it is equally important not to abdicate leadership responsibilities under the guise of collaboration and to recognise and own one's power, not using it to bolster position but to empower others and ensure a fair response.

These data resonate with ideas inherent to Reflexive Inquiry (Oliver, 2005), which includes an appreciative principle in which all action is seen as meaningful, and meaning is open to multiple interpretation and choice of response. This means that a group facilitator must position themselves in relation to others in the group with care and needs to be able to embrace robustness alongside empathy in their approach. Therefore, it was of central importance to this research that as the facilitator I was able to allow the usefulness of incoherence, to stop and listen to my 'blocks', thoughts and feelings of 'not knowing', of not feeling or of feeling absent, in a high level of reflection on bodily and emotional feelings and choice of action if this process was to support educators attuned, embodied interactions.

10.3. Supporting attuned embodied interactions in practice through the use of video in the group process

Throughout this research, data show how video was an essential part of the group process that enabled a deep exploration of children's and educators' lived experience of physical interactions. In their approach to video data analysis, Fazeli et al. (2023) identify that video data, is of immense help to researchers trying to understand human interactions and relationships, as discussed in chapter 7. And the ability to reflect on embodied intersubjective interactions in this research was certainly greatly enhanced by the use of video throughout. In the VERP reviews, video provided a level of detailed data that engendered in-depth analysis and reflection, enabling physical interactions to be evident and more readily focused upon (Fazeli at al., 2023). But what was highly significant was the close scrutiny of video micro-moments and the slowing down of the video clips in the VERP process, which made the subtleties and complexities of physical interactions more perceptible. For example, in observation GS3-Sh2: Shahida and Rahima: Just woken up / Cuddle, discussed in chapter 9, the mirroring of the educator's gesture by the child is so subtle, it would not have been recognised had it not been for the replaying of the clip in the VERP process. As Shaheda noted:

'When I watched it back, I doubt if I'd have even noticed that mirroring, when I was doing that movement on the child's back and the child was doing it on mine, until I saw it in the video…'

Video link: GS3-Sh1 Subtle mirroring - no sound

And Leiya said:

'*Watching the video observations helped me a lot and I was able to see things that I hadn't noticed or paid attention to…' (RG-S6)*

And Popi noted*,*

'I realise how you do things without thinking and how easy it is to miss things' (RG-S6).

In this way, slowing down and pausing the videos, gave 'perceptual salience' to elements of practice and interactions that would otherwise be taken for granted or not consciously thought about.

In addition, slowing down the video had the effect of bringing us closer to the child's experience. For example, slowing down clips of observation

GS4-S1: Sarita and Rocco: Arrival and separation, highlighted the intensity of Rocco's distress as it prolonged the experiencing of it, making it both clearer and harder to watch. As MacRae (2019) suggests, slowing down video may shift adult's perception of time to consider the child's experience of the duration and intensity of an event. So, re-experiencing and consciously recognising that discomfort through slowing down the video brought us closer to Rocco's experience. It also highlighted the impact of such an 'everyday' scenario on an educator that may not usually be noted as particularly significant at the time. In this way, using an embodiment framework (Ellingson 2017) drew attention to both children's and educators' lived physical experiences and also drew attention to the contribution of the more-than-human element of video as co-constituting the shared meanings we made (Digby 2023).

Simultaneous viewing of video, as in the VERP group review, also enabled multiple viewpoints and collaborative analysis of an observation (Jewitt 2012). Sarita noted,

'*it's been interesting to see other people's perspective because even though when you watch it back yourself, its 'okay', but then you hear what other people saw, it's like 'oh actually I didn't see that.' (RG-S6).*

In this way, the use of video contributed hugely to what Reason and Heron (2001) identify as phase III of co-operative inquiry, in which understanding can deepen, and insights emerge as co-subject-researchers become fully immersed in and engaged with their experience. And in the session six review, examples of how this sharing of perspectives in a reflective team approach impacted practice emerged, such as Shaheda commenting on giving more time for nappy changing, after watching Remi's video observation GS4-R1.

But not only did the taking, viewing and reviewing of the clips help to focus on the immediate event, the child and the meaning of the child's and the adult's actions in that moment, it also seemed to translate into the educators' greater awareness of their practice in relation to their physical interactions with children that they haven't noticed before. As Leiya noted,

'*I am more aware and respectful of children not wanting to hold my hand or have a cuddle or any physical touch such as stroking their face...'*

And Sarita noted,

‘*I notice more what’s underneath, the detail and I’m noticing physical communication more’ (RG-S6).*

This data confirms how the use of video in VERP promotes change through processes of self-awareness, self-confrontation and self-modelling (Figueira 2007). The visual evidence in the video deepens learning, as the educator can see themselves engaged in a repertoire of positive behaviours that are already within their capacity and experience. But in addition to this, when the strengths-based VERP processes are couched in a small group Work Discussion frame that creates a safe ‘holding’ space for reflexivity, it also impacts professional self-perception. And, in this research, it seemed that the educator-participants became more open to reflecting on their own states and behaviours and thereby develop conscientisation not only about practice in relation to physical caregiving interactions with children but also in relation to their professional selves.

As Sarita noted, ‘*I’ve noticed a shift in my body language and internal feelings.’*

and Leiya said: ‘*… I was able to reflect on my response and approach to children.’(RG-S6).*

For several members of the group, this extended to other aspects of their professional and personal personae, especially in relation to having more confidence in speaking in groups and voicing their ideas and opinions.

As Remi noted, ‘*I never usually speak in groups / on training courses*’, and yet she actively contributed to discussions from the start.

And Leiya commented: *I am much more confident than I was at the beginning. It has helped me to speak up during group sessions*

Overall, data suggest that using VERP with a focus on embodiment means that the shared multi-sensory bodily actions of observer and observee, researcher and participant, all became the focus of meaning making in this research (Elwick 2015) and the ability to reflect more deeply arises from the VERP process and from the relationship between the Guider, the participant and the video and reflecting in the moment to learn from past action. So, not only was video key to gathering data about the educator-child-participants interactions but also about the research process and thereby facilitated the identification of, and ability to follow the thread weaving between the different aspects of this research.

10.4. Unconscious processes becoming conscious in the research group

Data from the research group session videos also suggest that paying attention to the emotional dynamics of experience and the relevance of unconscious factors, that are central to VERP and Work Discussion, means that the reflexive processes in this research group enabled the lead researcher and the educator-participants to bring unconscious responses to the fore and to think about their relevance and usefulness. For example, in session three, when we were discussing distractions in the environment, I commented,

'*And I think that the other thing, is that we interrupt children's thinking… sometimes we do it inadvertently… Or sometimes we actually do it on purpose. And I think we need to think about that*.' (RG-S3)

And on reviewing the video recording of that session, I saw that I had interrupted group members on several occasions and that maybe this behaviour had begun to filter through from my unconscious to the edges of my consciousness and my self-awareness. This seems to indicate that in addition to mirroring in intersubjective interactions between subjects as discussed above, mirroring may also link internal unconscious thoughts and feelings with outer actions and expressions. Similarly, in session three, when we were sitting in cramped conditions, Popi raised the issue of the impact of space on the children

'*They kind of spent the whole morning in the room… it had a massive impact on them how they reacted in the afternoon*.'

At the time, this contribution was tangential to the topic of noise being discussed but linked unconsciously to the group's current uncomfortable situation.

And the example cited in 10.2.2, where the educator-participants seemed to tune into my underlying stress, illustrated the core ideas in the methods used in this research; that of the embodied nature of our responses and the relevancy of unconscious intersubjective communication, which can usefully inform our work interactions; tuning in to children and families and then providing empathy and containment when they need it.

In this way, using VERP and Work Discussion (Rustin and Bradley 2019), engendered reflexive processes in this research group, which made conscious many of the unconscious processes at play. In addition, attending to unconscious factors in the reflexive reading of data, and reading the emergent data from the observations and the group process through each other, highlighted the mirrored experience of the educator-participant's experience in the research group and that which they noticed of the children in their observations, the implications of which are discussed further in chapter 11.

10.5. Conclusion

Overall, the data presented in this chapter found that paying attention to the research process and using collaborative, reflexive and experiential methods was not only relevant in relation to my stated values and position, but also provided evidence of how attuned embodied interactions in physical caregiving practices can be supported and facilitated using Video Enhanced Reflective Practice and Work Discussion as professional development tools as well as research methods.

Data show that peer-to-peer reflection in a small group, as in Work Discussion and the strengths-based ethos of VERP, with an emphasis on learning from experience, can enhance educator's professional confidence and self-esteem, thereby contributing to self-efficacy and the potential for reframing ideas and increasing awareness of the impact of practices, such as physical interactions, on children's lived experience in settings. Reflexive use of video material enables otherwise overlooked physical interactions to come to be noticed, engendering deeper reflexivity and also self-awareness through highlighting the subtlety and complexity of such embodied communications, particularly through slowing down and pausing video.

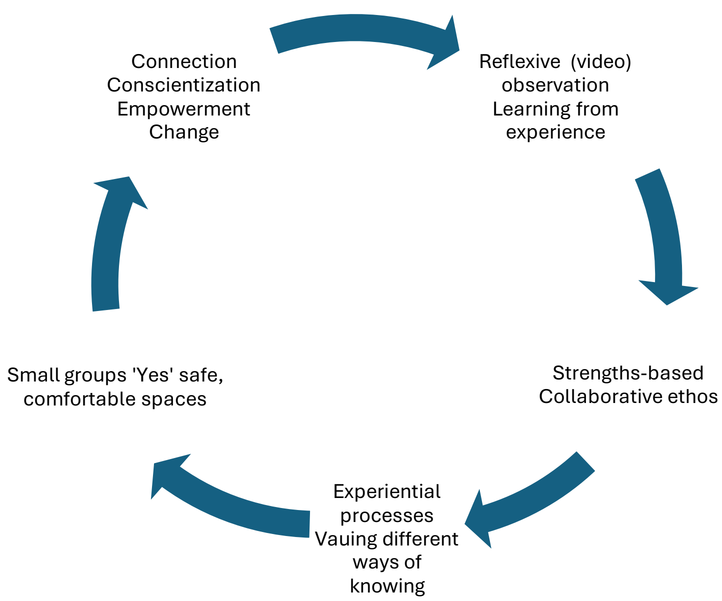
This enhanced awareness and openness to changing practice, I suggest is also facilitated through experiential processes and positive modelling of attuned interactions by a group leader, who uses reflexive methods to increase their own awareness of group dynamics and who structures a physical and psychological space that offers 'containment' and an experience of being 'seen', 'heard' and 'held in mind'.

Data also indicate that using an approach and methods that pay attention to the emotional dynamics of experience, and the relevance of unconscious factors can reveal unconscious connections in group process, which can mirror children's experiences and vice versa, as explored in chapter 11.

In summary, this chapter identifies the following key findings in relation to RQ3: How might attuned physical caregiving interactions in early years practice be supported and facilitated?

- Attuned embodied interactions in physical caregiving practices can be supported and facilitated using VERP and Work Discussion.
- Peer-to-peer reflection in a small group, with a strengths-based ethos and an emphasis on learning from experience, can enhance educator's professional confidence and self-esteem, contribute to self-efficacy and the potential for reframing ideas.
- Reflexive use of video observation highlights the complexity of embodied intersubjective interactions and increases self-awareness and awareness of the impact of practice.
- Openness to changing practice is facilitated through experiential processes and positive modelling of attuned interactions, in a space that provides a 'holding' environment for the educator.

Fig. 45: How attuned physical caregiving interactions in early years practice might be supported and facilitated



Chapter 11: Embodied interactions between educators and 0-3-year-olds in early years settings: Weaving Interconnecting Strands Together

11.0. Introduction

In the previous three chapters, I presented and discussed the data that were assembled from the video observations of physical interactions between the educator-participant-researchers and the child-participants, and also from the videos of the six research group sessions and journal notes made during the research process. In this chapter, I revisit the main findings identified in chapters 8, 9 and 10, elaborating further on key aspects and highlighting the inter-connections between them. In this regard, I focus on four key areas; touch, proximity, the influence of educators intrapersonal and interpersonal capacities, and of the environment and of time, and how they form a matrix of factors that influence physical interactions in early years settings. I also discuss the implications of those connections for how the lived physical experiences of embodied interactions for babies and toddlers are understood and how early years educators might be supported to think more deeply about them. Thereby further illuminating the central argument of this thesis, that children's bodyselves are a significant part of their experience, so physical interactions and care giving events should be central to early years pedagogy.

As well as reviewing the data materials separately, I also read them alongside and through each other, which brought patterns of connectedness to the surface between the separate threads in relation to the three research questions, which I weave together here. Considering the interconnectedness of the strands of inquiry reflects the holistic philosophy of this research and the concept of complex systems that is inherent to an embodiment framework, which emphasises a dialogical, bi-directional, reciprocal relationship within and between self and world (Mariani-Wighley et al 2022). This focus on interrelationships (Hetherington 2013) supports the 'border crossing' (Moss 2018) between different theoretical perspectives undertaken in this research. Significant in this regard was the conjoining of embodiment and intersubjectivity in the process of the research, which meant that the emotional and relational aspects of embodiment were highlighted, and the physical aspects of intersubjectivity were emphasised, which may otherwise have been understated if only looked at separately, but when woven together emphasised the imbricated nature of embodied intersubjectivity (Kiverstein 2012).

This coalescence enabled the emergence of data in relation to the connectivity of the internal and external in children's embodied experience of physical interactions, and of space, objects, actions and time in the intra-actions between the human and more-than-human within the phenomenon of embodied intersubjectivity. It also revealed mirrored experiences between the educator-participants in the research group and the child-participants in the observations and brought the elements of relationship and emotion to the fore, which also inferred a connection between the educator-participants' personal experience and feelings with their professional understanding of children and practice. Thereby highlighting that attuned embodied interactions that 'hold the baby' require professional support processes that also 'hold' the educator.

11.1. Holding the baby: Haptics

A key finding in this research is that of a continuum of touch in physical interactions between educators and young children, which emphasises the complex multi-variable experiences across and within each type of touch (Figs. 27, 28). This continuum incorporates the different types of touch discussed in chapters 3 and 8, including affective touch (Fairhurst et al. 2022), playful (Peláez-Nogueras et al. 1997) or social touch (Schirmer and McGlone 2022) and intrusive or controlling touch, and identifies these as impacting children's states and behaviours differently, from positive relaxed responses, through ambivalent or avoidant responses, to negative affect, thereby contributing differently to babies' and young children's experience of emotion and self / co-regulation, relationship with self/other, and connection with self/other/ the environment in early years settings.

In a holistic, embodiment frame, these are not isolated physical gestures but are co-ordinated with whole body communications in attuned embodied reciprocity. For example, in relation to affective touch, slow, gentle rhythmic stroking may be seen on the physical level to provide homeostatic regulation but also to create a potential experience of a nurturing relationship (Beltrán et al 2020, Fotopoulou et al 2022), which is connected to a child’s body/self-awareness (Boehme and Olausson 2022) and positive self-concept. However, that touch needs also to be accompanied by facial expressions and vocalisations that convey attuned mentalisation, for the child to have a whole embodied experience. In addition, a child’s experience of physical interactions is also connected to their learning (Svinth 2018), as, when they are in states of physical-emotional-personal equilibrium, babies and young children are more able to think about their experiences. This is especially the case in relation to the levels of consistency of interactions in physical care. When consistent, the patterns of sensory information experienced by the child are predictable enough for them to make causal connections between feeling, perceiving and action (Goswami 2011), and thereby to develop cognitive understanding of the experience and a consistent internal representation of themselves (Winnicott 1964, Boehme and Olausson 2022). Causal reasoning, therefore, is not just about logical thinking but also includes physical, relational, and emotional understanding. Therefore, this research finds that affective touch that is constant and attuned to the child’s state and intends to sooth, comfort or reassure, is instrumental in supporting children’s positive body/feelings, body/self experience, body/self/other relationships, and bodyself/world understanding, and is therefore a key element of embodied interactions that positively contribute to young children’s experience in early years settings.

The continuum of touch proposed in this research also identifies the various underlying intentions that influenced the types of touch used by educators. These ranged from caring intentions to the intention to connect or gain attention through playful touch, to an educator’s intention to alter a child’s physical-emotional state or to ‘teach’ or gain compliance. These intentions can be seen to subtly shift the qualities of touch as the interactions unfold, which is why I have conceived touch types as a continuum, as they overlap according to the adult’s intention, and impact children differently, soliciting different responses, not only according to the quality of the touch but also depending on the quality of the existing relationship between educator and child, the educator's ability to read the child's cues, and on the emotional temperature of the scenario. In this regard, this research suggests that touch can also express a differential in relationship status between educators and children and thereby potentially have degenerative impacts on children's experience, even though the intention may be benign. For example, affective touch that intends to change a child's emotional and physical state from agitated to calm and is attuned to the child usually has a benign intention and effect. And the gentle prodding of a child's tummy, such as in observation GS1-L2, may also have a benign intention and serve to make a connection between the educator and child. This type of connecting, playful touch, such as short affectionate taps and strokes are identified in this research and by Cekaite and Bergnehr (2018), as having generative intent, as they signal attention and acknowledgement of being together with a child. In addition, this type of touch encourages joint attention (Striano and Rochat 2000) bringing the child's attention to aspects of the environment / themselves and others, thereby facilitating relationship and mindsight. So, Cekaite and Bergnehr (2018) suggest that playful haptic contact provides greater participation possibilities and positive emotional experiences for younger children. However, this research introduces a different view on playful or stimulating touch by suggesting that it may be benign in intent but not always have a benign impact on a child's experience or elicit a positive response. Playful prodding or tickling touch also enters the child's intimate space and touches a vulnerable part of the body, so could be experienced by the child as intrusive, unless they are already confident in a positive relationship in which they can assert their bodily boundaries as they wish. In addition, this research identified subtle, ambivalent and ambiguous responses from children to playful touch, such as shrugging, 'snuggling-in' or 'fawning' type affection (Nelson 2025) that are more easily misinterpreted by educators. This is particularly the case in relation to tickling games, as discussed in chapter 8, which is complicated by the kind of ambiguous responses that children may convey in response to such touch

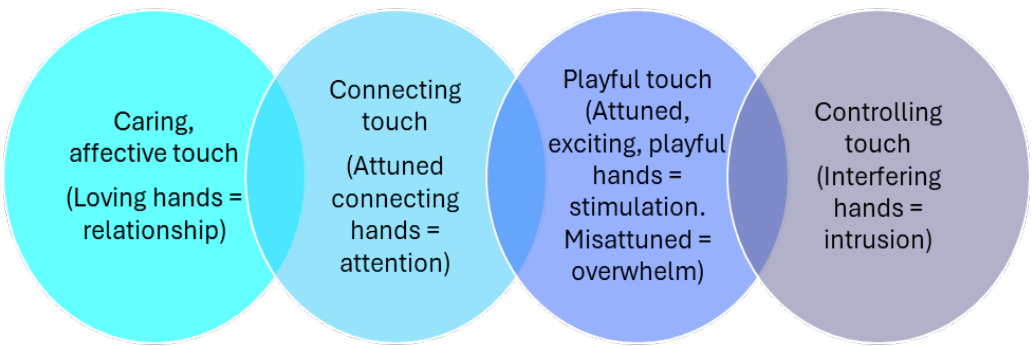
In addition, the impact of playful touch is influenced not only by the educator's intention but also by their level of attunement to the child's cues. Where there is close attunement, playful physical interactions may generate positive feelings and responses in the child but if the educator is not attuned to the child's responses, then playful touch can quickly transmute into intrusive touch, and children's cues are more readily overlooked. This also operates at a physiological level, where sensitivity to a child's cues is impacted by tension in the carer's body (Field 2014). The less tension we have, the more open are our sensory channels to a child's cues or signals such as body or eye movements, which thereby impacts levels of emotional attunement. Therefore, organisational factors that cause stress for educators, such as time pressures or large numbers of children to attend to, must be addressed because it seems that where the educator's intention is driven by the institution's agenda this transmutation along the continuum from playful to intrusive or controlling, is more likely.

In these contexts, playful or stimulating touch can also be seen to be used as a strategy for managing children's physiological and emotional states according to the adult's agenda, task or time frame, wherein the intention is to move a child on from a current state or situation to another according to pressures of time or unconscious responses to the 'disciplinary space' (Foucault 1972/1979) of an ECCE discourse that focuses on urging children towards set outcomes. When intrusive and controlling types of touch are used as a strategy in this way, they can miss or override a child's cues and lead to inattention to and disrespect for children's lived embodied experience, neglect of their embodied selves and potentially create an experience for the child in which the adult holds all the power, thereby teaching a child that how they feel doesn't matter and perhaps to learn to ignore or disassociate from their embodied feelings.

So, although this research recognises that there are playful type touches that convey affection and connection, this thesis recommends that using 'playful' touch such as tickling or vigorous games in order to control children's physical or emotional states should be avoided in ECCE. And that responses not usually considered as avoidance such as shoulder shrugging and 'snuggling-in', as discussed in chapter 8, should be noticed and interpreted carefully by educators as they too may indicate possible negative, or at least ambivalent, responses.

Fig. 28: A continuum of touch in relation to adults' intentions

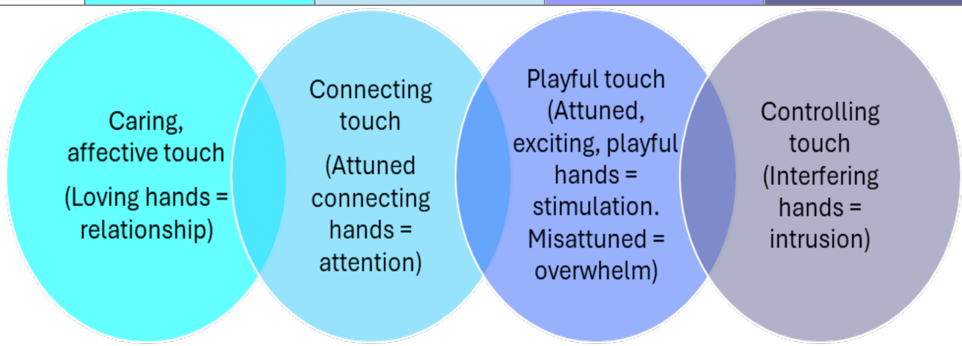
Descriptor of type of touch **Degree of firmness, speed and evenness**	Slow, gentle rhythmic stroking. Circular or light, soft stroking touch using the palm of the hand or the fingertips. Gently bringing heads together. Slow, smooth rocking movements. Close proximity of torsos. Front: front orientation	Gentle prodding. Soft stroking of face or head. More active hand actions with fingertips or palms. More distance between torsos. Front: front or front: side orientation	More vigorous prodding. Tickling / poking. Gentle jostling of bodies and limbs. Varied distance between torsos. Varied orientation	More vigorous tickling / poking. Manipulating the child's arms, hands, body, legs using sudden, rapid or jerky movements. More vigorous jostling / rocking. Random adjustment of the child's hair / clothes/ limbs / body position. Varied distance between torsos. Varied orientation



Adults' intentions/ behaviours	To soothe, care, comfort. Attuned to child's responses	To bring the child's attention to aspects of the environment / themselves and others. Attuned to child's responses.	To engage the child. To stimulate a response. To change a child's physical / emotional state. Attuned /mis-attuned.	Adult's need to move child on to another activity. To encourage compliance or gain child's attention. Mis-attuned to child

Fig. 29: A continuum of touch in relation to children's responses and impact

Child's response	Relaxation More eye contact smiles and vocalisations. Reciprocal gestures	Positive responses: eye contact, smiles, vocalisations. Ambivalent responses: shrugging Avoidant responses: head and gaze aversion.	Positive responses: eye contact and reciprocal gestures. Ambivalent responses: twitching movements, 'snuggling in' and shrugging Avoidant responses: head and gaze aversion, pulling hands away. Negative affect: protesting.	Ambivalent responses: twitching movements, 'snuggling in', shrugging. Avoidant responses: head and gaze aversion, pulling hands away. Passive compliance. Negative affect, protesting, crying.



Impact	Soothing. Reinforces social attachment. Provides homeostatic and allostatic regulation. Regulates fear and stress reactivity. Builds the foundations of co-regulation.	Stimulating / relational. Stimulates awareness of others' intentions. Reinforces joint attention.	Stimulating / excitatory. Stimulates awareness of others' intentions. Reinforces joint attention. Reinforces social rules and belonging. Loss of bodily integrity, autonomy and control.	Stimulating /inhibiting. Negative affect. Loss of bodily integrity, autonomy and control.

11.1.1. Holding the Educator - Embodied connections

In this research process, the potential inattention to children's physical experiences discussed above, is linked to the disconnect between educators' real experience of the physical graft, bodily strain and embodied emotional stress of working with young children, as in Popi's recognition of the physical strain experienced by Sarita when rocking Theo to sleep *(RG-S3):* '*The pain in your arms, holding for so long*'… *(RG-S3),* and the metanarrative of the dedicated early years educator, who is 'naturally' caring and is commonly depicted as just playing all day. Thereby revealing that educators as well as children are subject to 'disciplinary spaces' that construct the discourses through which they understand their pedagogy and their professional selves. However, this thesis suggests that when this disconnect between pedagogical discourse and the centrality of bodily experience for children is highlighted through reflexive discussion, and educators' own physical (and emotional) experience is brought to the foreground of awareness, greater understandings of connected experience can emerge, as discussed further below.

The findings of this research in relation to types of touch and their impact on children's lived experience, leads to conceiving of hands as producers of meaning and what adult's hands might mean for a child. In the context of this research, educators' hands represent the educator's self, attitudes, thought, feelings and intentions and are a conduit through which children understand what the educator thinks about them through embodied intersubjective transference. Babies and young children experience the mental and physical states of their caregivers through touch in an inter-corporeal dialogue (Stern 1998), as they perceive the muscular tension and movements of the other in physical interactions. This is because the amount of tension we have in our bodies directly affects the sensitivity we have in our hands and therefore, the quality of our touch (Field 2014). If gestures, touch or holding are stiffened and restricted by muscular and emotional tension, the signal sent to the child is distorted and so a child will sense if they are being held confidently or nervously, lovingly or uncaringly, and the degree of relational connection, through the degrees of smoothness, gentleness or speed of educators' actions. Therefore, this research recommends that educators use slow paced hand and other bodily gestures in all physical interactions, and particularly during physical care events, because not only are attuned physical interactions predicated on positive close relationships, but attuned relationships are also promoted through attentive and respectful physical care interactions in a connected, reciprocal process.

This research also found that educators ‘helping hands’ which are also ostensibly benign, can quite quickly become ‘interfering hands’ (Fisher 2016), particularly in play scenarios with objects, which may then be experienced by the child as undermining or intrusion as well as supportive or as positive attention. This research suggests that this is influenced by the current emphasis on the educators’ role as a necessary leader of learning in current ECCE policy guidance frameworks (DfE 2024), and also that such an approach can diminish children’s sense of autonomy and self-efficacy and potentially teaches the child that they are not competent and that their ideas and efforts are not valued. As Pikler says:

> It is crucial that the child discovers as much as possible on his (sic) own. If we assist in accomplishing every task, we deprive him of the single most important aspect of his development. A child who achieves things through independent experimentation acquires an entirely different kind of knowledge than does a child who has ready-made solutions offered to him. (Pikler, in Roche 1994, p.15)

And Gerber echoes that in relation to caregiving practices:

> When you approach a baby with an attitude of respect, you let him (sic) know what you intend to do and give him a chance to respond. You assume he is competent and involve him in his care and let him, as much as possible, solve his own problems. (Gerber 1997, p. 83)

The ethos of ‘assuming competence’ Gerber applies to pedagogy, is connected to the collaborative approach of both co-operative inquiry and VERP in the research group, which supported self-directed, autonomous choices and decision making on the part of the educator-participants, such as in the selection of video clips, and direction of discussions. In this way, respect for the educator-participants as self-directed people, modelled and reflected pedagogical approaches that respect babies’ and young children’s autonomous self-directed play and bodily integrity. And in so doing, impacted educators thinking about their pedagogical approach as regards being more respectful of children’s personal space as described by Leiya '*I've a more relaxed attitude and give children a lot more autonomy*' (RG-S6).

These findings contribute a new perspective on physical interactions in early years pedagogy and have significant implications for educators' professional skills and knowledge development. So, this thesis recommends that educators become more knowledgeable about types of touch and develop observation skills that enable them to identify the subtle differences of the quality of touch within those types, such as degree of firmness, speed and evenness and to understand their impact on children. This thesis also recommends that educators to refine their perception and understanding of children's responses to different types of touch, through making these topics a more central focus of initial and continuing professional training.

So, this research proposes a model for thinking about educators' hands in practice. Educators might usefully observe and reflect on their interactions and ask themselves, 'are my hands…

- Loving, caring hands?
- Connecting hands?
- Playful, exciting hands?
- Interfering or intrusive hands?

And how is the child responding?

11.2. Holding the Baby: Proxemics

In addition to embodied experiences of touch, chapter 8 identified the significance of proximity between educators' and children's bodies for children's experience and noted that even very small adjustments in proximity of heads/ faces, hands, arms and torsos, convey meaning and intent. When read through a biological / evolutionary frame, the physical vulnerability of a baby or young child means that the close presence of an adult may be comforting but also potentially threatening. Therefore, educators convey to young children that their proximity is benign through combining physical closeness with friendly facial expressions, sensitive touch and gentle or playful voice tone. However, this thesis emphasises that proximity more clearly indicates care and benign intent when in a front-front body position. For example, in chapter 8 it was noted how Leiya's subtle change of body position conveyed her full attention to Otto by turning her body towards him and Sarita comforts Rocco by holding him frontwards into her chest. In her concept of the 'purity rule' Douglas (1966) describes how physical position expresses formality or intimacy across cultures, not only according to social distance but also in the front-back dimension, where the front body is socio-culturally deemed more dignified and respect-worthy than the back. This sociological perspective reflects the biological context of the vulnerability of the front of the body, which we protect by shielding in threatening situations. An example of this would be when the educator-participants crossed their arms across their fronts when feeling emotionally uncomfortable in the group and highlights why caring adults hold children front-front to offer protection and comfort. It also offers some explanation of my discomfort at seeing babies dangling in slings facing outwards, which was one of the provocations for this research.

In addition, considering this front-back dimension of proxemics from a psychodynamic as well as a sociological or biological perspective, leads to a key finding of this research that when benign front to front proximity of bodies between educators' and children is combined with gentle slow-paced affective touch, and also with attuned responses to the child's cues that convey positive regard, then close relationships that nurture a child's body/self can be built. And that this constitutes an emotional-physical holding that reflects Bion's concept of containment (Bion 1961), which I identify as of central significance to elements of embodied interactions that contribute positively to young children's experience. Therefore, the relationality of body/self-other impacts children's experiences of physical interactions and emphasises an embodied intersubjectivity that connects the emotional and physical aspects of experience. Overall, the key findings in relation to touch and proximity in this research, show how, through a reciprocal embodied dialogue that combines body position and proximity, use of hands, touch and gestures, children and educators seek and use connection, and use their bodies as powerful conveyors of meaning of self, each other, and of events and the environment in early years settings.

Adopting a holistic, connected view led to this research identifying a matrix of factors that influence embodied intersubjective interactions between educators and babies and young children in early years settings, as illustrated in Fig. 42 below. The factor of educators' intentions has been discussed above. Findings in relation to other factors are discussed through the rest of this chapter.

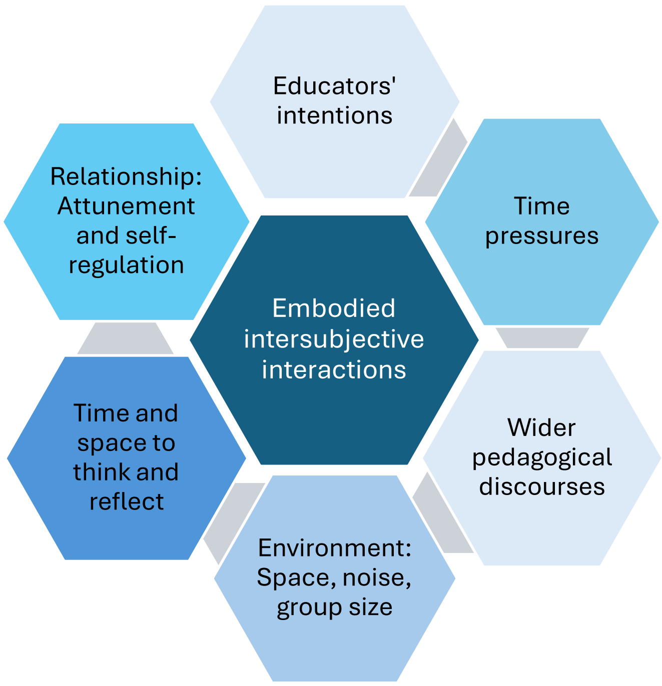


Fig.37: A Matrix of Factors that contribute to embodied intersubjective interactions**11.3. Holding the Baby: Relationship**

This research has relationality and relationship running through it as a core thread and identified educators' capacity for empathy, attunement, containment and self-regulation as a key factor in the matrix of factors that influence embodied intersubjective relationships with children. As discussed in chapter 8 and 9, data from the child observations showed how babies and young children's behaviours can sometimes be ambiguous, distressing and challenging, which require educators to be able to deescalate and repair misattuned interactions as needed, as a basis for a positive relationship to develop. These observations also showed many examples of the empathy shown by the educator-participants in their relationships with children, manifested through their physical and emotionally containing kinetic, haptic and vocalic behaviours, which evidenced the importance of educators' capacity to read, receive and contain babies and young children's embodied emotions and behaviours, and requires them to have a depth of understanding of the child, sensitive observation skills, and high levels of self-regulation and reflexivity. In this way, personal attributes such as intrapersonal awareness and interpersonal skills are an important part of the equation in work with very young children (Manning-Morton 2006, 2011, Elfer and Dearnley, 2007), which require educators to combine personal responsiveness with a professional perspective, as illustrated by Munehra in her response to an injured child,

'*I was shocked but I kind of kept that inside, I didn't panic. I just wanted to make sure that she was okay*.'

This response illustrates the balance educators need to strike between being sufficiently emotionally receptive to a child's state, which also means recognising their own emotional responses, with sufficient emotional regulation to not let their own emotions to take over, so as to be able to respond helpfully to the child. This emphasises the deep connection between children and educators' states, conditions and contexts, as children's need for attuned relationships require educators to have the emotional/ mental capacity to build responsive nurturing relationships and to think about their work, and therefore their need for professional development that enables reflexive thinking about the emotional dimensions of practice (Manning-Morton 2006, 2011, Elfer and Dearnley, 2007). Through the Work Discussion process (Kennedy et al 2015) in this research, recognising our visceral, physical reactions to a child's experience, such as in Munehra's example above, also emphasised the importance of reflecting on physical dimensions of practice too.

11.3.1. Embodied intersubjectivity manifest in 'loving moments'

Further to the findings in relation to the connection between proximity, touch and attunement leading to an emotional-physical holding that reflects Bion's concept of containment (Bion 1961), as discussed above, a key finding of this thesis is that when these interactions are also reciprocal, synchronised and mutually affective between educator and child, then 'loving moments' can occur. And that such 'loving moments' are the manifestation of an embodied intersubjectivity, which builds and sustains mutually fulfilling educator-child relationships, which are themselves sustained through a professional perspective that recognises and supports educator's reflexive thinking and embodied self-awareness. A professional awareness that can then avoid the mutual beneficence of caring for another person (Noddings 2019), becoming a gratification of educators' own unmet needs (Bain and Barnett 1986, Manning-Morton 2011)

In her model for 'Thinking about Professional Love', Page (2018) suggests that educators need to develop self-awareness (step one), a view I share, and in step two, need to de-centre and shift their thinking away from their own needs to become completely absorbed in thinking about the other. However, although such de-centering is a vital part of the process of keeping a child's needs in mind, as inferred in the discussion on empathy and attunement above, I would argue that posing this as a requirement to engage lovingly with children, positions 'professional love' as a yet another target educators have to meet, and when they fail to do so because they may also experience unloving feelings, feeds into a critical narrative. Therefore, I suggest that such an overarching concept as 'professional love' poses the mutable feelings and behaviours that occur in close relationships between educators and children, as a total way of being or aspirational state that sets an emotional goal that is unrealistic in the professional contexts of most early years educators. This also has the effect of externalising the concept of love and distancing educators from the lived experiences of loving interactions with children. In contrast, 'loving moments', are tangible, observable and directly experienced; reflecting the psychological process called the tangibility effect, which increases motivation to take something on because we can directly perceive it through our senses and connect with it on a mental and emotional level. This thesis therefore contends that conceiving of these attuned embodied interactions as 'loving moments' makes them realisable in practice and sustainable through a professional perspective that recognises and supports educators reflexive thinking and embodied self-awareness, and that when these elements are brought to consciousness in educators' thinking and experience, then a more holistic pedagogy may ensue that values attuned embodied relationship.

11.3.2. Holding the Educator - Embodied connections in relationship

In this research, reading the data from the child observations and the research group in relation to each other, highlighted how the intersubjective elements of mindsight, empathy, reciprocity and attunement happened at many different levels. Firstly, between the educator and child in the observation video, then between the guider and the educator in the VERP review, and then between the educator, guider, and the rest of the group in the Work Discussion, thereby strengthening relationship throughout all aspects of the research. In addition, the shared or joint attention between the educator and guider and the video clips, and between each member of the group as they became the focus of attention, reflected secondary intersubjectivity (Trevarthen and Aitken 2001). In this way, through watching the videos and through the group processes, direct embodied experience of relationship was experienced, which may then be translated into practice. In addition, VERP aims to support participants in moving towards a 'yes' cycle of attuned communications in their practice (Kennedy et al. 2011). This 'yes' cycle of VERP resonates with the 'yes' space advocated by Magda Gerber in relation to a RIE / Piklerian play space (Gerber 2007, Tardos 2007), where babies are free to move and play without the constraint of overly risky elements or restriction from anxious adults, who don't need to constantly intervene because they know the environment is suitable (Gerber 1997). So, in this research process, paying attention to the group relationships, the emotional temperature and embodied experiences of all participants established the research group as a 'yes' space, where manageable emotional/ personal/ professional risks could be taken as we each moved freely in our thoughts. Further to this, in VERP / Work Discussion processes, relationships in the group are built upon through the group facilitator and the group itself performing a containing function for educators. In a small group where the other adults can listen and return thoughts and feelings re-framed in a more manageable way, educators may be enabled to think about and talk through thoughts, feelings and actions in relation to all dimensions of practice (Elfer, 2012).

Therefore, this thesis suggests that modelling an attuned interaction pattern in the research group, coupled with the containing function of the 'reflective team' approach (Kennedy et. al. 2011) also enabled reflection on, discussion of, and an embodied experience of the intersubjective elements of empathy and mindsight (Siegel 1999), both in relation to other educators and in relation to children, thereby making connections between educators' own experience, their understanding of others and with pedagogy. For example, during a discussion about an educator's unresponsive behaviours Sarita commented,

'I think if I was to see that, I would personally want to question like is she okay? Something's obviously disconnected.' (RG-S5).

And in a discussion about children's experience of falling over, Popi commented on how hard it is for them to explain what has happened when they are upset, and yet the question 'what happened?' is frequently asked by educators (RG-S4). In this way, the focus on relationship in the research methods and process, meant that the nested intersubjectivity and containment of the group in the 'yes' cycles of communication, created a 'yes' space of thinking about the interconnectivity of embodied intersubjectivity in practice and a movement towards pedagogical change.

11.4. Holding the baby: Holding the Educator: Embodied Connections with Environment

In an embodied research approach the intra-action of between objects and human bodies is understood as an integral part of the network of influences on process and behaviour (Barad 2007, Pink 2009, Ellingson 2017). And, as discussed in chapters 9 and 10, data from both the child observations and from the research group sessions, highlighted the agential nature of material objects and brought to the fore the influence of space, objects and time, on embodied interactions and relationship, leading to the suggestion that generative intra-actions with the environment are enhanced when educators incorporate consideration of emplacement into their embodied interactions. In addition, looking at the concept of secondary intersubjectivity (Trevarthen and Aitken 2001) through an embodiment lens meant that not only was the agential nature of objects highlighted, but also the children's bodies became seen as a primary object of joint attention and therefore their bodyselves placed centrally to the space and time of care events and the focus of physical interactions, thereby supporting the intention of this research to re-frame physical interactions and care giving events as the primary focus of a pedagogy for 0-3-year-olds. Consideration of the influence of the more-than-human highlighted the influence of video in the research and how the use of video in a reflexive process enabled the educator-participants and the lead researcher to make links between educators own un/ conscious physical experiences and those of the children, whether they were the same or different. This was particularly evident in relation to distractions and discomfort in the environment, group composition, and the experience of time.

11.4.1. Distraction and discomfort

In relation to the child observations, distraction was noted in relation to ambient noise in the environment, which was seen to impact embodied intersubjective interactions through changing the intersubjective focus and also through unconscious reactions to the stimulation of the noisy busy environment, such as the speeding up of touch and movement. It was also noted in chapter 10 how these instances of noise distraction became conscious through the VERP review and Work Discussion process (Kennedy et al 2015, Rustin and Bradley 2019), which enabled the educator-participants to make the link between the children's experience of noise levels and distraction in settings and their own experience in the group sessions. This awareness was heightened through the use of experiential exercises, (as in session three, meditative bodycheck) that provoked reflection on the impact of contrasting quiet and noisy environments on the educators' ability to focus, and through watching the observation videos in which background noise, previously unnoticed, became more apparent. Similarly, educators' daily experience of their own physical discomfort was disregarded until brought to consciousness through the review of video and work discussion processes that focussed on the physical dimensions of being an early years professional and thereby lead to greater consideration of issues of environmental dis/comfort by the educator participants for both children and themselves.

11.4.2. Group composition

The data from the child observations and from the research group sessions together also gave rise to considerations of group process and composition and the connections between the educators' experience in the research group and the children's experiences in their peer groups. As discussed in chapters 7 and 10, consideration of group size, composition and process are central to ideas that underpin the training and development of adults but are not applied to groups for babies and young children, who are often expected to manage being part of groups of upwards of nine others and sometimes as many as twenty. And, as data from the child observations in this research show, the size and organisation of groups for babies and young children can be difficult for children of this age to navigate and their need for attuned intersubjective interactions may be compromised as the educator's capacity to respond in tune with each child is reduced in larger groups, which thereby decreases children's opportunities to be 'seen' and 'heard' and to be able to make connections and think about their experiences. Therefore, this thesis recommends smaller group sizes both overall and in specific play events as being optimum for effective embodied intersubjective interactions to take place. It also recommends that specific care interactions of changing, washing and dressing (and for young babies, feeding) are focused 1:1 events, which provide children with the socio-emotional support that enables them to then navigate group relationships with peers more confidently (Tardos 2007). In addition, the beneficial social learning that children can experience in groups is also supported in small group situations (Bradley et al, 2024), where children are also learning from and supporting each other. Social learning also derives from children watching the interactions between the educator and other children. Therefore, it is important educators not only take account of children's embodied intersubjective interactions with each other but also how their own interactions and behaviours convey messages to all the children present.

11.4.3. Time

Time emerged as a significant factor influencing embodied intersubjective interactions, and the connections between the experience of time in the group process and the educators' pedagogical thinking, and thereby on children's experience, were strong.

As discussed earlier in this chapter, the qualities of educator's touch were highly influenced by time and task pressure, where the educator's interactions were driven by the institution's time schedule. Educators then sometimes responded by rushing children through a care event, in which their touch and gestures are more likely to become brisk, or by using their physical interactions to move the child on to a different physical and emotional state even if they weren't ready. This sometimes meant that children's cues were more readily overlooked and touch becoming more controlling, potentially resulting in the kind of depersonalised 'civilizing' practices described by Leavitt and Power (1997) that can lead to inattention to and disrespect for children's lived embodied experience and neglect of their embodied selves.

In the child observations, it was evident how even where educators made efforts to balance the needs of the individual child with the expectations of the institutional routine, the temporal regimes that are inherent to early years settings led to educators using physical interactions to encourage children to comply with the routine. It seems that, how time is constructed in settings results in unconscious pressure for both educators and children to comply with an externally imposed 'body-time' (Leavitt and Power 1997) clock, which can result in educators feeling rushed and stressed, and potentially, children's embodied experiences disregarded. Further, this thesis suggests that this situation is influenced by the valuing of 'educational' play activities over physical care times and by the wider social context of the developmentalism that pervades early childhood policy and pedagogy, so 'moving children on' is a strong underlying discourse in educators' 'disciplinary space' (Foucault 1972/1979).

However, this thesis also asserts that the consideration of time that was integral to the research methods and process, enabled the educator-participants to focus on the child's and adult's actions in each moment, which then translated into a greater awareness being mindful in their physical interactions in practice. Specifically, this research suggests that this awareness was enhanced through the slowing down and freeze-framing of the video micro-moments in the VERP reviews, as MacRae (2016, 2019) suggests, slowing down video, not only draws our attention to movement but also shifts our (adult) perception of time which may be different to that of children.

For example, in GS4-R1, Remi and Layla Nappy Change, Remi's actions were seen to slow down, which she identified as being enabled by the temporality of the situation of Layla being the last child to change. Subsequently, this became a key issue that the educator-participants were taking away with them into their practice, commenting:

Remi*: Just that by doing this, I realise how much time we miss opportunities we miss with the children during nappy changing. Especially if you've got to do all nappies in a certain time frame. You miss out as much time, engaging with them.*

Sarita*: It's important to take your time*

Shaheda*: Thinking about that one-to-one time and giving it much more time than we would before.*

Popi: '*I now notice how just sitting is doing a lot*'.

In addition to the slowing down of video, the consideration of time was central to the temporality and chronemics of the research group, including a structure with allocated time for educators to think about their observations, quiet reflection time to make journal notes and the slowing down of interactions through the frequent use of pauses in the VERP reviews. All of these gave the educator- participants a direct experience of the stillness and capacity to think and reflect that slowing down and giving full attention to a task can bring, - an experience that is largely lacking in their professional lives, where constantly 'doing' and being busy is a common feature. This experience, in turn, supported the educator-participants increased awareness of a child's need to be given time to process their thoughts.

A process in which there is time to think and reflect also seemed to allow the educator participants to question the disciplinary space of their work. As Popi reflected, ‘*I think it (rushing and doing things for children) makes our life easier. That's why we do it. Because what you're doing in that moment, because you want something, you have a goal in your mind. But what is it doing to that child? You're taking away such important learning from them.’*

In this way, the research process made visible the conditions of pedagogical practice in relation to factors that impact physical interactions and highlighted the importance of educators having sufficient time to think about their practice and provision and for the pressures of time and tasks to be alleviated by developing temporal regimes that have the child’s experience as their central concern, allowing care events to take the time they require for each child to have the focussed attention they need.

11.5. Holding the Educator - Embodied connections

Inherent to this research was the intention to enhance children’s experiences of physical interactions by positively impacting practice, through supporting the professional well-being of the educator-participants, not only through extended knowledge and understanding but also through the experience of the research process. This intention was therefore built into the structure, approach and methods of the research, informed from the beginning by my professional principle of always making links between the personal and the professional (Manning-Morton 2006). In addition, reading the child observation and VERP review discussion videos through and in conjunction with each other, revealed mirrored experiences between the educator-participants in the research group and the child-participants in the observations, which inferred a connection between the educator-participants’ personal experience and feelings with their professional understanding of children and practice and evidenced that the well-being of babies and young children cannot be separated from the well-being of the adults who care for them (Manning-Morton 2006, 2024), therefore to effectively ‘hold the baby’, educators must also be ‘held’ professionally. This view is underpinned by the principle that to better understand children’s emotional states and behaviours, educators need to be aware of their own emotional responses and where these arise from in their lives (Manning-Morton 2006, 2014). And this research asserts that effective embodied, attuned, intersubjective interactions require educators to have an awareness of their physical, emotional and mental states, personal motivations and values that influence their approaches to embodied interactions and that this is effectively supported through professional development opportunities where the process, as well as the content, is the focus, and where educators are enabled to make links between their personal experiences, theoretical knowledge and their practice through reflexive, experiential processes. Analysis of the research group process found that combining an embodiment framework with the intersubjectivity elements of VERP, and the use of video observation enabled physical interactions to be evident and more readily focused upon (Fazeli at al. 2023) and thereby also to engender connections with our own embodied and emotional experiences; - in the observed interactions <u>and</u> within the group

<u>11.5.1. Embodied Connections between process and pedagogy: Learning from experience</u>

The research methods of VERP (Kennedy et al 2015) and Work Discussion (Rustin and Bradley 2019) used in this research, are both based on learning from experience, which, in this research, enabled connections to be made in many ways. A key way was through processes of watching and noticing physical interactions on many levels and in different configurations: The educators watched and noticed the children while observing, and then themselves and the children again in the observation video reviews, I watched and noticed the children and the educators in the video clips and the educators and myself together in the research group, the educators watched and noticed each other and themselves in the group and in the video clips, and watched and noticed me watching and noticing the clips, the others and myself in a nested process (see Fig. 46 below) that reflected the concept of nested intersubjectivity illustrated in Fig. 45. In the context of this research, this observational watching and noticing was about using all the senses, including our emotional senses and actively looking below the surface to think about what sense we made what we saw and heard, including our own responses (Rustin 2009, Manning-Morton 2018). Therefore, connections were also made through reflecting on personal and professional experience, which, together with noticing, enabled connections to be made between the educator-participants' experience and their pedagogy, directly, indirectly and unconsciously.

Fig. 46: Nested noticing in the 'Holding the Baby: Holding the Educator' research

One obvious way of learning through experience was through the observational videos in the VERP process (Kennedy et al 2015), and the taking, viewing and reviewing of video clips can be seen to have directly enhanced the educator-participant's perception and understanding of the complexity and nuance of physical interactions, as discussed in chapters 8, 9, and 10. Through repeated shared viewing of micro-moments of positive interactions, the video clips provided a level of detail that allowed in-depth analysis and reflection on the child's and the adult's embodied intersubjective interactions in that moment, thereby increasing awareness of children's embodied communications that had previously gone unnoticed. As Shahida said, '*I would never have known that I was doing* *that. Or she was doing something back until I saw it on the video*' (RG-S6). And this awareness then translated directly into the educators' practice in relation to their physical interactions with children, as evidenced in our final reviews of the research (appendix 3.8: session 6: Review proforma). In answer to the question 'what has stayed with you in relation to the video reviews?' comments were made such as,

'*The videos were great for catching the moments that you would miss. It made me more aware of the little things and finding time for them'* (Sarita).

'*Seeing the detail in the videos, realising how important physical touch is*' (Popi).

'Noticing more about what children like, so I'm more respectful, giving time for them to respond' (Remi)

'Watching the video observations helped me a lot and I was able to see things that I hadn't noticed or paid attention to, I was able to reflect on my response and approach to children.' (Munehra)

As well as the power of the video clips to highlight aspects of children's experiences that may be overlooked or not usually noted as particularly significant, it seems that the strengths-based approach of VERP also directly impacted the educators' pedagogical practice in relation to each other and their leadership roles. For example, in session three Popi shared how the experience of positive feedback in her own review in the previous session had impacted on her own approach to her team and she had started using video to focus on positive examples of practice. As she said,

'*They need to see that there is a lot of positivity in the way they interact with children and how they handle situations day to day*.'

And in the research reviews, her co-worker Leiya confirmed that '*Popi is more positive in her leader role and gives positive feedback to the team*.'

And Remi also commented, '*I notice other staff's responses more and now discuss this with them.*

This strengths-based ethos also directly impacted pedagogy through contributing to the educator- participants' willingness to reflect on their practice and on their own attitudes, motivations and behaviours, especially in the context of a reflective team approach. As Popi said,

'*To be able to have these discussions with people who know what you're going through, not questioning what you're doing, but being able to make you think. I think that was really impactful for me*.'

In turn this led to changes in approach, 'I *am more aware and respectful of children not wanting to hold my hand or have a cuddle or any physical touch such as stroking their face*.' (Leiya)

'*I have noticed a difference in how I approach children in regard to their personal space…*' (Munehra)

In this regard, this research suggests that a strengths-based ethos also indirectly impacted pedagogy through providing a contrast to the current critically evaluative contexts of ECCE in the UK,

'*we're so programmed to criticise ourselves'* (Sarita),

and thereby counteracted negative self-beliefs,

'*It (the research) has allowed me to be less critical of myself and actually focus on the things that are working*', '*now I acknowledge nice moments, there's more positive self-reflection'* (Sarita).

Such positive self-regard reflects the positive regard and warm, attuned relationships and interactions that were integral to the VERP reviews and Work Discussion sessions, which enhanced educators' professional confidence and self-esteem and which in turn, engendered positive regard and warm, attuned relationships and interactions in practice. In addition, the experience of the 'containing' function of the group and the facilitator, also seems to allow a greater capacity for containment in practice.

As Popi said, '*I'm thinking more about what is going on for the child. I read the children well, but now I'm reflecting more on body language as well*.'

In addition, when a strengths-based ethos is combined with a collaborative approach in which participants are seen as co-researchers, who contribute to the thinking and decision-making of the research (Heron and Reason, 2001), an indirect link between process and pedagogy is created through giving voice to the participants in a safe space that 'holds' the educator, where personal and professional confidence in expressing thoughts and opinions can grow. As several of the educator-participants noted, their confidence in speaking out in a group changed dramatically over the course of the research, from being too nervous to speak, to freely expressing ideas. And, although there is no evidence in this research of how that impacted on practice, I would suggest that educators who feel personally confident to speak out, are more likely to be effective advocates for children and families in professional contexts. In addition, using video in a supportive rather than evaluative context, offers an invitation to educators to tell their story and be heard in a way that is unusual, especially for those working with 0-3-year-olds, as identified in chapter 2.

11.5.2. Experiential processes

Another important way in which connections between process and pedagogy were enabled was through direct tangible experience in 'as if' scenarios. For example, in the 'hospital' exercise used in session 4, experiencing the positive and negative behaviours of the 'medics' caused direct consideration of practice in relation to touch and communication. Through the educators experiencing the 'as if' of being in the vulnerable physical position of a 'patient' and thereby, making connections to a child's experience of physical care situations, (and their own actual lived experience of being cared for) a physically and emotionally internalised conception of the impact of physical care interactions on children was facilitated.

As Remi journaled at the time, '*even though it was role play, and I knew it wasn't real life, I didn't like the way I was being touched*' and in the review she reported '*the 'casualty' exercise made me think about how I handle children*', illustrating how enacting the embodied behaviours of the role allowed her to connect physical experience to embodied knowledge through emotion (Manning-Morton 2006, Erturk 2015, Campbell and Miller 2023).

This experience also caused the educator-participants to think about how their own states were conveyed to children, as Munehra *said 'to soothe the child, you have to be calm yourself. If you panic, the child will panic.*'

In this way, the 'as if' of the embodied experience also engendered a reciprocity of understanding and therefore increased empathy, which is a core purpose of such an exercise. And the educator-participants' high levels of empathy shown during this session was then reflected in their review comments about their increased ability to tune in to children's physical cues,

'*I'm more in tune with what children are communicating'* (Sarita).

Another experiential exercise we engaged in was the 'Yoga Nidra' type meditative body scan, which also had a direct and indirect connection to practice, generating a heightened awareness of the impact of noise on our ability to relax and focus, which was connected directly to thinking about children's experience. As Shaheda noted at the time,

'*The background noises as well, we don't really think about, you expect the children to sit and listen and concentrate, but there's so many things going on around that you don't realise. … that's so distracting…'*

And in the session six review discussion, she then identified that this had prompted her to make changes in the children's play environment.

In this way, this thesis asserts that experiential exercises are a key pathway to supporting a deeper understanding of embodied intersubjective interactions in practice in early years settings and that by invoking the voice of the child in this way, educators are enabled to consider the embodied impact of their practice in more depth. But I also suggest that the overall structure of the research group processes contributed to the connections made between educator-participants' experience and pedagogy, as the collaborative approach and methods in the research and the structure and ethos of the group sessions, were all planned and designed to facilitate making personal and pedagogical connections in which the educator-participants combined experiential knowing with propositional knowing, in which they developed what they knew about children's embodied intersubjective experiences in their settings.

Making these connections was also enabled by valuing the different kinds of knowing identified in co-operative inquiry (Heron and Reason 2001); experiential knowing (recognising Sarita's situation and condition), practical knowing of a skill or competence (helping a child to sleep) and propositional knowing, knowing about something, that is, knowing about the lived embodied reality of caring for very young children. Heron and Reason (2001) suggest that when these forms of knowing come together, then research can have a transformative impact and conscientisation (Pascal and Bertram 2012) is enabled for everyone involved. This thesis proposes that these kinds of knowing become embodied knowing, that is part of our hands, arms, legs, head and trunk, where a 'holistic understanding of embodied knowledge centres on being in the world through our bodies' (Ellingson 2017, p.17), but further to this, also become part of our hearts and minds as we feel and think about what we experience. Such embodied intersubjective knowing thereby increases educators' awareness both of children's embodied experiences and of their own, developing conscientisation about their practice in relation to the physical care of children, and thence to bring about change.

11.5.3. Un/conscious connections

The VERP (Kennedy et al 2015) and Work Discussion (Rustin and Bradley 2019) reflexive processes used in this research also created the conditions for noticing unconscious connections as we watched and noticed self and other in the group. In this regard, awareness of mirroring and reciprocity in the child observations revealed unconscious connections in group process and between group process and pedagogy, as discussed in chapter 10. Although hard to detect and to substantiate, this thesis maintains that attending to these factors in the research served to make conscious the unconscious processes at play in the group and the mirrored experience between the educator-participant's experience in the research group and that which they noticed of the children in their observations. As the educator-participant-researchers said, '*I'm now more self-reflective, bringing out inner emotions and aware of the impact of our own 'stuff*' and '*I now understand how emotions also impact physical feelings*.' (Sarita). A connected awareness and deepening understanding of children's experience that surely supports attuned embodied interactions in practice.

11.6. Embodied connections: Theoretical connections

The data strands that emerged from this research were not only read through each other, but also through different theoretical lenses. This 'border crossing' between theoretical disciplines was a key feature of this research that enabled a more connected, holistic understanding by viewing data through theoretical interrelationships. For example, I examined touch through the lenses of biological, sociological and psychodynamic theories and identified how the physio-neurological processes of affective touch and sensitive holding constitute physiological aspects of the psychodynamic concepts of attunement and containment, highlighting that affective touch in everyday caregiving is of fundamental importance in the child's developing awareness of their internal and external physical and affective states, their relationships and sense of self (Beltrán et al 2020, Fotopoulou et al 2022). While reading the data through a sociological lens brought the socio-cultural contexts of touch in early years settings to the fore and showed that educators' intentions are highly influenced by time and task pressure and revealed the influence of dominant discourses of developmentalism and valuing of education over care in early childhood policy on educators' underlying intentions in their physical interactions. In this way, a multi-theoretical reading can expand understandings in the early childhood field of the centrality of physical interactions and caregiving practices in ECCE pedagogy, in contrast to the 'disembodied practice' identified by Tobin (1997) wherein the subtleties and complexities of embodied intersubjective interactions are hidden and so become inaccessible for consideration.

Significant in this regard was the conjoining of theories of embodiment and intersubjectivity in the process of the research, which meant that the emotional and relational aspects of embodiment were highlighted, and the physical aspects of intersubjectivity were emphasised, which, when woven together, emphasised the imbricated nature of embodied intersubjectivity (Kiverstein 2012). This coalescence enabled the emergence of data in relation to the connectivity of the internal and external in children's embodied experience of physical interactions, and of space, objects, actions and time in the intra-actions between the human and more-than-human within the phenomenon of embodied intersubjectivity and thereby enabled a clearer identification of the elements of embodied interactions that contributes positively to babies' and young children's experience in early years settings and constitutes part of the original contribution of this research to thinking about young children's experience of physical interactions.

Conclusion

This chapter has woven together the different strands of this inquiry to emphasise the interconnections between theoretical perspectives, the connectivity of the internal and external in children's embodied experience of physical interactions, and between the human and more-than-human aspects of space, objects and time, thereby connecting the key findings of a continuum of touch and the place of ‘loving moments’ in physical interactions that positively influence children’s experience. Most significantly the pattern woven by these strands show the interconnectivity between the experiences of the educator-participants and the child-participants, which, when brought to consciousness, can enhance the educator-participants’ professional understanding of children and practice. Therefore, this thesis recommends that developing a holistic approach that focuses on the interconnections of children’s and educators’ experiences is an effective pathway towards supporting children’s lived embodied relationships in early years settings. This research asserts that these capacities are facilitated through a professional development model that uses experiential, reflexive and process-oriented small group discussion, and peer-to-peer reflection in a small group with an emphasis on learning from experience. In a group where there is positive modelling of attuned interactions by a group leader, who creates ‘yes spaces’ within which educators can take risks in thinking about their practice and ‘Yes cycles’ of nested containment and intersubjectivity in which self-awareness and professional confidence can grow. Central to this is a strengths-focused approach, which enhances educators’ professional self-esteem through rebalancing deficit evaluative contexts and counteracting negative self-beliefs and thereby contributing to self-efficacy and openness to changes to practice. In addition, the reflexive use of video material in a strengths-based approach, enhances perception and understanding of the complexity and nuance of physical interactions, and gives emphasis to children’s experiences that may otherwise be overlooked or not seen as particularly significant in the day-to-day life of an early years setting. So, the use of video also engenders deeper reflexivity and greater awareness not only of the subtlety and complexity of embodied communications but also of the impact of educators’ practices on children’s experience.

This research moved away from the dualist concept of the body/mind split that pervades Global North culture and which, as a result, is reflected in the normalising and reductionist theories and policies that influence early years pedagogical practices, which then result in a devaluing of young children's embodied selves and experiences. In contrast, through using a framework of embodiment and a holistic approach to observation (Rustin 2009) this research argues that children's bodyselves are central to their experience, and that 'border crossing' between different theoretical perspectives, facilitates a holistic view which renders children's embodied experiences visible.

Chapter 12: Conclusion and Recommendations

Introduction

In this concluding chapter I present the central argument of this thesis and provide a summary of the key findings that address my research questions.

RQ1: What elements of embodied interactions might be identified as contributing positively to babies' and young children's experience in early years settings?

RQ2: What factors influence educators' approaches to, and experience of, physical caregiving interactions with young children?

RQ3: How might attuned physical caregiving interactions in early years practice be supported and facilitated?

I also identify how this research contributes to the knowledge-base of early childhood care and education and propose some applications of the findings for early childhood pedagogy in relation to physical interactions with young children and for the professional development of educators. I will then reflect on the process of this research and consider aspects that I might have done differently and that I believe warrant further exploration.

12.1: Overview of the research

This research explored the lived experience of physical interactions between educators and children aged birth to three years in early years settings in the UK. The underpinning rationale for the project was the apparent disconnect between the centrality of physical care events to babies and young children's daily life, and therefore the frequency of physical interactions in practice, and the lack of significance given to these interactions and events pedagogically, in policy documents in the UK and, to a large extent, in research in the early childhood field. Even though, as suggested by biological, sociological and psychodynamic theories, and as shown in this research, the qualities of physical interactions between caring adults and young children are closely connected to children's physical, emotional and personal wellbeing (Hertenstein and Weiss 2011). Instead, current discussions of children's physical selves, tend to be limited to either health, children's physical skills, or activity in the environment, with the result that not only is the child's experience of physical interactions with others and the actions and interventions of adults overlooked, but also that physical care events become disregarded in pedagogy and implemented with no reference to the centrality of embodied intersubjective interactions. Therefore, this research aimed to contribute new thinking about babies' and young children's experience of physical care interactions and to re-frame the significance of physical interactions and care giving events in early years pedagogy.

To do this I drew on theories and perspectives that bring together mind, body and emotion as part of a whole integrated human and that counter a mind/body dualist discourse. So, I used an embodiment framework, combined with elements of intersubjectivity, to examine how intersubjective body actions create meaning through interaction with others and with the more-than-human, including lived space and time. Conjoining embodiment with intersubjectivity enabled the more holistic nature of embodied intersubjectivity (Kiverstein 2012) to emerge and to provide a lens through which to look differently at babies and young children's experiences of physical interactions and care events.

In this way, this thesis contributes an original perspective on babies and young children's experiences in early years settings not usually addressed in research or pedagogical literature and offers original insights into an important aspect of child-educator interactions which is often not noticed and therefore, only partially understood.

12.2: Summary of key findings

The findings in this research confirm that bodies are powerful conveyors of meaning in early childhood settings, both in terms of how educators use their bodies and how babies and young children express themselves through their bodies, in a reciprocal embodied dialogue (Chapter 8). This thesis argues that children's bodies and therefore their bodyselves, bodyfeeling and bodythought are central to their experience, so highlights that all aspects of children's embodied communications are crucial to their meanings conveyed to others. But it also emphasises the subtle, and often unconscious, detail of embodied intersubjective communications in everyday practice in ECCE settings, so suggests that an embodied reading of the external cues of kinesics, proxemics and haptics, combined with a reflexive reading of the sensorial and emotional, as in this research, should be adopted to enable educators' interpretations of embodied intersubjective communications to go beyond the surface to a deeper understanding (Chapter 10).

This thesis maintains that 'bodyself', self-awareness, self-concept and physical well-being are impacted by physical interactions, so it asserts that embodied intersubjective interactions between educators and young children have high significance in early childhood pedagogy. In this regard, haptics or how educators use their hands in relation to touch is identified as a significant issue that impacts children's responses and experience in varied ways. This thesis identifies a continuum of types of touch, ranging from attuned, affective touch, attuned playful connecting touch, to less attuned controlling or coercive touch, within which attuned affective touch should be emphasised (Chapter 8).

Therefore, this thesis highlights how different types of physical interactions impact variously on babies and young children's experience and relationships. Significant findings that arose in this regard were the subtle and sometimes ambiguous responses of children to playful, tickling type touches and the tendency of educators to use more interfering types of touch when engaged in 'learning' activities, so this thesis proposes a model for educators to reflect on their use of their hands (Chapter 11). Most significant though was the identification of 'loving moments', which arise from a combination of benign proximity, affective touch and attuned responses, with reciprocal, synchronised and mutually affective interactions, and which convey positive regard and thereby build and sustain mutually fulfilling educator-child relationships (Chapter 8). This thesis suggests that creating the contexts in which such 'loving moments' can emerge should be a central focus of pedagogy, but that current policy contexts and discourses of ECCE mitigate against this (chapter 9).

This thesis identifies that types of touch are influenced by educators' intentions to either soothe and comfort children, to connect with or gain children's attention or to constrain or manage children's physical and emotional states or behaviours. And that these intentions themselves are influenced by the tangible and intangible aspects of the physical environment, such as furniture and objects, the number of children present, noise levels in the environment, and pressures of time. It also suggests that educators' pedagogical intentions and their experience of time pressure in particular, are indirectly influenced by the wider discourses of developmentalism and the unequal valuing of 'education' over 'care' that pervades early childhood policy and pedagogical guidance, in which the idea of always moving children on to the next stage or from a physical care moment to a 'learning' activity is inherent (Chapter 9).

Therefore, this thesis proposes a matrix of elements that contribute to embodied intersubjective interactions between educators and babies and young children in early years settings. Crucial to this matrix, is the capacity of educators to be able to attune to children's states of mind, and to physically and emotionally contain children's feelings and behaviours, which require educators to have a depth of understanding of the child, sensitive observation skills, and high levels of self-regulation and reflexivity. This research asserts that these capacities are facilitated through a professional development model that uses strengths-based, experiential, reflexive and process-oriented small group discussion, in which self-awareness and professional confidence can grow, and which enhances educators' professional self-esteem through rebalancing deficit evaluative contexts and counteracting negative self-beliefs, thereby contributing to an openness to change practice. In addition, the reflexive use of video material is found to enhance perception and understanding of the complexity and nuance of physical interactions and gives emphasis to children's experiences and the impact of educators' practices that may otherwise be overlooked or not seen as particularly significant in the day-to-day life of an early years setting. A significant finding in this regard, was the connections that emerged between group process and pedagogy, indicating the strong thread that weaves through the embodied intersubjective behaviours in the complex systems of groups of people, where the embodied, intersubjective interactions and unconscious emotional transactions that take place every day comprise the warp and the weft of the fabric of embodied relationships and that link personal experience and feeling with professional understanding of children and practice and that may, through conscientisation, lead to effective changes in practice.

Therefore, adopting a collaborative approach in the research was not only relevant in relation to my stated values and position, but also provided evidence of how utilising Heron and Reason’s (2001) 'extended epistemology' of experiential, presentational, practical and propositional knowing contributes to a research process that is transformative and informative (Heron and Reason 2001). This approach also supported the research’s praxeological aims of conscientisation and empowerment (Pascal and Bertram 2012).

12.3: Recommendations for early childhood care and education

The findings of this research recommend that concepts of children’s physical experience in ECCE should be extended to include a focus on how the process quality of physical interactions impact children’s experience. To support this, policy and pedagogical guidance would therefore need to incorporate thinking about how children engage in and experience physical interactions with educators and peers and how educators can best support children’s positive experiences through their embodied intersubjective interactions. This then, would also imply a change in the discourse in ECCE in relation to ‘care’ and to reposition physical caregiving as central to early years pedagogy and to professional development.

Specifically, this thesis asserts that it is important for educators to be able to identify the subtle differences of the quality of their touch and to avoid using intrusive and controlling types of touch. I would therefore recommend that early childhood care and education training courses might usefully include consideration of the continuum of touch identified in this research, the concept of ‘loving moments’, as a means for educators to further develop their awareness and understanding of their embodied intersubjective interactions. I also recommend that the matrix of factors that impact physical interactions, including the environmental factors of noise, space and group size is recognised as having generative or degenerative impacts on embodied intersubjective interactions, so should be a focus of reflection and evaluation in training, practice and provision.

Practice that is both responsive to children's need for physical and emotional support but also allows for children's autonomy and self-direction, depends on the ability of practitioners to combine personal responsiveness and closeness with a professional perspective in their physical care interactions. Therefore, this research also suggests that it is important that educators develop awareness of the various factors that influence their approaches to embodied interactions, including their unconscious emotions, motivations and depth of understanding of the child. Addressing and supporting the development of these attributes in a professional context is a sensitive and skilled undertaking. For this reason, this thesis recommends that professional development in this area attend to the process of experience for educators as much as the content, so a change in approaches to professional development is required, to prioritise a focus on reflexive learning through experience. Rustin and Bradley (2011) suggest that the emphasis on human relationships and quality of interactions and communications that are central to the caring, social professions are failed by the target and outcomes focus of managerialism, as these fail to take account of the most important, relational aspects of clients' (children's) experience.

The focus of this research was on physical interactions between educators and children aged 0-3 years. However, the recommendations of the research are readily applicable to older children who, although usually more able to rely on verbal interactions, still receive, understand and convey much information through embodied communications and whose wellbeing, therefore, is still impacted by the physical interactions of their educators and how well their educators are attuned to their non-verbal communications. This is even more pertinent for children who may have a learning or physical disability.

In this regard, this thesis suggests that it is through making connections in an embodied perspective that we can move away from a dualist view that is inherent to the current outcomes focus and compartmentalisation in the Early Years Foundation Stage curriculum framework (DfE 2024), towards a holistic view that embraces the multi-dimensional and interrelatedness of all aspects of children's experience and that gives attention to the whole as well as to each dimension.

Therefore, based on the interconnectedness of children's whole bodyselves and of children's and educators' experiences, this thesis recommends that early childhood care and education seeks to make connections in all aspects of practice and provision as a basis for pedagogy, as follows:

1. Connections between people (key persons, parent partnership, teamwork and leadership support)
2. Connections between each child and the group (interests, playthings, languages and cultures)
3. Connections between thinking, feeling, playing and learning (exploring, imagining, moving, being)
4. Connections with places and things (in and between the setting, home, the community, the natural world, across the globe)

And that educators training and development enables them to make

5. Connections between all aspects of children's experience and being
6. Connections between theoretical thinking and practice and across disciplines
7. Connections between personal experience, personal and professional values and children's experience and practice

12.4. Reflections on the research

While this research produced relevant, valid and useful findings, reflection on aspects of the process, content and context have led me to consider its limitations, some aspects I might have approached differently and areas that I believe would be fruitful areas for continued research.

Firstly, the inclusion of only eight educators from four settings, located in a particular socio-cultural context of urban London clearly limits the extent to which the research findings can be generalised to national or international contexts, as the research data was viewed through the lens of our particular personal and professional experience and values. However, I believe that in general the research findings can still usefully inform early childhood pedagogy in relation to physical interactions in care events.

Secondly, the use of video, although providing a core benefit to this research, also posed some limitations. From the beginning, I expected that educators and parents would have concerns about filming children engaged in physical care events, and this meant that educators quite rightly limited observations to pre- and post-nappy change, with filming stopping while the actual nappy change took place. In terms of the findings of this research, I don't believe this detracted from the validity of the data in relation to physical interactions in care events, as the video observations focused on other physical interactions such as sleep time, washing, comforting / holding and physically interactive play, offered relevant data regarding touch and holding. Also, although the use of video was extremely beneficial overall, it would have been more beneficial to invest in better technology and also to have practised my filming skills in advance.

12.4.1. Implications for future research

Although this research took place during the wider context of the Covid-19 pandemic, I do not focus on this context specifically during this thesis but clearly, given the procedures that early years settings were required to implement that inhibited physical interactions at that time, the impact of this on physical interactions and on care events would be an interesting further study.

In consideration of the importance given to the connections between educators and children's embodied experiences, this thesis suggests that further thinking about how the environment impacts children's physical dis/comfort is an aspect of embodied experience that could be revisited and looked at in more depth following on from this research. Consideration of the differences between the detailed theoretical and practice focus given to adult group size and composition in contrast to children's groups, gives rise to further questions regarding babies and young children's experiences in groups, such as what the relationship might be between processes observed in groups of adults to those that may be seen in groups of children.

12.5. Original contribution to the field

Bringing together the nuanced empirical data on educator-child interactions and insights from theory and extant research has highlighted important dimensions of physical interactions which have often been overlooked by researchers in the field. Specifically, identifying a continuum of touch in this research offers a new way of looking at types of touch as previously identified in research (Cekaite and Bergnehr 2018), because touch can be seen to subtly shift and overlap according to the adult's intention and impact children differently and solicit different responses, not only according to the quality of the touch but also depending on the quality of the existing relationship between educator and child, the educator's ability to read the child's cues, and on the emotional temperature of the scenario.

In addition, bringing a holistic observational approach and a multi-theoretical reading to bear on the data on touch and embodied interactions, has led to a new way of thinking about love in ECCE, proposing the idea of 'loving moments' as a concept that is observable and realisable in practice without imposing yet another externally imposed pedagogical goal on educators.

Adopting a multi-theoretical approach also enabled the identification of a matrix of factors that impact attuned, embodied intersubjective interactions, which, along with the continuum of touch and a model for reflecting on educators' use of hands, and a tangible concept of 'loving moments' offers educators new ways of making sense of and developing their practice in relation to 'holding the baby' with sensitivity and respect and to reflecting on and developing pedagogy in care events.

12.5.1. Concluding remarks

'*When a complex system is far from equilibrium, small islands of coherence in a sea of chaos have the capacity to shift the entire system to a higher order*.' (Ilya Progogene: Nobel prize winning chemist)

Journal notes:

In the beginning: *I am making this process pleasurable by sitting reading in my garden in the sunshine: The sound of wind in the trees, and the cooing of the pigeons. The smell of grass and lavender. The touch of the breeze and warmth of the sun on my skin. And I have excited butterflies in my belly from reading Ellingson.*

Later on*: I wake up and anxiety immediately grips by belly. My right shoulder is freezing up from constant tension and being on the computer. My hip aches from sitting so long – I'm in a constant state of panic!*

Last words for Ellingson (2017, p.55):

'Do Your Embodied Best and Do Not Stop' 'Remember the Care of Body-Self'

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Appendix 1.1: Educator participant profiles

Setting	Participant (pseudonym)	Qualifications and experience	Personal information (self-identified) **Removed pre-publication**
GS1	Leiya	CACHE Level 3 in Childcare and Education – works with under 2's.	
	Popi	4 years 0-3's Room Leader, SENCO. Bachelor of Arts in Education Studies	
GS2	Tovah	Level 3, many years of experience working with children and with parents of 0–3-year-olds	
	Chaya	BA in education, at least 3 years of experience working with 0-2 years	
GS3	Munehra	Apprentice Educator- working for two years. Almost level 3 qualified	
	Shahida	Level 3 qualified and 1 year of foundation degree Working in early years for 9 years	
GS4	Remi	Foundation Degree Early Childhood Studies 24 years qualified experience	
	Sarita	BA Hon early Childhood studies 16 years qualified experience	

Appendix 1.2: Ethics Approval

Approval for research activity gained from BSU Ethics sub-committee in January 2020.

Appendix 3.1: Data Analysis Template

Setting: **Title**

Data first created from video without sound, then with sound

Kinesics: Non-linguistic / non-verbal communication: ☐ Looking interested with friendly posture ☐ Being friendly/ playful ☐ Returning eye contact, smiles, nodding in response ☐ Showing you noticed ☐ Enjoying watching the other	
Examples	Notes
Haptics: Use of touch ☐ Showing emotional warmth ☐ Providing help when needed ☐ Adjusting the amount of support required	
Examples	Notes
Proxemics: Use of interpersonal space ☐ Giving time and space ☐ Co-operation	
Examples	Notes
Chronemics: Use of time in non-verbal communication ☐ Waiting and actively listening ☐ Waiting attentively for your turn	
Examples	Notes
Temporality: Time and sequences of events ☐ Receiving, then responding ☐ Giving and taking further short turns ☐ Building on the other's response	
Examples	Notes
Vocalics: Non-linguistic vocalisations	
Examples	Notes
Emplacement: The experience of specific places and things	
Examples	Notes
Vocalics: linguistic vocalisations ☐ wondering about what the other is doing, thinking or feeling ☐ Naming positively what you see, think or feel ☐ Receiving with friendly words; repeating and reflecting back ☐ Checking understanding ☐ Offering choices and making suggestions the other can follow	
Examples	Notes

Appendix 3.2: Information and consent for parents

'Holding the Baby': A Research Project Exploring Practitioners' Approaches to Physical Interactions in Caregiving Practices in Early Years Settings

<u>Information for Parents</u>

Dear Parent / Carer,

I am carrying out a research project looking at physical interactions in caregiving practices in early years settings and the setting that your child attends is interested in being part of this project.

I will be working alongside the practitioners in your child's setting to gather observations of practice in the physical care of the children and for this we will need your consent.

If you would like more information or to ask me any questions, I will be at the centre on:………………. between ………and……….. and would be happy to talk to you then.

What is this research about?

Physical care is a significant aspect of daily practice in early years settings; babies and young children spend much time being physically handled by adults in care events such as feeding, changing, dressing and washing throughout the day. Therefore, how physical care events are carried out should be a central focus of early years practice.

The key purpose of this project is to explore effective practice in the physical care of babies and young children aged from birth to three years old in early years settings and has the following aims:

1) To explore the ideas, values and beliefs that influence early years practitioners' approaches to children's physical care
2) To consider the importance of positive physical care for babies and young children as a core feature of early years practice
3) To identify caregiving practices and physical interactions that contribute to children's positive experience of being in in an early years setting

Who is carrying out this research?

This research is being carried out by Julia Manning-Morton as part of her PhD studies at Bath Spa University. Julia is a trainer, lecturer and author in early childhood. She has worked in the early childhood field for 40 years as a practitioner, manager, adviser and lecturer in early childhood; mostly in London, UK. Julia is committed to making positive contributions to the lives of babies, young children and their families and believes strongly that we should never stop learning and developing, which is why she is now studying for her PhD and carrying out this research.

Julia also believes that it is important that children in settings are observed by people who know them well and who they know and trust. So, this research will also be carried out by early years practitioners who already know your child working alongside Julia to observe practice.

How will we carry the research out?

The research will be carried out in your child's nursery group room; there will be no changes to your child's daily routine or environment. Julia and an early years practitioner, who is either your child's key person or another practitioner familiar to your child, will make written and video observations of the key person interacting with the children whose parents have agreed to them being involved. The practitioner will make 4 observations: one observation per month. We will then meet to discuss the observations and to identify practices we want to think about more and maybe to make changes to practice.

Julia will work with the practitioners to agree a framework for carrying out the observations, to ensure that children are treated with dignity and respect at all times during the research.

The focus of the observation discussions will be on the practices we see and your child's responses. We will not be assessing your child in any way.

What does taking part involve?

Parents: You do not need to take part in the research, but you will need to agree to your child being part of the observation process. This will involve a practitioner who is known to you and your child (your key person usually) and Julia making written and / or video observations of everyday care events in the group, such as washing, changing, dressing and feeding and settling to sleep.

The practitioner in your group, in discussion with Julia, will identify the particular care event (s) that they want to focus on, and we will then discuss this with you, so that you can confirm or withdraw your consent, should you wish to do so at that point. If a child displays any signs of unhappiness or discomfort with being observed at any time, we will stop the observation and your key person will tell you, so that you can decide whether you wish to continue your child's involvement or not.

We expect that your child will be involved in observations of 4 care events, over a period of 4-6 months, which will take place as part of the nursery's usual everyday routine in the usual nursery group area.

All observational material will focus on the interactions between the practitioner and child. Respect for children's physical privacy will be maintained throughout.

You will also need to give consent for observations that include your child to be shared within the research discussion group and to be used as part of Julia's PhD; this may include examples being included in conference presentations. You will have the opportunity to see examples of the observations at intervals during the project and have the right to request seeing all observations of your child at other times.

Parents will have sight of video and written observations that include their child and be asked for consent for video clips to be used in presentations.

You will have the right to withdraw your child from the research at any time and can do this either by contacting Julia directly or by talking to your key person or the setting leader.

Some questions you may have…

What happens if we observe negative practice?

The approach being used in this project focuses on strengths but acknowledges that we all have things we can improve on, so our aim is to think about what we observe and identify how to develop practice positively.

However, we also have a duty to safeguard children's well-being, so if any observation shows an indication that a child is at risk of being harmed, this will be shared with the appropriate agencies, following the setting's and local authority's safeguarding procedures.

What will happen to the information and observations we collect?

Observations will be shared in the research group and Julia will include examples in her writings about the research. This will be in her thesis for the University, for journal articles and for conference presentations. All settings and participants will be made anonymous, and you will be asked to give consent for material to be used for these purposes. Practitioners, who take part in the discussion group, will be required to keep personal details and information about settings, families and other participants confidential.

All information and observations will be made anonymous and kept securely. Data will not be broadcast on the internet. Summaries of the information we gather will be made available to setting leaders, practitioners and parents for comments half-way through the year, when the research finishes and when it is finally written up.

Do I have to give consent to everything?

No, you can choose to give consent for the observations to be used for some purposes and not others. You also have the right to withdraw your child from the research at any time.

How do I complain if I'm not happy with the research?

If for any reason you are not happy with the behaviour of the researcher or the practitioners involved in the research or the way the research is carried out, please talk to the leader of the setting and / or contact Julia's supervisor: Lone Hattingh at Bath Spa University. l.hattingh@bathspa.ac.uk

How do I take part or find out more?

If you would like more information or have any further questions, please see Julia when she is in the setting (details at the top of this leaflet) or talk to your key person or head of centre.

Alternatively, you may contact Julia by email either directly or through the head of your setting: julia.manning-morton18@bathspa.ac.uk. Julia will be happy to talk to you about the research and answer any questions you may have.

Consent form:

Consent to take part in the research project:

'Holding the Baby':

Exploring Practitioners' Approaches to Physical Interactions in Caregiving Practices in Early Years Settings

I hereby give permission for my child .... to be part of the research project 'Holding the Baby', exploring approaches to physical interactions in caregiving practices in early years settings.	☐
I have read and understood the information for parents, which includes the aims of the project.	☐

I agree to my child being part of written observations	☐
I agree to my child being part of video observations	☐
I agree to observations of my child being discussed in the research group and used as part of Julia's PhD thesis.	☐
I understand that I will see examples of observations at intervals during the project and have the right to request seeing all observations of my child at other times	☐
I understand that any materials produced as a result of the project, such as video or written observations will be confidential and treated anonymously in any subsequent reporting or publications and will not be broadcast on the internet	☐
I understand that any materials produced as a result of the project, such as video or written observations will be kept securely and that electronic data will be encrypted	☐
I understand that I have the right to withdraw from the research project at any time.	☐

Signed: ....

Name: ....

Name of setting:……………….

Date:

For later / on-going use:

I have seen observation: *CODE NO':…….* and agree to it being used at professional and academic conferences	Signed: Date:
I have seen observation: *CODE NO':…….* and agree to it being used at professional and academic conferences	Signed: Date:
I have seen observation: *CODE NO':…….* and agree to it being used at professional and academic conferences	Signed: Date:
I have seen observation: *CODE NO':…….* and agree to it being used at professional and academic conferences	Signed: Date:

Appendix 3.3: Information and consent for settings

‘Holding the Baby’: A Research Project Exploring Practitioners’ Approaches to Physical Interactions in Caregiving Practices in Early Years Settings

<u>Information for Setting Leaders and Practitioners</u>

Dear Colleague,

This information leaflet is to introduce my research project and to invite you to a meeting being held at ………………. on…………………………

At the meeting I will share more information about the project with you, and you will be able to ask me any questions you may have and, if you are interested in taking part, we will then be able to discuss and make practical arrangements for carrying out the research.

What is this research about?

Physical care is a significant aspect of daily practice in early years settings; babies and young children spend much time being physically handled by adults in care events such as feeding, changing, dressing and washing throughout the day. Therefore, how physical care events are carried out should be a central focus of early years practice.

The key purpose of this project is to explore effective practice in the physical care of babies and young children aged from birth to three years old in early years settings and has the following aims:

1) To explore the ideas, values and beliefs that inform early years practitioners’ approaches to caregiving events
2) To consider the importance of positive physical care events for babies and young children as a core feature of early years pedagogy
3) To identify caregiving practices and physical interactions that contribute positively to individual children’s experience of being in an early years setting, through using observation and reflective practice

Who is carrying out this research?

This research is being carried out by Julia Manning-Morton as part of her PhD studies at Bath Spa University. Julia is a trainer, lecturer and author in early childhood. Her career in the early childhood field spans 40 years and diverse roles as a practitioner, manager, adviser and lecturer in early childhood; mostly in London, UK. Julia is committed to making positive contributions to the lives of babies, young children and their families and believes strongly that we should never stop learning and developing, which is why she is now studying for her PhD and carrying out this research.

Julia also believes in working collaboratively with practitioners, so this research will be carried out by Julia working alongside early years practitioners to observe practice in their setting. This is important so that the children will be observed by people who know them well and who they know and trust.

How will we carry the research out?

Julia and a group of early years practitioners will meet to discuss and identify aspects of physical interactions and caregiving practices we want to think about in more depth. We will develop our observation method and agree an ethical framework for carrying out the observations, to ensure that children are treated with dignity and respect at all times. We will then undertake written and video observations of physical interactions and caregiving events in the setting and then meet to discuss and reflect on the interactions we have observed in order to identify aspects of practice we wish to develop and change. Meetings will take place 6 times over the course of a year.

What does taking part involve?

Setting leaders: You will need to commit to developing this aspect of practice in the setting and consent to your setting being part of this project. You will also need to support the practitioner-participants in carrying out observations and be able to release them to attend a series of 6 meetings of approx. 2 hours each over a period of one year. It is proposed that each setting has 2 practitioners participate in the research; it will offer organizational support if one of these is a senior member of the team.

The times and dates of meetings will be agreed between Julia, settings and practitioners to take place at the most convenient times for the majority of those participating.

Should a practitioner-participant withdraw or leave the setting during the year, Julia and the setting leader will discuss whether a replacement participant would be possible and/ or advisable at that point.

Practitioners: You will need to have a keen interest in developing your practice in this area and be prepared to undertake observations of practice and to be observed. This will involve making written and / or video observations of physical interactions and care events, including comforting, washing, changing, dressing and feeding and settling to sleep. Support with observation skills will be given should you need it, and we will jointly develop a framework for carrying out the observations in a sensitive and ethical way.

You will also need to commit to attending 6 meetings of approx. 2 hours each over the period of one year. The times and dates of meetings will be agreed between Julia, settings and practitioners to take place at the most convenient times for the majority of those participating.

You will need to sign an agreement to take part in the research, but you have the right to withdraw at any time. You can do this either by contacting Julia directly or by talking to your setting leader.

All information and observations will be made anonymous and kept securely. Summaries of the information we gather will be made available to settings, practitioners and parents for comments, half-way through the year, when the research finishes and before it is finally written up.

Questions you may have…

How often will the meetings be?

We will meet every other month over a period of a year, a total of 6 meetings.

How many observations will I have to do?

You will undertake an observation in preparation for each meeting, except the first and the last ones; so, a minimum of 4 observations.

What happens if we observe negative practice?

The approach being used in this project promotes a 'no blame' culture and focuses on strengths but also acknowledges that we all have things we can improve on, so our aim is to think about what we observe and identify how to develop practice positively.

However, we also have a duty to safeguard children's well-being, so if any observation shows an indication that a child is at risk of being harmed, this will be shared with the appropriate agencies, following the setting's and local authority's safeguarding procedures.

What will happen to the information and observations we collect?

Observations will be shared in the research group and Julia will include examples in her writings about the research. This will be in her thesis for the University, for journal articles and for conference presentations. All settings and participants will be made anonymous and as a practitioner-participant, you will be asked to keep personal details and information about settings, families and other participants confidential.

All video material will focus on the interactions between the practitioner and child. Respect for children's physical privacy will be maintained throughout, and parents will have sight of video material and be asked for consent for video clips to be used in presentations.

How do I complain if I'm not happy with the research?

If for any reason you are not happy with the behaviour of the researcher or the methods and approaches used in the research, please contact Julia's supervisor: Lone Hattingh at Bath Spa University. l.hattingh@bathspa.ac.uk

How do I take part or find out more?

If you would like to take part in the research, or if you would like more information, please come along to the meeting (details at the top of this leaflet) to discuss the project in more detail. Alternatively, you may contact Julia by email either directly or through the head of your setting: julia.manning-morton18@bathspa.ac.uk. Julia will be happy to talk to you about the research and answer any questions you may have.

When we have agreed that you will be taking part in the project, please complete the consent form below.

Consent form: Consent to take part in the research project:

'Holding the Baby':

Exploring Practitioners' Approaches to Physical Interactions in Caregiving Practices in Early Years Settings

I hereby agree to be part / for my setting to be part of the research project 'Holding the Baby', exploring approaches to physical interactions in caregiving practices in early years settings, which will involve attending group meetings and undertaking written and video observations.	☐
I have read and understood the information for setting leaders and practitioners, which includes the aims of the project.	☐
I agree to adhere to the Ethical Framework that participating practitioners will develop in the discussion group	☐
I understand that any materials produced as a result of the project, such as video or written observations will be confidential and treated	☐

anonymously in any subsequent reporting or publications and will not be broadcast on the internet

I understand that material from the project may be used at professional and academic conferences and that I will have the opportunity to give additional consent for such use.

I understand that I have the right to withdraw from the research project at any time.

Signed: ....

Name: ....

Name of setting:……….

Date:

Appendix 3.4: Principles of Attuned Interactions and Guidance for professional reflection (PAIG) (Kennedy et al 2015, pp.22-23)

Being attentive	Looking interested Turning towards Friendly intonation and posture Giving time and space for other Wondering about what they are doing, thinking or feeling.	**The foundations of intersubjectivity**
Encouraging initiatives	Waiting Listening actively Showing emotional warmth through intonation Naming positively what you see, think and feel. Naming what you are doing, hearing, thinking or feeling. Looking for initiatives	
Receiving initiatives	Showing you have heard / noticed the other’s initiative. Receiving initiative with friendly body language. Returning eye contact, smiling, nodding in response Receiving what the other is saying or doing with words. Repeating / using the other’s words, phrases or gestures.	**Intersubjectivity**
Developing attuned interactions	Receiving then responding Checking the other is understanding you. Waiting attentively for your turn Giving and taking further turns on the same topic. Giving and taking short turns Interrupting long turns by checking for reception. Supporting turn-taking round a group Contributing equally to the interaction Co-operating – helping each other.	**Intersubjectivity**
Guiding	Extending, building on the other’s response Scaffolding- judging the amount of support required and adjusting. Giving information when needed Providing help when required. Offering choices that can be understood. Making suggestions they can follow.	**Mediated learning**
Deepening discussion	Supporting goal setting Sharing viewpoints Discussing collaboratively and problem solving Naming difference of opinion. Investigating the intentions behind words Naming contradictions/ conflicts (real or potential) Reaching new shared understandings Managing conflict (back to being attentive and receiving initiatives with the aim of restoring attuned interactions)	

Appendix 3.5 Seven steps towards effective shared review (Kennedy et al 2015, p.25)

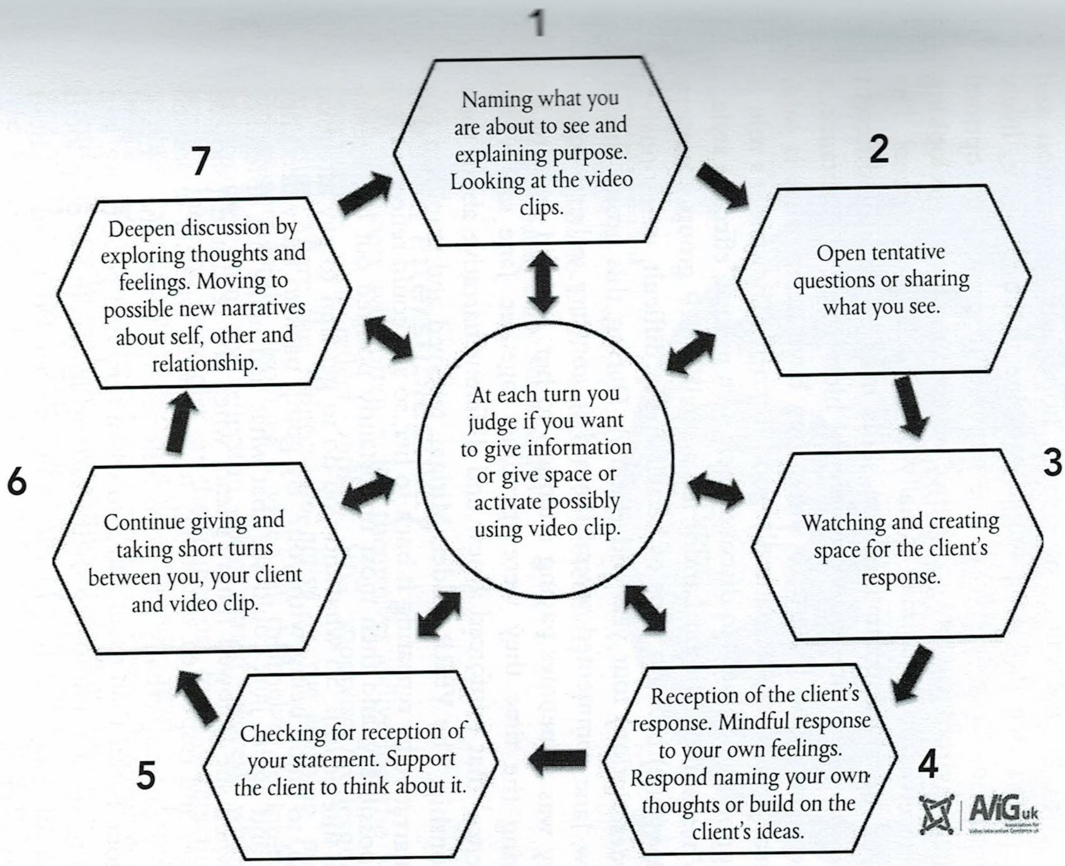

Figure 1.1 Seven steps towards effective shared review

Source: K. Šilhánová and H. Kennedy, from Kennedy, Landor and Todd (2011)

Appendix 3.6: Group session plan pro-forma

Time	**Content**	**Considerations**	**Resources**:
prep	Arrange room, Check IT, set up cameras		
9.00	**Begin: Introduce the session:** Thoughts, feelings and ideas arising since the last session?		
	Reflective exercise:		
	Participant researcher 1. Video review 1: Context of the observation What is it you want to focus on in these clips? What do you want to think about? What are your key thoughts and feelings about the clip?		
	Journal: Reflections on physical interactions in care events Reflections on my embodied response		
	Group discussion: Observer: What do you think is the most important thing for us to focus on? What would be of most use to you? Group: What jumps out at you? Your initial feelings/thoughts after viewing. Why do you think you feel like that?		
	Participant researcher 1. Video review 2		
	Group discussion		
10.00	**Participant researcher 2. Video review 1 and 2 as above**		
11.00	**Journaling**: What are your thoughts and feelings (emotional and physical) that arose in this session? **End: Final thought / comments. Practical arrangements.**		

Appendix 3.7: Framework for observations, journaling and group discussion

Video observation: Educators video a care event or physical interaction.

Educators choose clips in the observation that they think reflect positive physical interactions and use the framework to note down the key aspects of their observation that they want to discuss.

Name of Observer	**Date and time**
Notes on context of observation:	
Area: No’ of children: No’ of other adults: General description or key aspects of the context:	
What you notice in the child during the care event / physical interaction	
Body orientation Body movements Stance Gestures Touch Proximity	
Facial expressions Eye movements / eye contact / gaze	
Vocalisations / tone / volume	
What you notice in yourself	
Body orientation Body movements Stance Gestures Touch Proximity	
Facial expressions Eye movements / eye contact / gaze	
Vocalisations / tone / volume	
What you notice in the environment	
Time	
Space	
Objects and materials	

Framework for journaling

Reflections on physical interactions in care events

- What was I thinking and feeling (physically and emotionally) in this scenario or event?
- What puzzled, excited or worried me during this event?
- What did I notice about my actions or responses?
- How do I make sense of what happened or how I felt?

Reflections on my physical response

- Physical feelings, such as muscle tension, tummy ‘butterflies, mouth-watering, clenched jaw, hot flush, shivering, relaxed, jittery, backache, swollen feet etc., etc.
- Sensory experience, such as smells, tastes, heat, sights, sounds, the feel of clothing, surfaces or objects.

Reflections on the group sessions

- What was I thinking and feeling (physically and emotionally) in the session?
- What puzzled, excited or worried me during the session?
- What did I notice about my actions or responses?
- How do I make sense of what happened or how I felt?

Framework for discussion group

Observer introduces the observation and their key thoughts and feelings about it.

Watch video

Observer identifies aspects of the physical interactions that they think reflect attuned interactions

Group discussion:

What have we noticed about our physical interactions in care events?

What do we think about what we have observed?

Appendix 3.8: Session 6 review proforma

Holding the Baby Research Group: Review   Research name……………………………

<u>1: Content of observation videos:</u>

For each / any of the video observations that you contributed / viewed.

- What did you think was significant?
- What has stuck in your mind?
- What did you note in your journal?
- What did you notice about your actions or responses?
- How did you understand the child's body language and gestures?
- What physical feelings and sensory experiences do you remember / feel now in response to any of the scenarios?

(Please identify which observation you are referring to for each of your comments)

Holding the Baby Research Group: Review

2: Discussion group sessions

For each of the group discussions that you were part of.

- How have you experienced being part of this group and these sessions?
- What has stuck in your mind about the process?
- What did you note in your journal?
- What physical feelings and sensory experiences do you remember / feel now in response to this session?

(Please identify which session you are referring to for each of your comments)

Appendix 3.9 Table of data sources

Video observations of physical interactions between educators and children				
Observation code	Title and context and time	Description	Reviewed / Transcribed	
GS1-L2	Leiya and Otto: Nappy change. 1:1+2	L: ‘This is me trying to get O to change his nappy. So normally, it takes a lot of time. His favourite word at the moment is ‘no’, so this was me trying to persuade him.’	Y	Y
GS1-P5	Popi Singing with group. 1:4	As Senior Practitioner P works across the 0-3s provision so is not always based in this group, but the children know her quite well. Here she is with a group of 4 toddlers singing and playing music.	Y	Y
GS2-B1	B and Menashe: Row the boat. 1:1+	B is sitting on an adult sized chair with M astride her lap. They are playing ‘Row the boat’, falling backwards.	Viewed in session not part of a VERP review	Y
GS2-C2	Chaya and Ella: Just woken up/ Cuddle: 1:1+	Ch: ‘This is Ella she was my key child. Here it was her first day back after she was away.’ Ch is sitting in a low adult chair cuddling E until she is ready to get up and play.	Y	Y
GS2-C3	Chaya and Ella playing with construction	Ch is modelling how to join together a construction set to make a tower.	Not reviewed in session	N
GS3-M1	Munehra and Alena: Putting shoes on. 1:1 +	M: ‘This child is two years old. She is just starting to walk and doesn't really talk. In this video, she was playing but then saw that other children were getting ready to go outside and she wanted to go as well.’	Y	Y
GS3-Sh2	Shahida and Aliyah: Story. 1:1 +	Sh: ‘A is two and a half. I asked her if she wanted to read a story, and she said, yes, so we enjoyed sharing the book.’ A is sitting on Sh’s lap while they look at a book together.	Y	Y
GS3-Sh1	Shahida and Rahima: Just woken up / Cuddle. 1:1+	Sh: ‘R had just woken up. Her mum had bought her in sleeping and I noticed that she was awake, so I picked her up, but she was still sleepy, so I had to just stay with her.’ Sh is sitting in a low adult chair cuddling R while she wakes up.	Y	Y
GS4-R1	Remi and Layla: Nappy change. 1:1	R: ‘The first one is nappy changing. L was the last one I had to change, so, I got to actually spend more time with her.’	Y	Y
GS4-R3	Remi and Cleo: Falling game. 1:1 +1	It is towards the end of the day and C is due to be going home soon. R is sitting on a low chair. C is sitting astride her right leg; they are playing a ‘falling’ game.	Not reviewed in session	Y
GS4-S1	Sarita and Rocco: Arrival and separation. 1:1:1	R has just arrived for the day. R is in his parent’s arms, standing just inside the door talking with S, P then lifts R from her arms into S’s. R is very distressed.	Y	Y
GS4-S3	Sarita and Theo: Rocking to sleep. 1:1 +	S: I'm trying to put the baby to sleep. Luckily, it was a calm moment. Although it was busy (in the room), it was calm. I was still watching the other children though. S is sitting in an armchair in the room, rocking T.	Y	Y

Video recordings of each of the six research group meetings			
Code	Date	Setting location	Reviewed / Transcribed Y/N
RG-S1	Nov 2021	GS2	Y
RG-S2	Dec 2021	GS3	Y
RG-S3	Feb 2022	GS4	Y
RG-S4	Mar 2022	GS1	Y
RG-S5	Apr 2022	GS1	Y
RG-S6	May 2022	GS3	Y
Journal entries made by the lead researcher			
Journal entries made by the educator-participant-researchers			
Review discussions between each pair of educator-participant-researchers and the lead researcher			

Appendix 4.1: GS4-S3 Sarita and Theo (5 months): Rocking to sleep. Timing between changes in touch and position

00.00: S is standing holding T, T's left arm is flung outwards, and his mouth is open. 0.04: S is putting his dummy into his mouth. T opens his eyes and looks at her and brings his arm in. 0.06: S sits down. S rocks her body backwards and forwards. T is gazing at her face, and he has his left arm held up 0.11: S brings her right hand up and gently strokes his forehead. T closes his eyes and brings his hand down. 0.22: S continues to rock and stroke T's head. He brings his hand up and touches her face. 0.30: He repeats this gesture, then brings his hand down to rest on her upper chest. His eyes are closed. S continues to rock and stroke his head. 0.46: She turns back to T, still stroking his head. He kicks his left leg, then wriggles both of them slightly. 0.56: She stops stroking briefly, then starts again. She shifts his position slightly. 1.04: He lifts his hand up. S continues to look at him, rock and stroke his head. 1.16: S looks away and then back to T. His eyes are closed. 1.28: S stops stroking and holds the side of his head with her open palm. T's eyes flutter open briefly. 1.36: She then moves her right hand and pats his thigh/bottom rhythmically. T's eyes are closed, his hand is still on her upper chest, he is sucking on his dummy. 1.59: S moves her leg slightly and changes to rock side to side and patting, looking closely at him. 2.19: S looks around at what is going on in the room briefly, then back to T. His eyelids flutter. 2.24: She moves her leg. She looks at T and strokes his thigh, then slightly pats his back with her left hand. She continues to rock, now backwards and forwards, and goes back to stroking his head. 2.44: She adjusts his t-shirt and puts both arms around him; left arm / hand now on his left top arm/body and her right hand on his back. His hand is still on her neckline, necklace and as she relaxes her arms, his hand slides down, his hand grips on to her t-shirt. 3.02: She glances up, then looks back at him, makes a quiet sshh sound 3.32: She brings her hand down to rest on her knee and stops rocking.	Timing between changes in touch and position? 4 2 5 11 8 16 10 8 4 12 8 23 20 4 20 18 30

Appendix 4.2: GS1-P5: Popi Singing with group. Transcript with analysis

Orange = Kinesics: hands/arms/gestures.
Green= Intersubjective communication: Gaze, noticing, responding
Brown= environment / object

As Senior practitioner Popi works across the 0-3s provision, so is not always based in this group, but the children know her quite well. Here she is with a group of 4 toddlers Elenora (E), Cleo (C), Perse (B), Alfred (A), singing and playing music.

Popi is sitting cross-legged on the floor in an area with musical instruments and song props. Perse is sitting sideways on her lap, on her right knee. P has her right arm behind B's back Cleo standing watching and A and E sitting on the floor nearby. B has something stuck on her jumper; she picks it off; P is looking at it closely.
E is aware of the camera, sitting gazing at it briefly.
A casts a song card to the floor and gets up
P: Shall I pick it off? 123, whoops, there you go. She picks it off and holds it on her finger for them to look at. Wow, pink, pink. She leans her body a little away to look more closely at B's response.
A brings a song prompt card to her. P looks up at him.
A:??
What do you have Alfred?
He brings it to show her. She looks at the card and then his face. At this point she has both arms loosely around B with her hands linked
Aah! five little men… shall we sing it? She is looking directly at him; He agrees, she nods.
She then uses her left arm to make the gestures for the song, while keeping the right arm around B. Holding up all five fingers…
C is at the wall mounted activity toy. When P starts singing, she turns towards her. E is sitting and watching.
Sings: Five little men in a flying saucer flew round the world one day,
She looks from A to B as if checking that the singing is ok with B and then to C to include her. She has an open, half smiling expression on her face. And playfully prods C's tummy as if to welcome and include her. C does a little should shudder as if tickled and smiles. B is also half smiling at A.
…they looked left and right but they didn't like the sight
P using gestures with her hands head and body to elaborate the song.
P also looks at C nodding in response to her while still singing
…so, one man flew away. Ready? Whoosh. She makes a large arm swing.
Four little men in a flying saucer flew round the world one day,
A is singing along, she smiles at him
…they looked left and right but they didn't like the sight so one man flew away, whoosh. How many left?
C slightly jiggles to the song as she walks to the song card basket.
A backs away and leans against the storage unit, C moves to in front of P and picks up a toy monkey lying next to E's leg. B shifts on her lap, turning her body more away and studies a handbell that is by her feet. As she does so P moves her hands to allow her space but also holds them in a cradling position but away from B's body as if they are ready if needed. Then making song gestures with her right arm.
Three,
C brings over the toy monkey.

...a monkey. Three little men in a flying saucer flew round the world one day,
B now has 2 handbells. P turns her attention to E sitting nearby; looks between A and E smiling and rocking her body in time with the song's rhythm. E slightly mirrors a rocking motion, P smiles more broadly.
...they looked left and right but they didn't like the sight so one man flew away... and then you go shoop; she demonstrates with her arms.
2 left now, ready? She waggles 2 fingers while smiling at A. '*two little men in a flying saucer flew round the world one day,*'
P speeds up the song. A starts dancing, jigging round in a circle. As he turns, he looks at the camera and seems to hesitate a little, then again shyly half-glances briefly in the direction of the camera. P laughs and mirrors him by moving her upper body and arms, she is smiling, A is smiling.
...they looked left and right but they, but they didn't like the sight so one man flew away, whoosh.
B shakes her bells. P mirrors B's actions with her arms although B can't see this. A spins himself around again.
Now we only have one, just one, are we ready? One little man in a flying saucer flew round the world one day
E is standing close to P gazing at her face.
P sings fast beating her arms up and down, and A dances vigorously spinning around again, all the while holding the song card, glancing at the camera again. C is watching A smiling. B and E are straight faced. P slows right down and speaks the next line
...he looked left and right but he didn't like the sight, - she puts her hands on her hips and shakes her head, looking at C with a straight / serious face. A also looks serious?
...so... what did he do? Looking at C, who vocalizes and lifts the monkey into the air.
P: *Did he go flying? One man flew away, whoosh yay!*
C excitedly lifts and waves the monkey.
A starts to jig again briefly as if to carry on but then sees that the focus has changed
C pushes the monkey towards her
P: *What's that? Monkey, oo-ooh, aa-ah, monkey*.
C points to its face.
P: Monkey, mouth. P is looking intently at C. And back at B who is still on her lap. Monkey, nose.
A bends down to E then drops the song prompt card in front of E; maybe as if repeating the 'whoosh' arm gesture of the song. E picks up another card at the same time.
P: Do you want to have more songs? There you go, I think E would like to have monkey.
P offers the toy monkey to E, who goes to take it but then turns to the shelf behind them. B takes the monkey, but A takes it from her hands and cuddles it. C is watching.
P: Would you like to get me another song? To A
B are you feeling better now? P bends her head round to look at B more closely and more from the side, she brings her arms loosely around her. You go and get me another song then I'll sing it to you.
B: Yeah
P: Yay, P helps B get up off her lap; she is holding her hands, stretches her arms out to the side as a lever to stand.
A shakes the monkey then drops it in front of E
P: be gentle (to A about E)

B goes to the song prop box. A runs off. P interacts briefly with E, you've got 2 (handbells). She is still cross-legged in the same position and location, her hands resting loosely in her lap and an open smiley expression.
C: Baa-baa
P: Baa-baa? You want me to sing you Baa-baa? Okay, ready?
She is looking directly at C and starts singing and beating the rhythm with her hands on her knees.
Baa-baa black Sheep, have you any wool?
B brings over a song prompt card.
E glances up at the camera.
...*Yes sir. Yes sir. Three bags full,*
P gently pokes C's tummy. A returns and P glances at him, as if keeping a check on what he is doing.
...one for the master and one for the dame and one for the little boy who lives down the lane.
C walks away to get another card
A holds up a card and says this one, P keeps singing
Thank you said the master, thank you said the dame and thank you said the little boy who lived down the lane.
P is using her hands to make Makaton signs for the words in the song. She rests her hand in her lap.
B shows her a song prompt card
E is putting the handbells in the basket on the shelf behind them.
What do you want?
P: You like Row, row, row the boat? Shall we do it? P opens out both hands palms up in an offering gesture.
C is crouched choosing another song card from the basket.
P: Would you like to sit down and then we can have row the boat. P turns her body slightly towards B and pats the floor. B sits facing her.
P: Would you like to hold my hand? Again, P offers her open hand gesture. B has the card in her right hand so offers the left one. She shifts her legs and lower body to fit more comfortably in front of P.
P: one hand? cool.
They hold left hands and move their upper bodies backwards and forwards in a rowing motion. S curls her right hand into a loose upward turned fist.
C has 2 song cards, one in each hand and is waving them to the time of the music.
P: Row, row, row the boat. Gently down the stream. Merrily, merrily. Merrily, merrily Life is but a dream.
B is looking at the card the whole time.
P rocks from side to side. A and C approach with song cards and bags. A is saying something.
Now shall we rock? B is looking directly at her.
Rock, rock, rock your boat. Gently down the stream...
P makes her voice a whisper
...and if you see a crocodile, don't forget to scream.
A draws her attention away; P drops B's hand and looks at A who has placed himself between P&B talking to P.
She looks back at B with her hands in a 'jazz hands' position on the word 'scream' but still – in a kind of half enquiry gesture. B waves the song card and then gets up to standing
P: Aah scream... - in a very quiet voice. She laughs, yay', B gets up.
A:???
P: What do you have in your bag? Show me, show.

A opens bag and takes out picture. They are all looking at what A brings out of the bag.
P: You got me a teapot. What does that mean? Teapot? Am I singing? P takes the picture, turns it to show them all.
P: Sings - I'm a little teapot… patting her chest with her right hand.
B takes the picture and puts it back in the bag. She seems to slightly shake her head.
C is still waving her song cards.
Am I singing? No, no, ok then we won't, no. P shakes her head and body to emphasize the 'no'.
B: says something to her, P looking and listening intently. A walks off with his bag.
P: Where did they go Perse? Would you like to put them away?
P holds up a card, C takes it.
P to C: Where does it go? Okay. You take two? B also goes to take it and knocks it out of her hand.
Perse takes one. Where does it go?
P gives B another card. A is putting his cards in and out of his bag.
Where does it go?
B: Stands directly in front of P, looking at the card: 'A man' She turns the card towards P.
P: A man, yeah. She makes an open-handed gesture in enquiry and nods her head in agreement.
B: Looking at the card turns it back towards herself. - singing?
E starts to stand up. C still watching, picks up her song cards again.
P: Okay, we'll do more singing or a different song? Find a man you're right. One two three, four five.
P points at the people on the card in turn.
E: Looks at camera as they start to walk away. Notices a small world animal on the shelf, picks it up and walks off holding it.
A: Takes Baa-baa black sheep card out of the bag, waves it and says Baa-baa black sheep
P looks over at him and says, Yes, you do have Baa-baa black sheep book.
B: Singing,
P: Yes singing, let's do it together.
B turns around sits back on P's lap. P has her arms and hands open.
P: Five little men in a flying saucer flew round the world one day, they looked left and right…
P is holding B around the waist with her hands clasped lightly in front; she rocks her from side to side, P is laughing, while also looking at the card the whole time. P glances up at A 3 times.
C watching at first then turns towards the activity apparatus on the wall.
A walks off with his bag of cards.

Appendix 4.3: GS1-L2 Leiya and Otto timings

Chronemics: Use of time in non-verbal communication		
The pauses to listen are brief. Longer pauses created by other interactions and moving and by other child's interruptions. Although this may be seen as an unwelcome distraction, it also breaks the tension and gives a welcome relief to focus elsewhere for a few seconds. These apply to chronemics and proxemics and temporality. * Intervention makes O laugh He looks at child 2 and they laugh together. Otto jiggles his body.	0.00-0.03: L speaking (ch1)	3
	0.03-0.08: Pause, O speaks, L responds	1
	0.08-0.14: Pause	6
	0.14-0.19: L speaking (ch2)	5
	0.19-0.31: C's intervention	12
	0.31-0.36: L speaking (ch3)	5
	0.36-0.40: Pause	4
	0.40-0.54: C's intervention (ch4) *	14
	0.54-0.58: L speaking (ch5)	4
	0.58-1.06: C's intervention	8
	1.07-1.12: L speaking	5
	1.12-1.22: Pause while moving	10
	1.22-1.24: L speaking (ch6)	2
	1.24-1.29: Pause	5
	1.29-1.30: L speaking	1
	1.30-1.34: Pause	4
	1.34-1.44: Dough interaction	10
	1.44-1.47: L speaking (ch7)	3
	1.47-1.57: C's intervention	10
	1.57-2.06: L speaking (ch8)	9
	2.06-2.08: Pause	2
	2.08-2.17: physical interactions	19
	2.17-2.22: C's intervention banging	5
	2.22-2.31: L speaking (ch9)	9
	2.31-2.38: Pause	7
	2.38-2.41: L speaking (ch10)	3
	2.41-2.44: Pause O speaks, L responds	1
	2.44-2.51: Pause	7
	2.51-2.57: L addresses distraction	4
	2.57-3.04: L speaking (ch11)	7
	3.04-3.14: Move to books	10
	3.14-3.21: Pause, O choosing, L responds	5/2
	3.21-3.30: Pause, O choosing, L responds	7/2
	Total time speaking:	66
	Pauses to listen	47
	C's interventions	47
Total time: 210 seconds	Other pauses / waiting	49

Appendix 4.4 GS4-R1 Remi and Layla Nappy Change Analysis

Data first created from video without sound, then with sound

<table>
<tr><td colspan="2">Kinesics: Non-linguistic / non-verbal communication:
• Looking interested with friendly posture
• Being friendly/ playful
• Returning eye contact, smiles, nodding in response
• Showing you noticed
• Enjoying watching the other</td></tr>
<tr><td>00.28-00.32: As Layla lays down, she laughs, clasping her hands together in front of her. Remi looks fondly at her and they laugh together; Remi tickles her tummy
00.31-00.40: Remi and Layla laugh together; Remi watches Layla laughing with a smile on her face and joins in the laughter. She tickles Layla's tummy. At the same time Layla turns her head, seems to notice the figures on the wall and reaches towards the Red Riding Hood figure with her whole hand open. Remi follows her gaze and the intent of her gesture and mirrors the gesture by pointing at the figure.
00.42-44: When Remi points at the Peppa Pig, then the Winnie the Pooh figures, Layla waves and gestures towards them with her left leg as well as her arm.
01.30-: When Layla plays at replacing the figure on the wall for a second time, Remi turns her attention towards her, pauses and watches what she is doing. She smiles and comments.
01.45-: After playing at replacing the figure to the wall for the third time, Layla points toward the Winnie the Pooh figure
01.46: At the point of pointing toward the Winnie the Pooh figure and Remi noticing, Layla lifts both her legs into the air, bringing her feet towards her head and turning to look at Remi at the same time. Both use one hand each to try to peel the figure off the wall. It is stuck securely so Remi pulls it off
02.18: When Remi hands Layla the Cinderella figure, Layla has her mouth open (As if she may be about to say something
) as she looks at it. She then points towards other objects in front of her before turning back to the wall and pointing at the PP figure.
02.42-3.35: Layla scans the wall and then points decisively at the WtP figure – with a quick direct gesture and moving her torso forwards towards it. She then brings her hand down and waits while Remi unpeels the figure from the wall. Remi taps the figure as if confirming Layla's request before unsticking it and giving it to her. Layla takes it into her pile in her hands. She scans the wall again, reaches up to touch the empty spaces where the figures were, briefly feeling the sticky patches, scratching at the remaining pieces of sticky pad and waving her hand across the surface. She then turns to look at what Remi is doing and Remi points to the last remaining figure of Postman Pat. Layla looks down at her pile of figures then points at the blank wall. She waves her hand across it with a slight shake of her head, and Remi mirrors this action, also waving her hand across the empty space. Remi is looking intently at Layla at this point. Layla repeats the waving motion and then points to the PP figure; Remi starts to unpeel it from the wall, Layla wriggles her body, Remi turns to her, smiles and they laugh together, looking at each</td>
<td>Hands

Joint attention / secondary intersubjectivity throughout
This pointing is also 'fast mapping' language – embodied communication and language learning

I think she was preparing to get herself up to reach it but R helps her instead

Mirroring – also becomes echoing</td></tr>
</table>

other. Remi hands her the figure. Layla looks at it briefly, adds it to her collection. 03.35-: Layla looks around then points at her changing box containing her wet wipes. Remi picks them up and shows them to her, Layla looks, Remi then shows her the nappy, watching Layla. Layla points at the nappy sack. Remi mirrors this gesture, confirming what it is. She reaches for protective gloves. 04.02: Layla points again at the wet wipes. Remi hands them to her as she puts on the plastic gloves. 04.35: Remi: *Weyhey*, she laughs and smiles at Layla. Layla laughs 04.36- 41: As Layla pulls the PP figure off the wall again, Remi looks at her and smiles 04.40- 50: Layla reaches for the wet wipes again; Remi holds them up for her to try again to remove one.	
Haptics: Use of touch • Showing emotional warmth • Providing help when needed • Adjusting the amount of support required	
00.04-00.29: Remi offers her hand to help Layla climb the steps. She holds Layla's right hand but as Layla goes to use her left hand to hold on to the steps to climb, Remi takes her left hand too. This means that Layla cannot use her own balance and movements autonomously; as Remi helps her climb, Layla wobbles a bit. She also cannot get her left leg in position for the next step up; Remi puts her leg into position for her. She completes the next step herself and could, if she had hands free, had crawled up onto the changing table but Remi lifts her up instead, placing both her hands around Layla's torso just below her armpits. She puts her into a sitting position and then gently puts her hand behind Layla's back to support her as she lays down. Layla glances behind her, sees / senses the hand and then allows her upper body to move backwards. 00.31: Remi tickles Layla's tummy 01.02-17: When Layla points back to the Red Riding Hood figure, Remi puts her hand behind Layla's head and helps her to sit up to reach it herself. As Layla grasps the figure, Remi also pulls at it to unstick it from the wall. When Layla has it, Remi lays her back down again. 01.20-30: While reaching for something (Layla's box containing her changing things?), Remi keeps her hand resting on Layla's belly. 01.47-2.09: At the point that Layla lifts both her legs into the air, Remi again places her hand under Layla's head to help her sit up, to be able to reach the Winnie the Pooh figure. Both use one hand each to try to peel the figure off the wall. It is stuck securely so Remi pulls it off, Layla gives up and looks at the figure already in her hand. Remi hands her the WtP figure, it sticks to the other, Remi pulls them apart for her. 02.10-18: Layla glances at the PP figure then looks and points at the Cinderella figure. She doesn't try to pull it off, Remi peels it off the wall and gives it to her. 02.27-40: Layla reaches and moves her hand as if to try to peel the PP figure from the wall. Remi reaches over to do it as it's stuck firmly. Layla Leaves her hand pressed to the figure, watching for a while	**Helping / not helping**

then turns back to the figures in her hand. Remi hands her the PP figure. She places them together in her hands. 03.50-58: The nappy sack gets stuck to the figures, Remi unsticks it. 04.07-04.36: Remi hands Layla the wet wipes. Layla begins to try to take one out of the packet. Remi holds the packet still while Layla pulls at a wipe with one hand (she has the figures in her left hand). It is stuck, Remi eases it out a bit with her finger, Layla turns back to look at her figures and presses one to the wall; Remi leans forward and does the same. Layla removes the figure from the wall. 04.40-5.00: Layla reaches for the wet wipes again; Remi holds them up for her to try again to remove one. They are tucked inside, so Remi pulls one to the opening then waits for Layla to pull it out. Layla pulls it out, Remi holds out her hand and Layla gives it to her. 05.02-08: Remi puts one hand behind Layla's head and her other hand on her chest and gently lays her down	
Proxemics: Use of interpersonal space • Giving time and space • Co-operation	
Chronemics: Use of time in non-verbal communication ▪ Waiting and actively listening ▪ Waiting attentively for your turn	
00.36: When pointing to each of the figures on the wall in turn, Remi pauses between each and waits for Layla's vocal response.	
Temporality: Time and sequences of events • Receiving, then responding • Giving and taking further short turns • Building on the other's response	
00.36-47: Remi points at the Red Riding Hood figure and then to the Peppa Pig and Winnie the Pooh figures; each time looking carefully at Layla to check that Layla is following Remi's gestures / Remi is still following Layla's interest. When Remi points to the Cinderella figure, she seems to realise that Layla cannot see that figure from her laying position. Layla points back to the Red Riding Hood. 03.07-: Remi points to the last remaining figure of Postman Pat. Layla looks down at her pile of figures then points at the blank wall. She waves her hand across it and Remi mirrors this action, also waving her hand across the empty space. Layla repeats the waving motion and then points to the PP figure	**Joint attention**
Vocalics: Non-linguistic vocalisations	
Emplacement: The experience of specific places and things	
00.01: L glances at person holding the camera 00.02: The pull-out steps up to the changing table: A feature designed to support children's autonomy and the lessen the amount of lifting educators have to do. The space looks cramped to me and	The wall as boundary The wall as active participant in this event

there are things on the floor that seem to impede free access to the steps. 01.30-46: Layla repeats the action of putting the figure on the wall (but not completely) and removing it 3 times: She moves the figure to her left hand and presses it against the wall, opening her grasp and pressing with her thumb. She then pulls it away again and holds it on both hands, looking at it intently. She repeats this for a second time, and this time turns it around with both hands to look at it upside down then the right way up again. She then quickly repeats the gesture of putting it towards the wall a third time. 03.57-59: The figures are stuck together, Layla pulls them apart 04.26- 36: Layla presses a figure to the wall; Remi leans forward and does the same. Layla removes the figure from the wall. 05.07-08: As she lays down, Layla repeats the action of putting the PP figure towards the wall as if to replace it.	Joint attention / mirroring
Vocalics: linguistic vocalisations ▪ wondering about what the other is doing, thinking or feeling ▪ Naming positively what you see, think or feel ▪ Receiving with friendly words; repeating and reflecting back ▪ Checking understanding ▪ Offering choices and making suggestions the other can follow	
00.30: Remi: *Was that funny? Was that funny?* 01.00: Remi: *This one? Little Red Riding Hood, would you like to see?* 01.10: Remi: *You'd like to hold it* 01.18: Remi: '*Heey*' – half laugh 01.23: Remi: '*Oh well done' Did you put it on the wall? Did you put in on the wall?* 02.20: Layla: *Abdaa*. She points towards other objects in front of her before turning back to the wall and pointing at the PP figure. 02.24: Remi: *Which one? Peppa Pig?* 02.42: Layla scans the wall and then points decisively at the WtP figure – with a quick direct gesture and moving her torso forwards towards it. '*Dat*' 02:44 : Remi: *Winnie the Pooh?* Remi taps the figure as if confirming Layla's request Layla: '*agon*' she repeats the waving motion and then points to the PP figure '*cat*' 03.20: Remi: *Cat, well done, cat.* R starts to unpeel it from the wall, 03.25: Layla: *cat*, she wriggles her body Remi turns to her, also wriggles her body and head and smiles and they laugh together, looking at each other. 03.29: Remi: *Cat, is that your cat dance?* She laughs Remi hands her the figure. '*Cat and Postman Pat*' Layla looks at it briefly, adds it to her collection. 03.35: Layla: '*Kaka, cat*'	

Appendix 4.5: GS4-R1: Remi and Layla (16 months) Nappy Change: Transcript with analysis

5 mins 7 secs

Remi's introduction: *The first one is nappy changing. She was the last one I had to change, so, I got to actually spend more time with her.*

Remi: *Here you are then, Layla.* Remi pulls out the steps up to the changing table. Then offers her hand to help Layla climb the steps. She holds Layla's right hand and as Layla goes to use her left hand to hold on to the steps to climb, R takes her left hand too and helps her climb. Layla wobbles a bit and cannot get her left leg in position for the next step up; R puts her leg into position for her. She completes the next step herself. (**Providing help when needed / Adjusting the amount of support required)**

Remi: *Ready Layla, one, two three,* Remi lifts Layla up onto the changing table, placing both her hands around Layla's torso just below her armpits. She puts her into a sitting position.

Remi: *Ready Layla? there you go*. Remi gently puts her hand behind Layla's back to support her and waits as she lays down. (**Checking the child is understanding you, Waiting attentively**). Layla glances behind her, sees / senses the hand and then allows her upper body to move backwards, '*Ohh / aah'* she says. *And a*s she lays down, she laughs, clasping her hands together in front of her (**Being friendly/ playful)**.

Remi: *Was that funny? Was that funny? (***Receiving then responding**) Remi looks fondly at her and they laugh together (**Showing emotional warmth**); Remi tickles Layla's tummy (**Being friendly/ playful**).

Layla: *Abdabdaa.* Layla turns her head, seems to notice the figures on the wall and reaches towards the Red Riding Hood figure with her whole hand open. Remi follows her gaze and the intent of her gesture and mirrors the gesture by pointing at the figure *(***Receiving then responding, mirroring**).

Remi: *Red Riding Hood*, she points at the Red Riding Hood figure and looks back at Layla *(***Giving and taking further turns**). *Who's this one?* She waits, *'Pp… Peppa Pig?'*

Layla: *Ra ra* and lifts her left leg – as if pointing with it **Receiving, then responding**.

Remi: *Winnie the Pooh*? *Cinderella*? **Building on the other's response** Pointing and looking carefully at Layla to check either that Layla is following her gestures or that she is still following Layla's interest *(***Giving and taking further turns, Checking understanding, Waiting attentively**). When R points to the Cinderella figure, she seems to realise that Layla cannot see that figure from her laying position **(empathy, mindsight).**

Layla: '*uer'* she points back to the Red Riding Hood. '*Abda'.* Remi: *Little Red Riding Hood? (***Receiving then responding**)

Layla: '*teb'* and kicks her legs *(***Receiving then responding, Contributing equally to the interaction**)

Remi: *This one? Little Red Riding Hood, would you like to see? (***Receiving then responding, Building on the other's response)** Remi puts her hand behind Layla's head and helps her to sit up to reach it herself) **Co-operating – helping each other)**.

Layla reaches to grasp the figure. Remi: *You'd like to hold it (***mindsight, Receiving then responding)** Remi pulls at the figure to unstick it from the wall and gives it to Layla.

Remi: *Ready? You hold it while I do your nappy. She* lays Layla back down again. Remi: '*Heey'* – half laugh (**Having fun**)

While reaching for Layla's box containing her changing things, Remi keeps her hand resting on Layla's belly (**Showing emotional warmth)**.

Layla moves the figure to her left hand and presses it against the wall, opening her grasp and pressing with her thumb. She then pulls it away again and holds it in both hands, looking at it intently. Remi: '*Oh well done' Did you put it on the wall? Did you put in on the wall? (***Naming positively what you see)** Layla repeats the action a second time.

Remi: *Ready? Mind it doesn't fall. Is it going to fall?* **Giving and taking further short turns**

Layla: *Abdaa*. She turns the figure around with both hands to look at it upside down then the right way up again. '*Ajabda'* **Receiving, then responding, Giving and taking further short turns.** Remi watches her. '*Yeah'.* Layla then quickly repeats the gesture of putting it towards the wall a third time. '*Ada'*

Layla points toward the Winnie the Pooh figure and lifts both her legs into the air, bringing her feet towards her head and turning to look at Remi at the same time **Waiting and actively listening**

Remi: *You want this one? Alright, you going to sit back up?* **Showing you noticed** Remi again places her hand under Layla's head to help her sit up and to be able to reach the Winnie the Pooh figure.

Remi: *This one might be a bit tricky because look, it's really stuck let's see, then we can put it back on. I think this one might be stuck. Oh look, hold on.* Both use one hand each to try to peel the figure off the wall. It is stuck securely so Remi pulls it off, Layla gives up and looks at the figure already in her hand. Remi hands her the WtP figure, it sticks to the other, Remi pulls them apart for her. **Co-operation, Providing help when needed**

Layla glances at the PP figure then looks and points at the Cinderella figure. '*Bubdaa'*

Remi: *Bye-bye? Ok, this is Cinderella. This is tricky, this gets sticky.* Layla doesn't try to pull it off, **Waiting and actively listening** Remi peels it off the wall and gives it to her. When Remi hands Layla the Cinderella figure, Layla has her mouth open as she looks at it.

Layla: *Abdaa*. She points towards other objects in front of her before turning back to the wall and pointing at the PP figure.

Remi: *Which one? Peppa Pig?* Layla reaches and moves her hand as if to try to peel the PP figure from the wall. Remi reaches over to do it as it's stuck firmly. Layla leaves her hand pressed to the figure, watching for a while

Remi: *This is tricky.* Layla: *aa.* Remi: *Tricky.* Layla turns back to look at the figures in her hand. Remi hands her the PP figure. She collects them together in her hands. '*Ako'*

Layla scans the wall and then points decisively at the WtP figure – with a quick direct gesture and moving her torso forwards towards it. '*Dat'* Remi: *Winnie the Pooh?* Remi taps the figure as if confirming Layla's request **Receiving, then responding, Building on the other's response**

Layla brings her hand down and waits while Remi unpeels the figure from the wall. Remi gives it to her. Layla takes it into the pile in her hands. Layla scans the wall again, '*kaka'* she reaches up to touch the empty spaces where the figures were, briefly feeling the sticky patches, scratching at the remaining pieces of sticky pad

02.55: Remi: *There's no more there, can you see any more?* **Naming positively what you see**

Layla: '*Na'* waving her hand across the surface. Remi: *No? I can see one more here look.* Layla: '*ook'* She turns to look at what Remi is doing **Receiving with friendly words; repeating and reflecting back**

Remi: *Look, I can see one more. What's this?* she whispers. Remi points to the last remaining figure of Postman Pat.

Layla looks down at her pile of figures '*gaga',* then points at the blank wall. '*Gaga'* . She waves her hand across it with a slight shake of her head. Remi: *There's no more her, look, it's gone*. and Remi mirrors Layla's action, also waving her hand across the empty space **Mirroring**. Remi is looking intently at Layla at this point. **Looking interested with friendly posture**

Layla: '*agon'* she repeats the waving motion and then points to the PP figure '*cat'.* Remi: *Cat, well done, cat.* **Returning eye contact, smiles, nodding in response**

R starts to unpeel it from the wall, Layla: *cat*, she wriggles her body **Being friendly/ playful.** Remi turns to her, also wriggles her body and head and smiles and they laugh together, looking at each other **Mirroring, Being friendly/ playful**

Remi: *Cat, is that your cat dance?* She laughs **Showing you noticed, Showing emotional warmth**

Remi hands her the figure. '*Cat and Postman Pat'.* Layla looks at it briefly, adds it to her collection. Layla: '*Kaka, cat'*

She looks around then points at her changing box containing her wet wipes. Remi picks them up and shows them to her, **Receiving, then responding** *These are your wipes*, Layla looks, *and your nappy*. Remi shows her the nappy, watching Layla. **Looking interested with friendly posture**

Layla points at the nappy sack. Remi mirrors this gesture, confirming what it is **Receiving, then responding**. '*yes, and nappy sack. And what are we missing? Gloves!* She reaches for protective gloves.

The nappy sack gets stuck to the figures. Remi: *Oh dear is it stuck?* Remi unsticks it. *'There we go'*

Layla: '*dat'* she points again at the wet wipes.

Remi: They're your wipes, **Receiving, then responding** she hands then to her as she puts on the plastic gloves, '*you hold those'.* **Giving and taking further short turns, Building on the other's response**

Layla begins to try to take one out of the packet. Remi holds the packet still while Layla pulls at a wipe with one hand (she has the figures in her left hand). It is stuck, R eases it out a bit with her finger, Remi: *Are you getting it? That's it… Shall I hold it? Can you take your wipe?* **Providing help when needed, Adjusting the amount of support required**

Layla turns back to look at her figures and presses one to the wall. Remi: *Are you putting it back? Do you want some help?* Remi leans forward and presses the figure to the wall. Layla removes the figure from the wall.

Remi: *Weyhey*, she laughs and smiles at Layla. **Looking interested with friendly posture** Layla laughs

Layla: '*Adada*. She reaches for the wet wipes again; Remi holds them up for her to try again to remove one. They are tucked inside. Remi: can you get one? look, take one now. Remi pulls one to the opening then waits for Layla to pull it out. Layla pulls it out, Remi holds out her hand and Layla gives it to her. **Providing help when needed, Adjusting the amount of support required**

Remi: *Thank you. Can I lay you down now? Ready? Lay you down?* Remi puts one hand behind Layla's head and her other hand on her chest and gently lays her down. Layla: *Abdaa*. As she lays down, she repeats the action of putting the PP figure towards the wall as if to replace it.